

Educational reform *in Chile*

José Pablo Arellano Marín

*Consultant,
Office of the Executive
Secretary, ECLAC
Minister of Education of Chile
from September 1996
to March 2000
jarellano@eclac.cl
www.jporellanom.terra.cl*

This article analyses the reforms put into effect in the mid-1990s with the aim of setting in motion a process of profound changes in pre-school, basic and secondary education in Chile, the main changes made, and some of the achievements and difficulties of this process as seen at the present day. It begins by describing the initial context of the reforms, in which, as the objectives of full coverage of the educational system had been largely achieved, the new objective addressed was to improve the quality of education with equity. It also makes reference to the institutional changes which had taken place in the organization of education: the consolidation of the system of subsidies and the transfer of educational establishments to the municipalities in the 1980s, and the change in teachers' working conditions in the 1990s. It then summarizes the main initiatives taken to improve education in the 1990s. The central part of the article deals with the four main pillars of the educational reform process: programmes to improve and modernize teaching methods; the professional development of teachers and the incentives offered for this; the reform of educational curricula, and the introduction of full-day rather than half-day classes. It concludes with an appraisal of the achievements made and the difficulties encountered; among the first are the high priority given to education within the increased allocation of public and private resources, the emphasis on equity in the measures taken to improve education, and the continuity of the policies followed throughout the 1990s; among the second are the relatively poor results still obtained by most pupils and the learning gap that those results imply.

I

The initial context

In the mid-1960s, the main aim of the reforms was to expand the coverage of basic education (which was also lengthened from 6 to 8 years) in order to make it universal, and to increase the coverage of 4-year secondary education.

In Chile, the proposed objectives in terms of coverage were largely achieved. It can be seen from table 1 that not only was basic education made universal but also secondary education now covers the great majority of young people between 15 and 18. The present objectives are therefore to improve the quality and equity of education by ensuring that the opportunity of having a good education is extended in particular to children from lower-income families.

However, improving the quality of education has two dimensions: on the one hand it is necessary to make good the deficits revealed when expanding the coverage, and on the other it is necessary to take on the new challenges raised by the information society, with all its changes and new demands on the education system. The inherited deficits in the system are due to the fact that part of the expansion of coverage was carried out without having sufficient resources, and this was compounded by the sharp cuts made in the resources provided for public expenditure on Chilean education during the 1980s.

Secondary education –which has grown most rapidly– is also the area where there has been the

TABLE 1

Chile: Increase in the coverage of education, 1960-1990
(Percentages)

Year	Illiteracy (among those over 10)	Pre-school education	Basic education	Secondary education	Higher education (20-24 years)	Number of students (thousands)
1960	17.6	2	80	14	4	2 257
1970	10.2	4	93	50	9	2 254
1982	8.3	12	95	65	11	3 162a
1990	5.4	18	95	78	20	3 269

Source: National Institute of Statistics (INE), population censuses.

^a Data for 1980.

most serious shortage of resources. At the beginning of the 1960s, the amount invested per student was equivalent to 15% of the per capita product, but 30 years later this proportion had gone down to 10%. Table 2 shows the expenditure on education in the 1980s and reveals that even during the economic recovery in the second half of that decade public expenditure on education continued to go down. All this redounded in inferior working conditions for teachers and insufficient resources to provide good-quality education. As a result of the reduction in public resources, the purchasing power of teachers' pay shrank so much that there was a decline in the number of young people interested in university-level teachers' training courses, there was a deterioration in the school infrastructure, and there was a shortage of schoolbooks and materials.

TABLE 2

Chile: Expenditure by the Ministry of Education (MINEDUC), 1980-1990

(In pesos of the year 2000)

Year	Expenditure by MINEDUC (billions of pesos)	Subsidized enrollment (thousands of students)	Monthly subsidy per student (pesos)
1982	736.1	2 331.4	13 188
1983	682.6	2 391.9	11 334
1984	664.6	2 458.6	10 647
1985	663.9	2 497.5	10 001
1986	603.8	2 529.0	11 189
1987	555.3	2 740.2	10 504
1988	574.6	2 746.9	10 621
1989	560.8	2 709.5	10 639
1990	534.7	2 692.1	10 103

Source: Ministry of Education (1999).

