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Education Reform in Chile: Context, Content and Implementation

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Introduction

From the beginning of Chile's transition to democracy in 1990 until the present, the government has taken unprecedented steps to transform and improve the education system. Backed by a broad consensus regarding the education sector's strategic importance for economic and democratic development, policy changes have aimed at the goal of providing high-quality education to all. Universal high-quality education is expected to improve abstract thinking, communication skills, teamwork, learning ability, and moral judgment and hence enable graduates to perform well in the complex world in which they will have to function. These policy changes have come about within a decentralized institutional framework in which market principles—introduced in the early 1980s in accordance with the neoliberal economic policies of the former military regime—operate in concert with state policies designed to improve quality, equity, and the curriculum.

Chile's educational advances of the 1990s provide an exceptional opportunity to study the roles that state and market might play in shaping a society's system for developing its human resources and promoting cultural integration. To this end, it is important to examine the context and content of the education policies advocated by the Chilean

government, the processes by which the changes have been implemented, and the main problems surrounding education policy reform.

Policy Context

External Context: Urgency, Opportunity, Consensus

Two principal factors account for Chile's deep concern about the country's educational institutions and practices. The first is a shift in national objectives. With the end of the authoritarian period, internal strife subsided and attention turned to constructing a consensus-based program for national development. Education occupied a central place in this program. Two decades of social chaos had left education in the shadows, with no thought to its social or cultural functions. As the 1990s dawned and ushered in major technological and sociocultural changes, education experts and society as a whole grew increasingly concerned about which cultural values to preserve and how to shape the intelligence and will of the new generation. The second factor relates to the acceleration of global changes marking the end of the century, in which information, knowledge, and communications play a pivotal role. These circumstances pushed education to the top of the social and political agendas.

The widespread sense of urgency regarding education reform has been fueled by three other factors as well. First, action in this sector has been one of the highest priorities of the last two administrations: the transition government of 1990-94¹ and President Eduardo Frei's government of 1994-2000. Second, the macroeconomic stability and growth achieved in recent years have ensured the availability of a certain amount of financial support to sustain needed investments and reforms in education. And third, the proposed policies have met with widespread public acceptance. Whereas the privatization and decentralization implemented by the military government in the 1980s were strongly resisted by both teachers and the political opposition of the time, the educational changes of the 1990s—directed at the means and processes of teaching and learning—are not controversial. Indeed, there is universal support for the "modernization" of the sector.

Internal Context: Good Coverage, Poor Methods and Outcomes

When the transition government took over at the beginning of the decade, Chile's subsidized school system was offering almost universal coverage at the primary level (lasting eight years), and close to 80 percent at the secondary level (lasting four years). This meant that education policy could address issues other than access. One of the principal problems at the time was a steady decline in public expenditure on education in conjunction with increased enrollment at the secondary level. Primary and secondary schools both were operating in extremely precarious material conditions. So it is not surprising that the average quality of learning in the state-funded school system was unacceptably low. According to the results of a survey known as SIMCE (the *Sistema de Medición de la Calidad de la Educación*, Educational Quality Measuring System), only

45-50 percent of students met minimum objectives during the 1980s, with no improvement over the course of the decade. Teachers, too, suffered serious problems. Their salaries had dropped by about one-third in real terms, and many of them had been subjected to political persecution for opposing the education management and financing model instituted in the 1980s. They saw the return to democracy as an opportunity to improve their financial and professional status, as well as to recentralize the system.

Decentralization and Financing through Per-student Subsidies: A Legacy of the 1980s

For most of its history, Chile's school system has followed a highly centralized model of state-provided education that dates back to the mid-19th century. The only time it veered from this course was during the 1980s, when the military regime introduced radical reforms aimed at decentralizing and privatizing the system. These changes remained in place even when the democratic government came to power in 1990, although the state did adopt some new guidelines for action in the sector.