II

Institutional changes

In the institutional field, two very important changes in the organization of the educational system had occurred in the early 1980s and remain in effect today. On the one hand, a system of educational subsidies for financing private education was improved and consolidated, and on the other, all the educational establishments belonging to the central government were transferred to the municipalities. A decentralized system for the management of education was thus established in which the Ministry of Education (MINEDUC) pays a monthly subsidy for every student who attends classes in a municipal or private school chosen by his parents.

This system of subsidies, which shares some elements with what is known as the voucher system in other contexts, has a long-standing tradition behind it in Chile. Ever since the nineteenth century private schools providing education free of charge have received assistance from the government. As from 1951, when Bernardo Leighton was Minister of Education, it was laid down that the amount of the subsidy for such schools would be equal to half the amount paid by the State in respect of each pupil in public schools. Thus, subsidized free private schools received a certain amount of money per pupil from the State, obtaining the rest of the resources they needed from other sources. In reality, however, the size of the subsidy for private schools varied considerably over the next three decades and was rarely enough to cover a significant proportion of their costs. As from 1980, the amount of money paid per pupil attending classes was set at a uniform level, regardless of whether the beneficiary establishments were municipal schools or subsidized private schools.

The improvement in the size of the subsidy and the regularity with which it was paid were reflected in a big increase in the number of private schools during the 1980s. In terms of the number of students enrolled, subsidized private education expanded from 402,000 students in 1980 to 960,000 in 1990, while enrollment in municipal schools went down from 2,260,000 to 1,700,000 over the same period. During the 1990s the level of enrollment in municipal schools has stabilized and registered a slight increase in the number of students, but enrollment in private schools continues to display the most dynamic growth.

The main institutional change in the 1990s concerned the working conditions of teachers. In 1991 the Statute on Educational Professionals, better known as the Teachers' Statute, was adopted and it removed teachers from the provisions of the general labour code covering private-sector workers and brought them under a set of special rules in keeping with their employment conditions, including a better pay scale, bonuses and allowances, and greater employment stability.

It was not easy to arrive at this set of rules, and indeed the 1991 regulations were modified in 1995 to make them more flexible. Teachers' needs and aspirations in terms of increased pay had to be reconciled with the fiscal resources available, and the increase in pay was therefore gradual. It was also necessary to reconcile and harmonize the administrative decentralization arrangements and subsidies (the amount paid per student attending classes) with the new rules on staff costs, which were independent of the size of the student body.

III

Measures to improve education

Since 1990, when democracy was restored, the governments of the Democratic Coalition have gradually been putting into practice a set of measures designed to reverse the crisis situation of the educational system, to promote innovation

in education, and to create a new climate in schools and colleges, thus preparing the ground for the reform process begun a few years later. Some of the most outstanding measures are described below:

1. The programme to improve the quality of basic schools in poor areas (the P-900 programme)

This programme is designed to give support to the 10% of schools with the worst performance and the greatest needs, so that first-cycle pupils (up to fourth grade) will obtain a mastery of the basic cultural skills: reading, writing and elementary mathematics.

Using the principle of positive discrimination, the P-900 programme (which began in 1990 and is still in operation) has given rise to actions to create the most suitable context for the work of both teachers and students, by improving the teaching and learning processes as well as school management. Under this programme, teaching material is supplied and technical assistance in the form of workshops for teachers and support for students by young monitors is provided. Two years ago the programme was expanded to cover the whole of basic education. The Ministry of Education has signed three-year agreements with each school for the design of a strategy to enable them to overcome their problems. After that period, an evaluation of their management must be made. So far, the P-900 programme has involved 2,361 establishments with over half a million students, almost 20,000 teachers and 15,000 young monitors, at an annual cost per student of around US\$ 20.

2. Programme for Improving the Quality and Equity of Basic Education (the basic MECE programme)

The basic MECE programme, aimed at pre-school and basic education, was begun in the early 1990s. Under it, the supply of school books in basic education was substantially expanded, the distribution of classroom libraries (under which each classroom receives some 70 books to stimulate the habit of reading) was begun, and funds were earmarked for increasing the coverage of pre-school education and introducing non-traditional forms of education in that area.