The reforms of the early 1980s consisted of three main measures directed at school management and financing. As a first step, the government transferred the administration of all schools from the Ministry of Education to the nation's 325 municipalities (there are now 334); the municipalities were thus empowered to make their own decisions regarding staff and infrastructure, while the Ministry of Education retained powers of oversight, assessment, textbook selection, and the establishment of standards and curricula. Second, the old system of allocating resources—based on the historic expenditures of each school—was replaced by the payment of a subsidy for each child enrolled at a given school. This subsidy was intended to operate as a financial incentive to private entrepreneurs who might be willing to set up new establishments for primary and secondary education. Third, the reform transferred the management of a number of public institutions offering secondary-level vocational education from the Ministry of Education to corporations established for this purpose by the major business associations.

The decentralization and privatization of the 1980s were intended to achieve greater efficiency in the use of resources through competition among schools for enrollment, the transfer of functions from the Ministry of Education and its central bureaucracy to local municipalities, and the diminished negotiating power of the teachers unions. In addition, the private sector was encouraged to participate more in the supply of education, so as to increase the competition between schools and provide more options for consumers, and an effort was made to bring technical-professional secondary education into closer contact with the economic spheres of production and services.

By 1990 the school system was organized and managed in a dual fashion: public primary and secondary schools were administered by municipalities, but they looked to the Ministry of Education for guidelines on their curriculum, teaching methods, and evaluation. Similarly, private schools—whether or not they received a government subsidy—were subject to Ministry-established curricula and evaluations. This arrangement, the result of reforms imposed by the military regime on an historically centralized system, was basically accepted by subsequent *Concertación* (coalition)

governments, although the latter have attempted to strengthen the role of the Ministry and have undertaken programs of direct intervention to enhance quality and equity.

Box 1

Structure, Size, and Management Categories of Chile's School System

Chile's school system consists of a mandatory eight-year primary program for children six to 13 years of age and an optional four-year secondary program for those 14 to 17. Students in the secondary program have a choice of following a more general academic (humanistic-scientific) curriculum, which prepares them to continue their studies at a tertiary level, or a vocational (technical-professional) curriculum offering training in skills that will enable them to enter the job market. The pre-school segment of the education program caters to children up to five years of age in an array of public and private institutions; enrollment in this segment is not obligatory and concentrates on four- and five-year-olds. In 1995 coverage of this group reached 24 percent. Total enrollment in primary and secondary schools in 1996 was 2.89 million students. Some 2.18 million attended primary school, where coverage approached 95 percent for children six to 13 years of age, while 709,207 students attended secondary school, where coverage was 80 percent for those 14 to 17. The system is served by 129,000 teachers in approximately 10,000 primary and 1,600 secondary education establishments.

As of 1996, the share in enrollment for the different categories created by the 1981 reform was as follows:

<u>Category</u>	<u>Percent</u>
Municipal education	57.1%
Private subsidized education	32.7
Non-subsidized private education	8.3
Corporation-run education*	1.8

* Refers to technical schools run by business associations and corporations, with public support through agreements with the government rather than on the basis of per-student subsidies as in the rest of the system.

New Policy Paradigm of the 1990s

The rationale behind Chile's present education policies has departed from both the traditional centralized system, whose primary concern was to increase coverage, and the privatized and decentralized system of the 1980s. As suggested above, the policies of the 1990s have combined decentralization and competition for funds, on the one hand, with positive discrimination and proactive efforts by the state, on the other. The new programs are designed to improve the quality and equity of education, introduce new methods of transmitting information and evaluating programs and institutions, and open primary and secondary schools to external "support networks," particularly universities and corporations.

This framework has its roots in concepts developed at independent academic centers that opposed the authoritarian government. These centers sought to supersede both the traditional "teacher-state" and the decentralized system imposed by the neoliberal reform, which lacked a central agency capable of guiding the system toward new levels of quality

while safeguarding equity.² Views on education policy were also shaped by the World Conference on Education for All held at Jomtien, Thailand, in March 1990, and by ideas set forth by UNESCO and the UN Economic Commission for Latin America and the Caribbean (ECLAC) in the early 1990s. Principles established between 1990 and 1992 (Box 2) have guided education policy making throughout the current decade (see section 3).³

Box 2

Guiding Principles of Chile's Education Policies during the 1990s

Policies concerned with quality have called for the following changes:

1. Shift the focus from educational inputs to learning processes and outcomes.
2. Conceive of "equity" not as the provision of a homogeneous education across the nation, but rather as the provision of an education that is sensitive to differences and discriminates in favor of disadvantaged groups.
3. Regulate the system not through bureaucratic and administrative procedures but through incentives, information and assessment.
4. Encourage institutions that have been somewhat divorced from the requirements of society—devoted primarily to self-sustainment and controlled by their practitioners and bureaucracy—to become more responsive to the demands of society and to interact more closely both among themselves and with institutions from other fields and environments.
5. Replace policies that promoted change via comprehensive reforms and linear planning, with differentiated strategies and incremental change based on unleashing schools' own ability to take initiative, rather than follow prescribed methodological or curricular "recipes."
6. Shift from the absence of strategic (state) policies—or the subordination of such policies to special interests within and outside government—to strategic policies that are nationally defined, consensus-based, differentiated, and flexible.

Content of the Policies

The overall objective of state intervention in the education sector since 1990 has been to address the major issues of low quality and inequity in the learning experience provided to students. (Coverage is no longer a major problem.) Government actions have concentrated on four policy areas: financing, regulation of the teaching profession, educational environment and processes, and the political consensus on the need for change in the sector and the kind of changes required. Important steps, designed to act incrementally over time, have been taken in each of these areas. This paper will focus on policies affecting the learning environment and teaching processes; questions of political economy in the education sector will be touched on only briefly.

Financing

Increase in spending

Between 1990 and 1996, the total expenditures of the Ministry of Education increased steadily, from US\$1.158 billion to US\$2.235 billion (see Table 1), after a decade-long decline. Subsidies—that is, public spending per student enrolled in the school system (which on average accounts for about two-thirds of the sector's budget)—rose 68.9 percent, while the total budget for education increased 93 percent. In addition to subsidies, the total budget includes spending on higher education, investments in educational infrastructure, and programs to improve quality and equity. Hence, the policies of this decade revolve around per-student subsidies—which signify that resources are being transferred to owners/managers, whether municipal or private—while, at the same time, the central government is capable of undertaking proactive measures through special investment and improvement programs. The political opposition sees the latter feature as a symptom of recentralization and bureaucratic control; in this respect the policy debate is about whether "all expenditure should go to subsidies" or whether "expenditure should go to subsidies plus improvement programs."

Per-student expenditure in 1990 represented just 77 percent of 1982 spending. It was not until 1994 that spending exceeded the 1982 level. By 1996 expenditure was one-third greater than in 1982, not counting spending on quality and equity improvement programs, special assistance programs, or infrastructure. If those costs are included, per-student expenditure increases to practically double that of the early 1990s (see Table 1).

Along with the sustained increase in expenditure, the subsidy policy has sought to address the most serious imbalances between schools' subsidy income and normal operating expenses in the various types of education schemes. This has involved substantially increasing subsidies to rural schools and adult education. In addition, since 1995 special subsidies have been awarded to schools in poor areas that have extended their school hours to provide remedial activities for lagging students.

Shared Financing, 1993.

Under a tax reform passed at the end of 1993, the families of children attending subsidized private (but not municipal) primary schools and subsidized municipal and private secondary schools are required to pay a fee, as a form of co-payment alongside the state subsidy. When per-family fees exceed a certain level, the subsidy is decreased proportionately.⁴ Shared financing allowed the schools in the system to collect US\$35 million in 1994, US\$55 million in 1995, and US\$80 million in 1996 (which was equivalent to about 6.3 percent of total subsidies for that year). In 1996, 25 percent of enrolled students (about 744,000) were included in this co-payment scheme, with fees ranging from about US\$2.50 to US\$85 per month.