This programme was carried out between 1992 and 1997 with the support of a US\$ 170 million World Bank loan, and since then it has been maintained –and even expanded– with national resources and has been made part of the regular activities of the Ministry. The basic MECE programme represented an increase in the investment in infrastructure and teaching materials, as well as innovations in education. In a similar manner, the Weblinks programme and the Educational Improvement Projects (PME) were also begun, as we shall see below.

3. The Weblinks programme

This was originally a pilot project for an inter-school computer network involving the installation of leading-edge information technology in marginal rural and urban schools. Subsequently, it was extended to all establishments.

Today, all high schools have a computer laboratory. Half of them –accounting for nearly 90% of the total enrollment– have been connected to the network since the year 2000. Between three and eleven computers, with the respective software, have been installed in each school, together with between one and three printers (depending on the size of the school).

Since 1999, under an agreement with the Telefónica CTC Chile telephone company, some 5,200 schools enjoy free access to and use of the Internet for ten years. At the same time, 55,000 teachers (54% of the total number in the country) have received special training. Indeed, the Weblinks programme has devoted the equivalent of 20% of its investment in equipment (which comes to US\$ 80 million) to the training of teachers in this field.

4. Educational Improvement Projects (PME)

A fund was set up at the beginning of the 1990s for these projects, which are aimed not only at further improving basic and secondary education but also at strengthening the autonomy of basic and secondary schools in teaching matters. This novel initiative has become an important challenge for teachers and school managers. Each educational community defines its own project on the basis of its own particular diagnosis. The teaching team designs the most appropriate actions for its students and lays down objectives, deadlines and evaluation strategies, all this being aimed at dealing with problem situations and promoting innovations in teaching or management.

In order to obtain finance, the PMEs compete with each other in provincial-level contests which evaluate their technical quality, their impact on learning, and the level of socio-educational risk of the establishment. When selected, the schools receive the corresponding funds and an educational aid package which provides them with the tools, equipment and basic inputs (television set, VCR, image projector, etc.) to enable them to carry out their programmes, which usually last between two and three years. The amount allocated for each project ranges from US\$ 4,000 to US\$ 28,000, depending on the number of students enrolled and whether the school is of primary or secondary level.

Teaching material has also been allocated, to the value of nearly US\$ 1,900 per school.

This initiative has become a valuable experiment in the decentralization of teaching. In support of it, the Ministry has given schools and colleges the possibility of managing the funds they receive directly. Thanks to this possibility, the management teams feel more responsible for the project; they obtain the materials and resources promptly; they are publicly accountable for them to their teachers, students, parents and authorities, and in many cases they manage to obtain other contributions from the community, thus optimizing the direct financing received from the Ministry of Education.

Interesting and frequent examples of PMES are school radio stations, newspapers and even television news programmes developed by teachers in conjunction with their students in order to strengthen their language and communicational capacity. One rural school in Central Chile installed a meteorological station to support the teaching of mathematics: this helped the teacher to train his students in the use of decimals, which they were finding it hard to learn. Another school organized beekeeping, while others have developed hydroponic cultivation, among many other initiatives.

5. Programme for Improving the Quality and Equity of Basic Rural Education (the rural MECE programme)

A special programme called the rural MECE programme has also been developed and is aimed at over 3,000 small, isolated and scholastically incomplete schools teaching children up to sixth grade in combined classes. These multi-grade schools, which have one, two or up to three teachers, required special teaching arrangements enabling them to work simultaneously with children of different grades and to incorporate educational elements peculiar to a rural setting, as urban practices were not applicable in many respects.

This programme has provided students with textbooks and material which are specially designed for their specific situation and also make possible differential progress, according to the learning capacity of each pupil, in a combined group or class. Micro-coordination centres have been set up so that teachers from nearby localities can meet periodically to analyse the innovations made in each establishment and follow

up these initiatives. In this way, the rural MECE programme seeks to overcome the professional isolation of rural schoolteachers and adapt the supply of courses to the needs of multi-grade rural schools and their respective rural environments. These micro-centres are a foretaste of the type of school that the educational reform process is trying to promote all over the country: a non-bureaucratic, self-managed school which is flexible and open to its environment. They anticipate the learning community into which each teaching team in the country should develop, that is to say, a creative group which, in that capacity, evaluates and discusses the best teaching strategies for its students.