Although the co-payment arrangement has succeeded in attracting private resources into education, it has also segmented public education (by differentiating schools according to the level of resources that sustain them) and caused social segregation (by excluding families that are unable to pay). This practice violates principles of equity and needs to be remedied, though no appropriate mechanisms for doing so have yet been found.

Table 1: Ministry of Education Expenditures and Per Student Subsidy Rate 1982-96
 (Ministry spending in millions of U.S. dollars averaged over 1996;
 monthly subsidy rate per student in 1996 U.S. dollars)

Year	Minimum (millions)	Education as a percentage of public expenditures	Education as a percentage of GDP	Subsidized enrollment	Monthly per student subsidy	Per student subsidy index (1982 = 100)
1982	1,594	-	-	2,331,434	27.44	100
1985	1,436	-	-	2,497,528	20.81	76
1990	1,158	13.1	2.5	2,692,125	21.02	77
1991	1,296	13.4	2.6	2,683,137	21.7	79
1992	1,489	13.6	2.7	2,728,180	23.73	86
1993	1,621	13.8	2.8	2,750,714	25.84	94
1994	1,767	14.2	2.8	2,808,823	28.78	105
1995	1,974	14.9	2.9	2,891,167	34.53	126
1996	2,235	15.6	3.1	2,989,141	35.53 (*)	129

Regulation of the Teaching Profession

Teachers Statute 1 (Law 19,070), 1991.

In 1991 the government restructured teachers' labor regulations and transferred them from the Labor Code governing private activities to a special Teachers Statute (*Estatuto Docente*) that sets forth national work standards (e.g., number of days, maximum number of hours, holiday benefits) and an improved nationwide salary structure. It also provides bonuses for further training, professional experience, and working in difficult conditions, as well as high job stability.

This statute has been the most controversial measure of the 1990s. It caused a split in the presidential cabinet and would not have gained executive approval without the personal support of the president himself. In congress, the articles referring to job tenure, especially the tenure of principals, were made even more stringent, with the strong support of the political opposition. At the same time, the opposition believes that the

statute has reversed the measures introduced in the 1980s to deregulate the teachers' labor market and runs entirely counter to the subsidy financing scheme. The statute made it practically impossible for owners/managers to make changes in their teaching staffs in line with enrollment (and, therefore, with income); in essence, it has hindered management from becoming more efficient by making one of its key factors inflexible. Yet it also provided a basic political condition that has helped ensure reform in other areas, in that it in large measure satisfied teachers' expectations of a better deal with the return to democracy. Between 1990 and July 1996, there were only two days of teacher strikes, and no opposition whatsoever to the set of programs aimed at improving the quality of teaching and learning, which forms the heart of the education policy agenda in the 1990s.

Teachers Statute 2 (Law 19,410), 1995.

Under the new municipal administrations established through the democratic process from 1991 to 1993, the teaching staff grew by approximately 10 percent. However, enrollment—and, therefore, income—did not increase commensurately, and financial imbalances appeared within the municipalized system. In response, the statute was reformed to relax the rules on tenure and to link salaries to performance. One initiative created an Annual Plan for the Development of Municipal Education (*Plan Anual de Desarrollo de la Educación Municipal*, PADEM), which made it possible to reduce staffing levels as of 1997, and established a National Performance Assessment System (*Sistema Nacional de Evaluación de Desempeño*, SNED) for schools, which allows evaluations to take into account the type of students teachers work with, and establishes incentives and awards for teaching staffs that improve learning outcomes. Both PADEM and SNED are in the initial stages of implementation.

The 1995 reform of the teachers statute also provided for a further increase in teachers' salaries. This and other raises during 1990-96 (not including one agreed on in September 1996 and applied in the first quarter of 1997), boosted teachers' remunerations by 80 percent in real terms since 1990; average pay amounts to about US\$640 per month for a 30-hour week.

Improvement Programs: Policies Related to Educational Activities

As mentioned earlier, the overriding goal of Chile's education policy in the 1990s has been to improve the quality of learning to meet the educational requirements of the future, in particular the need to use and manage information in innovative ways. The policy initiatives described below are intended by the government to ensure that the "knowledge-based society" provides equal opportunities to all.

The education policies of the first *Concertación* government (1990-94) were not officially referred to as "education reform," since that phrase was identified with a tradition of top-down changes imposed by statute on the entire system in a homogeneous fashion. These typically had focused on curriculum and structure, and took the attitude of

"plus ça change, plus ça reste égale" with regard to the type and levels of student learning. In contrast, the major objective of the new government was to substantially improve the learning of the majority of students through differentiated improvement programs, which would respond to needs within the school system that varied by level and type of educational situation. These programs sought to directly modify teaching and learning practices by introducing new processes into the learning environment, as well as by establishing new opportunities, incentives and ideas to encourage initiative among teachers.

The fundamental assumption underlying this strategy was that universal high-quality education could only be achieved through the committed and well-informed cooperation of the professionals at the base of the system. Thus, the strategy for change would be inductive rather than deductive, practical (grounded in previous experience and political realities) rather than statutory, varied in its approaches, and subject to modification on the basis of the lessons learned during implementation. Furthermore, teachers would not merely pay lip-service to these changes but would participate fully; the system would rest squarely on the learning, responsiveness, and autonomous decision making capabilities of the teaching staff in each school, acting within a context of new methods, ideas, and incentives.

The second *Concertación* government (1994-2000) has made education its top priority. It has vowed to double public spending in the sector within six years, has restructured the school day and thereby introduced a new operational time-frame, and, as of 1995, started speaking openly of "reform." This does not mean that the government's strategic vision has changed, but merely that the scope of change has expanded. Between 1990 and 1996, changes in education have increased in breadth, depth and importance, and, at the same time, have come to involve not only the Ministry of Education, but also the entire government, political system and society as a whole. As detailed below, the course followed during the decade has gone from intervening in the poorest 10 percent of primary schools to including all subsidized primary education; from there to encompassing all secondary education; and subsequently to proposing changes to the operating time-frame of the entire school system, its curriculum, and teacher training.

Quality Improvement Program for Schools in Poor Sectors ("The 900 Schools Program"), 1990.

As a first step in its education program, the transition government in 1990 concentrated on meeting the needs of the 10 percent of primary schools with the poorest learning results. Conceived as an "intensive care" effort, the 900 Schools Program (P-900) provided an array of material (infrastructure, textbooks, teaching materials, classroom libraries) and technical support. The immediate goal was to improve reading, writing, and arithmetic skills, as well as enhance the self-esteem and communication skills of students in their first four years of basic education. The underlying strategy here was to modify the approaches and methods used to teach reading, writing, and arithmetic; hire young people in the community who had completed their secondary education to act as monitors and help teachers with children lagging behind; and give schools a healthy infusion of new

textbooks and educational materials. The program moved into the schools swiftly and was met with a warm welcome from teachers and communities alike. Since the first year of its implementation, it has shown positive results.

Once the schools in the P-900 program achieved the desired improvements in the learning levels of their students—as measured by national performance tests administered to fourth-graders—they could leave the program and begin participating in the Ministry of Education’s universal coverage program for basic education, known as MECE-Básica. Between 1990 and 1996, some 2,099 primary schools completed the program. Over this period, the average fourth-grade score in mathematics and Spanish on the SIMCE test in the P-900 schools rose from 52.11 (out of a maximum of 100) to 64.06. This represents an improvement of 11.95 percentage points. During the same period, average scores in all subsidized schools improved by 8.95 points, which suggests that the gap in quality between the schools at the lowest levels of the system and the rest had narrowed.⁵

Box 3

The 900 Schools Program

The 900 Schools Program introduced the principle of "positive discrimination" into Chilean education, putting into practice a special strategy of intervention in the 10 percent of schools showing the poorest learning results in the system (according to average scores in Spanish and mathematics in a national standardized exam).