Rural schools are a natural meeting point for families. The rural MECE programme envisages various strategies for bringing parents, and especially mothers, into closer contact with the education of their children. In recent years, in areas where there is no formal pre-school education, the programme "Know Your Child" has been introduced: a project in the hands of the mothers themselves. Its aim, as well as providing attention for children between 4 and 6, is to link up families with the educational project of the local school, to generate an alliance in this way for the benefit of all the children, and to keep this alliance in being all the time that the children are in school.

All these programmes (P-900, Weblinks, the basic, secondary and rural MECE programmes and the PMES), which were begun in the early 1990s, are still in operation and have gradually been improved and enriched during the second half of the decade on the basis of the experience gained. The P-900 programme has expanded its coverage in terms of the grades and subjects it supports; textbooks have increased in both quality and quantity, and teachers are now even given the chance to choose which of them to use; classroom libraries now extend up to eighth grade, and the material in them is now being renovated; the "second generation" PMES are pursuing more demanding teaching objectives, and so forth.

Taken together, these initiatives have improved the conditions of subsidized education, have furthered the renovation of teaching practices, have provided an incentive for collective work by teachers, and have made possible the decentralization of education, better school management, and more and better refresher training for teachers.

IV

The four pillars of the educational reform process

In the midst of all these initiatives and advances in the educational system, in 1994, at the beginning of his term of office, President Frei set up the National Commission for the Modernization of Education, made up of 18 distinguished professionals and academics from various fields of activity and political backgrounds. Its mission was to make a diagnostic study of the educational system –including its shortcomings and limitations–, identify the challenges that Chile must face in the coming years, and put forward suitable proposals for meeting them. The report of the Commission thus became an important point of reference for the changes to be made later.

In May 1996, President Frei called into being an educational reform process which, while reasserting the initiatives and programmes under way, added others to make up an integrated set of changes.

1. Programmes for educational improvement and innovation

This set of programmes includes all the programmes which have been adopted over time in order to provide schools with teaching material and promote innovation, such as the supply of textbooks and other material and the various measures taken under the MECE programmes already referred to. In addition, it includes the Montegrando Project, which is to set up a network of top-level high schools to lead the way in the reform of education, which will later spread all over the country.

2. Professional development of teachers

No educational reform can be successful unless it provides for energetic support for teachers. The present reform provides for the improvement of teachers' working conditions and training, both in the case of teachers who are already working and those who are still on their initial training courses.

In Chile, 95% of all teachers have completed specialized studies: 78% are graduates of universities or university-level professional training institutes, while 17% come from the teachers' training system. Their average age is 43: 12% are under 30, while 11% are over 55. The great majority (70%) are women.

The improvement in teachers' pay has been gradual but systematic and substantial, as may be seen from table 3. Innovative forms of incentives for obtaining better results have been introduced, such as:

a) *Improvement of working conditions*

i) *Special allowances for outstanding performance.* These are quarterly bonuses for teachers in the schools (one-quarter of the total) which obtained better results, in recognition of the work of the teaching teams which made the schools work well and helped their students to learn better.

In order to determine which establishments deserve these bonuses, the National System for Evaluating the Performance of Subsidized Educational Establishments (SNED) was set up and evaluates every two years the whole of the subsidized schools and colleges. In order for the process to be fair, the comparisons are made between schools of similar types. First, the schools are divided into homogeneous groups on the basis of the socio-economic vulnerability of their students, the level and form of education given in the schools, their size, and whether or not they are in rural areas. The schools in each group are then compared with each other: i.e.,

TABLE 3

Chile: Teachers' pay for a 44 hour week (monthly average over a year)

(In 1999 average pesos)

Year	Municipal sector		Subsidized private sector
	Average	Minimum	Minimum
1990	243 138	134 251	69 047
1991	260 398	162 097	150 667
1992	304 402	180 105	173 354
1993	342 277	190 617	176 958
1994	389 270	221 192	197 833
1995	428 380	244 095	239 039
1996	459 854	268 310	267 151
1997	502 544	294 345	293 074
1998	528 488	320 789	320 789
1999a	547 794	338 408	338 408
2000a	566 503	356 717	356 717

Source: Ministry of Education, Planning and Budget Division.