The program focuses on grades one through four. Its objectives are to improve students’ language skills, math skills, and self-esteem. To this end, it combines new investments—in infrastructure, textbooks, teaching materials, and classroom libraries—with teacher training at in-school workshops.

The program’s main innovation has been to provide support outside school hours for children who are lagging behind their peers. These activities are led by young people from the community, known as monitors, who have received special training in so-called "learning workshops."

Schools that manage to improve learning results "graduate" from the system, which can be considered the "intensive care unit" of the subsidized school system.

Program for Improving Quality and Equity in Preschool and Basic Education (MECE-Básica), 1992

The MECE-Básica program, initiated in 1992 with the financial and technical support of the World Bank, covered the entire preschool and primary-school system. Its purpose was to significantly improve conditions, processes, and outcomes at preschools and primary schools through a combination of investments in material inputs and innovations in teaching methods, tailored to the different types of schools. The program, which concluded in 1997, had resources totaling US\$243 million.⁶

On the input side, MECE-Básica supplied textbooks to all subsidized enrollees (some 6 million books per year),⁷ library materials for all first- through sixth-grade classrooms, and teaching materials for all classrooms from preschool through fourth grade. Additional investments in infrastructure repairs, and a program of health services, aimed at ensuring the best conditions for learning.⁸

MECE efforts to enrich the work of students and teachers were highlighted by three major innovations: a special program for rural schools; a program to encourage better management at the school level (the "Education Improvement Projects" program); and a computer network for schools, known as the "Enlaces" (Links) Network.

The first element of MECE-Básica, the *rural program*, encompassed more than 3,000 rural primary schools with staffs of one to three teachers. Its support consisted of textbooks, library and teaching materials, and special teaching strategies geared to rural cultural conditions and to schools with students at various grade levels in a single classroom. Following its establishment in 1992, the program expanded gradually, taking in one-fifth of the relevant schools per year, beginning in regions with the greatest percentage of rural population and the most disadvantaged schools. It achieved total coverage in 1996, with 3,338 schools, 5,121 teachers, and 96,540 students.

The main challenge for this part of the MECE program lay in formulating an appropriate curriculum and teaching methods. The Chilean school system, with its centrist traditions (the entire country had followed the same curriculum) and urban orientation, had failed during the 1970s and 1980s to provide specific policies for rural education. In fact, the system in place in 1990 discriminated against rural children through sheer inattention. Under current policy, this situation has changed entirely, in that the linguistic and cultural backgrounds of rural children are no longer considered obstacles, but instead are treated as a valued and necessary starting point in the learning exercise. This does not mean that the transmission of values is limited to those found in the local culture; that, too, would constitute a serious infringement of the principle of equity. Rather, the idea is that schooling should start with what children bring to the classroom but not end there. It should set them on a path of universal knowledge and teach them the language of fully modern citizenship, while valuing and enhancing their own environment and culture.⁹

Thus, MECE-Básica's rural curriculum combines information on the local culture with the general knowledge that ought to be communicated at school. The design and content of textbooks and teaching materials conform to that scheme. Teacher training is structured to prevent rural teachers from remaining isolated and to provide them with relevant concepts and methodological tools, through continual interaction in local associations of rural teachers at facilities called Microcenters for the Coordination of Teaching (Microcentros de Coordinación Pedagógica). These teachers meet periodically to follow up on the implementation of proposed innovations.

The purpose of the second element of MECE-Básica, the *Education Improvement Projects* program (known in Spanish as PME, *Proyectos de Mejoramiento Educativo*), is to enable teachers to meet the challenges involved in improving learning. This initiative

consists of an annual competition between school "projects," which are evaluated on the basis of their impact on the learning of fundamental skills that need to be inculcated at the primary level. A school that wins a PME competition receives a certain amount of public financing, scaled to enrollment. These awards average US\$6,000 (which can be expended in a period of one to three years) and include a Teaching Support Package containing a television set, video recorder, microscopes, and other such items. The five annual competitions from 1992 to 1996 received 7,540 project submissions, of which the Ministry of Education selected and financed 3,655, benefiting 62,875 teachers and 1,347,651 students.

The PME program helps teachers develop skills needed to design and implement improvements by encouraging the teachers themselves to undertake their own projects. To this end, the annual competitions permit schools to consider a broad range of subjects for projects. In general, these coincide with areas covered in the curriculum, such as basic knowledge, oral and written expression, mathematics, natural sciences, social sciences, the arts, metacognitive strategies ("learning to learn"), and moral and emotional development.

School projects must have the specific objective of raising achievement in these areas. But it is up to the groups of teachers to decide which skills will be given priority and how learning will be improved. The PME strategy thus combines guidelines and resources emanating from the center of the system with projects independently designed at the grassroots.

Systematic monitoring and managing of the MECE program have shown that wherever the PME strategy has been implemented successfully, independently designed and executed projects supported by public funds in pursuit of higher-quality education give rise to some (or all) of the following benefits:

- Horizontal communication between teachers of different subjects or grades takes place with unprecedented intensity and educational focus.
- There is greater team effort in diagnosing problems, designing solutions, and evaluating team activities.
- The need to prioritize the actions required to set up a PME, integrate the project into the school routine, and finance it, tend to place teachers in a more management-oriented framework, rather than in the position of merely complying with bureaucratic rules.
- In many cases, parents and/or others in the community of a school that wins a PME offer their cooperation and provide significant additional resources to carry out the project, which serves not only to expand the scope of the project itself but also to open up the school and its teachers to their external environment.
- More emphasis is placed on identifying training needs and seeking the means to satisfy them.

- There is greater innovation in the curriculum, teaching, and teaching materials.

The Ministry of Education has contracted several external evaluations—carried out in 1997—in order to judge the efficiency, effectiveness and impact of both the PME program and the rural program

Finally, the third element of MECE-Básica, a pilot program of computer science education known as the "*Enlaces*" Network (*Red Enlaces*), involved setting up a computer communications network between students and teachers of primary schools and between primary schools and other educational institutions. Universities acted as the central "nodes" on the network and helped schools learn how to use the new technology—hardware and software—in an educational setting and how to adapt to the culture of electronic communications (using electronic mail and fora to develop collaborations within and among schools).

The *Enlaces* Network was set up in 1992 with the aim of linking 100 schools by 1997. This was considered a bold endeavor at the time, when such networks were still at the pioneering stage. The network relied on user-friendly computers—suited to the technology of Chile's telephone system at the time—with educationally stimulating software. The program's immediate success, along with rapidly changing technology, prompted the government to upgrade the project in 1994; it began providing equipment in line with each school's enrollment and established new targets for network coverage, which was to reach 50 percent of subsidized primary schools by the year 2000 and all secondary establishments during 1998. *Enlaces* has been setting up computer laboratories in primary schools of all sizes and, since 1995, also in secondary schools, which are getting three to 12 units, depending on their enrollment. These are the latest models with multimedia capabilities.

Investments in computer science education in Chile have benefited from the lessons learned in North America and Europe in the 1980s. One of these lessons is that, even once computers are available, it still takes time to learn how to make effective use of them in a school setting. Furthermore, it is essential to work with teachers in introducing these technologies.