^a Estimate.

the comparison is only between establishments with similar characteristics. Finally, six indicators are determined for them: effectiveness, effort to improve, initiative, improvement of teachers' working conditions, equality of opportunities, and integration of teachers and parents. This process takes into account not only the level attained in comparison with the rest of the group, but also, and especially, the progress made in all the indicators.

This system of measurement has gradually been perfected to make it more objective and thus reward the most important results pursued in the establishments in question. The size of the bonuses awarded for outstanding performance has also gradually been increased.

ii) *Special allowances for work in difficult conditions.* These allowances aim to compensate teachers who work in places considered as difficult because of their geographical location (difficult access, particularly bad climate, etc.), marginality, extreme poverty, urban insecurity or the like. They consist of a variable percentage of the national basic salary, with a maximum of 30%. In each region, the size of the bonus corresponding to each establishment is determined every two years. The regions have a limited amount of resources to distribute among their schools in respect of these allowances, and determine with special attention which of them need this incentive most.

iii) *Awards for excellence in teaching.* As another means of recognizing the importance of teachers' work, in 1997 all the schools in the country were invited for the first time to elect from among their teaching staff the teacher most worthy of distinction for the excellence of his or her educational work. The idea was not that the Ministry of Education, the government or the municipalities should make this selection: instead, each establishment should do so. This is a significant award which, in addition to the honour it represents, also involves a substantial economic reward: over 10 months of the 1999 average salary.

b) *Refresher courses for teachers*

In this respect, the reform process includes a wide and varied range of initiatives such as the following:

i) *Fundamental upgrading courses.* The introduction of the new programmes of studies was preceded by what were known as fundamental upgrading courses. The objective is that all teachers should prepare themselves for the implementation of the new curricula. Introductory and upgrading courses were offered in

various matters specially required by teachers, with special courses for head teachers.

In collaboration with universities and other accredited academic institutions, the Ministry of Education has offered these upgrading courses totally free of charge. The respective classes are held during the summer months and are complemented with various actions that teachers must carry out in their own schools in the course of the year.

ii) *Internships and diploma courses.* Training scholarships are offered in connection with practically all the initiatives in the reform process, but the most novel measure has probably been the possibility of attending courses abroad. This programme, which started in 1996, includes internships and diploma courses (according to whether they last two or five months), and has helped to give our teachers and our educational system the possibility of familiarization with international advances.

iii) *Weblinks.* Suitable training for teachers is of fundamental importance for the use of information technology as a teaching tool. For this purpose, the Ministry set up the Technical Assistance Network, made up of 30 university institutions which offer training to 20 teachers from each school entering the Weblinks project. This training is given in the teachers' own schools and comprises two yearly stages involving a total of 92 hours of attendance. In the last four years, over 55,000 teachers have completed this training.

iv) *Programme to Strengthen Initial Teacher Training.* In order to achieve higher quality in the upper-level studies of future teachers, a special programme of scholarships was set up for talented young people training to be teachers, together with a fund offering resources to be awarded by competition to universities and institutes for financing projects to improve four-year teachers' training courses. Working networks have been established among the institutions, and new links have been forged with the educational system and its component schools; in addition, improvements have been made in the infrastructure of faculties of education and their libraries, and greater use is being made of multimedia facilities.

In the last three years, an increase has been observed in the number of applicants for teachers' training courses, who also have better academic qualifications than in previous years. This is clear proof that the set of reform initiatives, including the higher priority given to education on the public agenda, has succeeded in reversing the negative trends of previous years. Increasing numbers of young people are now deciding that they want to be teachers.

3. Reform of curricula

This reform has three main objectives. First, to update the aims and content of basic and secondary education, in view of the fact that the existing study plans and programmes had been prepared in the early 1980s. Second, to promote high-quality education incorporating the most recent advances in teaching. Third, to comply with the provisions of the Constitutional Organic Law on Education, which, in addition to formally expressing the general goals and graduation profiles for the two cycles, laid down new procedures for establishing school curricula, based on decentralization. This means that schools have a substantial degree of freedom to define their own study plans and programmes.

The reform of curricula involves two stages. Initially it was necessary to agree on a global framework and then to prepare the study programmes. The general framework must incorporate certain basic objectives in respect of ethical training, personal growth and self-assertion, the person and his environment, and the development of the ability to think.

The general curricular framework for basic education was approved early in 1996, after which the study programmes for the first and second stages of basic education were prepared and came into effect the following year. The new curricular framework for secondary education was also approved and began to be applied as from 1999. In the year 2002, all levels of education will be subject to the new study programmes. As already noted, the implementation of these changes in curricula calls for the corresponding training of teachers and the renewal of school books.

New bases for pre-school education are also being prepared, and in 2002 a new curriculum will come into effect which will replace that used for over three decades.

Special mention should be made of the participative yet highly professional way in which the new curricula have been prepared. This is one of the key functions of the Ministry of Education, which now guides, leads and regulates the educational system, without direct responsibility for running the schools, as in the past. For this purpose, it set up the Curricula and Evaluation Unit, to be responsible for the preparation, updating and evaluation of curricula, which prepared a first draft curricular framework for submission to a group of outside experts. A national consultation was then held among all teachers and even secondary school students. After that, a panel of specially invited foreign experts

was organized to analyse the draft and compare it with the standards of the countries with the best school results. Finally, the proposed framework was submitted to the Supreme Council for Education for its final approval.

The actual study programmes can be prepared by the schools themselves, although the great majority of them—as was expected—have initially used the curricula prepared by Curricula Unit of the Ministry of Education.

4. Full-day classes

This was the most important initiative in the programme announced by President Frei in May 1996. According to the prior diagnostic studies, it was obvious that high-quality education called for more hours of study than those being fulfilled by schoolchildren in Chile. The great majority of them attended classes for only half the day, because in order to expand enrollment the school facilities were being used in two shifts.

The concern to increase the time spent in school had already been reflected in several measures taken in previous years, under which the school year had been increased from 37 to 40 weeks. In 1995 an educational support subsidy was established to enable pupils who so required to receive extra hours of teaching during the last months of the year.

This initiative to introduce full-day classes means that in basic education the weekly number of hours of classes goes up from 30 to 38, while in secondary education it rises to 42 hours. In other words, taken

TABLE 4
Chile: Monthly subsidy per student, according to type of education
(In February 2000 pesos)

	Half-day classes	Full-day classes
Basic education, grades 1 - 6	17 899	24 076
Basic education, grades 7 and 8	19 438	24 175
Special basic education	59 027	73 154
Secondary agricultural techno-professional training, grades 1 - 4	32 213	39 261
Secondary industrial techno-professional training, grades 1 - 4	25 098	30 581
Secondary commercial techno-professional training, grades 1 - 4	22 498	28 854

Source: Ministry of Education, Planning and Budget Division.

over the whole 12 years of schooling, the larger number of hours per week are equivalent to over two more years of schooling compared with the half-day system.

International studies soundly endorse the positive effect of more hours of schooling on the quality of education. Indeed, in the preparation of the reform special attention was paid (among other sources) to the influential study *Prisoners of Time* made in the United States by the National Education Commission on Time and Learning and a review of 130 studies on this subject made by The Brookings Institution, which concludes that 97% of the studies in question bear out the assertion that there is a highly robust link between longer time in school and the achievement of better results.

V

Achievements and difficulties

A process of profound changes like the educational reform programme described here is a complex process whose effects can only be appreciated after some time. This is particularly true when the reforms are still in course of application and will only be fully in effect around the year 2005. Nevertheless, some elements already stand out and offer valuable experience for other processes of change.

Clearly, one of the achievements of these years has been the higher priority given to education in the public agenda and in the allocation of public and private resources, and the continuity of the policies applied throughout the 1990s.

The considerable increase in resources may be seen from table 5. Between 1990 and 1999, public expenditure on education increased by 150% in real terms. The priority given to the educational reform process in the allocation of public resources was clearly shown when, in spite of the fiscal restrictions in 1998-2000 associated with the effects of the Asian crisis, public expenditure in this area continued to increase and the investments originally scheduled for the reform process were not affected.

In the 1990s, the subsidies given and the expenditure per student more than doubled: the subsidies went up from 10,143 pesos in 1990 to 24,000 pesos in 2000 (in pesos of the latter year). Such a substantial increase in the subsidy per student for primary and secondary education was possible because

The expansion of full-day classes not only means increasing the number of hours for which teachers are hired, for which purpose it is necessary to increase the monthly subsidy, but also expanding the school facilities in the great majority of the country's schools, which involves heavy investments for at least five years. Table 4 shows the increases in the subsidies paid, which have been increased by approximately a third because of the extension of the school day.

So far, over half the schools (although only a smaller proportion of students) are already giving full-day classes. The remainder are building facilities or preparing projects for their incorporation into this system in the coming years.

not only was overall public expenditure on education increased, but also this expenditure was concentrated on basic and secondary education, with only a small increase in expenditure on university education. Furthermore, within basic and secondary education there was a proportionally larger increase in the resources aimed at students from lower-income families.

It may be seen from table 5 that the private contribution to education grew even more than that of the public sector, registering an increase of 170% in real terms during the decade and representing nearly 3% of the gross domestic product. This significant increase was due to the contributions made by families to the cost of higher education and a growing contribution to subsidized education through the co-financing system. This was naturally made possible by the rapid growth of the economy during these years.

Most of the larger resources went to improve the working conditions of teachers (see table 3 above).

This increased private contribution to the financing of education helped the State to concentrate its resources on less well-off families. In practically all programmes priority was given to the neediest families, in keeping with the greater equity pursued by the reforms.

The strategy of greater equity in the educational improvement initiatives of the early 1990s and the reforms announced in 1996 always sought to give

TABLE 5

Chile: Total expenditure on education, as a percentage of GDP^a

	1990	1991	1992	1993	1994	1995	1996	1997 ^b	1998 ^b
Public expenditure on education/central government expenditure	11,9	12,0	12,8	13,0	13,5	14,3	14,9	15,5	16,1
Public expenditure on education/GDP	2,6	2,7	2,9	3,0	3,1	3,1	3,4	3,5	3,9
Private expenditure on education/GDP	1,8	1,9	2,0	2,2	2,5	2,5	2,8	2,9	3,1
Total expenditure on education/GDP	4,4	4,6	4,9	5,3	5,6	5,6	6,2	6,4	7,0

Source: Ministry of Education, Planning and Budget Division.

^a Gross domestic product.

^b The figures for 1997 and 1998 are provisional. Public expenditure on education comprises central government expenditure on this item, plus municipal contributions to education.

priority to the students with the greatest needs. It began with the 900-P programme, which gave priority to the 10% of schools with the lowest performance, and went on to increase the school subsidies to give special support to rural education, students in special schools, pupils requiring support classes to avoid repetition and possible dropping out from the system, and students in boarding schools. Moreover, almost without exception new programmes were begun in the poorest schools: this was so, for example, in the case of the provision of computer training and the introduction of full-day classes, where the first schools to extend the school day were precisely those serving the poorest children. Likewise, the programmes to increase school meal coverage, school health programmes, the provision of textbooks and materials and the expansion of pre-school enrollment were all aimed at securing greater equity. Similarly, in the programmes operating on a competitive basis, such as applications for PMES, for the Montegrando Project for secondary education, or for refresher courses for teachers, one of the selection criteria has always been the level of poverty and needs of the schools in question.

When families have been required to help pay for the education of their children, systems of scholarships and (in the case of higher education) loans have been established in order to prevent this requirement from becoming a factor of exclusion.

Apart from the importance of the bigger resources made available for achieving the advances made in the reform process, another basic factor has been the continuity of the policies applied during these years. This has been aided by the continued existence of the Coalition government, the building of consensus in respect of the reform proposals, and the continuity of the high-level staff of the Ministry of Education. This

continuity is worth stressing, because in Latin America there is generally a high degree of policy instability, with frequent changes of ministers. This is particularly undesirable in an activity such as education, which by its very nature is a long-term project.

As regards the achievements in terms of learning, two aspects are worthy of note. Firstly, repetition and dropping out have been reduced, so that a growing proportion of young people are completing their secondary education. Within secondary education, the rate of repetition has been reduced from over 12% in 1990 to 8% at the end of the decade and the dropout rate has been brought down from 7.5% to 5%. The same evolution is to be seen in basic education, with the rates dropping from 7.8% to 3.5% and from 2.3% to 1.5%, respectively. These rates had remained practically unchanged during the 1980s. This success in keeping children in school and increasing the proportion of students who pass on to the next grade is undoubtedly an important achievement.

With regard to scholastic achievement proper, Chile has the great advantage of having the System for Measuring the Quality of Education (SIMCE), which has been carrying out periodical nationwide tests since the late 1980s. According to the results of these tests, the average improvement in results is still insufficient. There has, however, been significant progress in the case of the poorest schools.

Notwithstanding the positive impact represented by this progress, however, the poor results obtained by the vast majority of students in comparison with international standards are worthy of note. Over 60% of the pupils in Chilean schools fail to reach the levels considered desirable for the eighth grade. Likewise, the results in the international mathematics and science tests held in 1998 under the Third International Mathematics

and Science Study (TIMSS) reflect a poor showing by the eighth grade students of Chile, whose results were among the lowest of the 38 participating countries. Thus, 95% of the Chilean schoolchildren turned in a performance below the average registered by children of the countries with the best results, such as South Korea and Singapore.

All this confirms the importance of the efforts which have been made as part of the educational reform process and at the same time highlights the need to heighten them in order to narrow the learning gap thus revealed, although this will necessarily take several years.

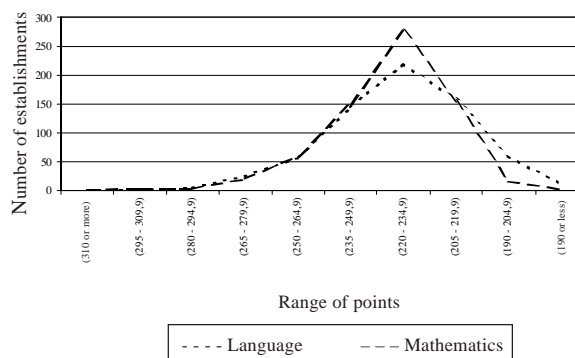
There are various aspects of the reform process which must be strengthened in order to ensure improvements in quality, which are by definition harder to attain than increases in coverage (see the proposals in Arellano, 2000).

At this point, I should like to emphasize an aspect which seems to me to be specially important when the objective is higher quality and there is decentralization. This is emphasis on the results and on the need for ongoing evaluation. In practice, very great differences are to be observed between the results of different schools attended by children of similar social and cultural backgrounds. The figure shows this dispersion in the results of the establishments attended by children from the poorest 40% of the population. In spite of their unfulfilled needs, 13% of those children obtained results which were better than the national average.

Greater emphasis needs to be placed on the results and on the adaptation of teaching practices and the learning environment in order to bring them closer to those of the schools which, despite their lack of resources, managed to enable their pupils to learn and

FIGURE

Establishments in the fourth and fifth quintiles of the socio-economic scale, in order of SIMCE ranking in second half of 1998



Source: Estimates by the author on the basis of Ministry of Education, results of the System for Measuring the Quality of Education (SIMCE).

develop their capabilities, as indispensable means for overcoming the shortcomings of the school system.

Above all, it is necessary to persevere with the efforts made in these years. Improvements in the quality of education are not achieved in a short period of time, and this is proved by the results of the last international TIMSS tests: of the countries which repeated the mathematics and science examinations after four years, practically none of them display any substantial change in the average performance of their students. A sustained effort lasting ten to fifteen years is needed in order to attain the levels of quality that our educational system needs in order to prepare our children better to meet the demanding challenges of the knowledge society.

(Original: Spanish)

Bibliography

Arellano, J. P. (2000): *Reforma educacional: prioridad que se consolida*, Santiago, Chile, Editorial Los Andes (www.jporellanom.terra.cl).

Delannoy, F. (2000): *Education Reforms in Chile, 1980-98: A Lesson of Pragmatism*, Washington, D.C., World Bank, June.

García-Huidobro, J. E. (ed.) (1999): *La reforma educacional chilena*, Santiago, Chile, Editorial Popular.

Ministry of Education (MINEDUC) (1999): *Reforma en marcha: buena educacion para todos*, Santiago, Chile.