In addition to linking schools to each other and to universities, the *Enlaces* program has developed its own software, known as *La Plaza* (the Square), which provides teachers and students with a user-friendly introduction to this medium, encourages its use in education, and makes schools less dependent on computer specialists. *La Plaza* integrates tools such as electronic mail, discussion fora, news, and education software and production tools.¹⁰ The user is not required to know anything about the operating system itself. This program has evolved in line with technological advances and the expansion of the interschool computer communications network, which encompassed 500 institutions by 1996 and was scheduled to reach 1,500 in 1997.¹¹

Box 4

Concepts Underlying Investments in Computer Science Education

1. The central purpose of the project is to link schools, teachers and students in a vast communications network that will substantially enrich the school's routine activities. The focus is on improving communications through the use of technology, not on the use of computers in and of itself.
2. This communications network and the introduction of schools into it, are supported by universities that help schools learn to use the new media.
3. It is impossible to make good educational use of the new media unless teachers are involved and have become familiar with the technology.
4. There is no way to introduce students to the new technology, especially in the context of poverty, in a rapid and efficient way unless it is user-friendly. That is, it must be easy to use and evoke familiar worlds. With this in mind, the program developed its own software, *La Plaza*.

The *Enlaces* system has vast implications for the quality and equity of primary and secondary education in Chile. By providing access to a large store of knowledge and information, it has dramatically redefined the limits of what can be accomplished at each school and has made it possible for all school-children to have access to the same information and opportunities for cultural exchange, regardless of their geographic location or social status.

Program for Improving Quality and Equity in Secondary Education (MECE-Media), 1995

After three successful years with MECE-Básica and five years with the 900 Schools Program, the Ministry of Education decided to launch a comprehensive intervention in secondary education. Following two years of preparatory work on the technical and political details, the Ministry in 1995 launched the six-year MECE-Media program with an investment of US\$207 million (more than double the per capita investment in MECE-Básica).¹² MECE-Media involves new investment and innovative procedures, like the original MECE program, but features some important additions and modifications. The program encompassed 325 secondary schools in 1995, added 440 more in 1996, and was expected to achieve total coverage (1,350 schools) in 1997.

Material support provided by the program includes infrastructure repairs, textbooks, school libraries (not classroom libraries as in the primary schools), teaching materials, and computer equipment to link schools to the *Enlaces* Network. Teachers select library and teaching materials from lists prepared by the program under a "demand-based" system of procurement. All secondary schools are eligible to receive material support through MECE-Media, though investments in physical infrastructure cover only the municipalized sector.

MECE-Media's policy interventions focus on three areas: the curriculum, teachers' work routines, and student activities. The program has designed a new curricular framework for secondary schools, and is creating opportunities for professional discussion among teachers at each school to help them plan and supervise changes in their school. It also has set up a series of student workshops—dubbed "elective curricular activities"—designed to reduce feelings of alienation, especially among students living in poverty. These workshops take place on Saturdays and during vacation periods, and feature activities and topics that appeal to young people, ranging from art and communications to sports and the environment. (Lemaitre, 1997).

MECE-Media also includes Education Improvement Projects (PME) similar to those connected with MECE-Básica, along with a new support mechanism, in the form of a nationwide technical assistance network and a fund to permit schools to hire outside technical support on their own.¹³ A "Technical Assistance Directory" provides basic information about the network, which consists largely of university teams and to a lesser degree of professional consulting teams and corporations.

Box 5

Three Instruments for Strengthening Teacher Autonomy and Educational Quality

PME Projects

Under the PME program, primary and secondary schools compete for public resources by creating projects to improve education. Schools are assisted in the generation of project ideas by the Ministry of Education and by external support networks established by the schools themselves. Projects are evaluated by provincial entities (there are 41 in the country) outside their home province. Each school has full control over the resources it is awarded, which arrive in three installments. The second and third disbursements are conditioned on project progress reports. The amounts awarded vary with enrollment; the average is US\$6,000. Awards also include an equipment package, with a television, video recorder, overhead projector, and/or other equipment requested by the school, worth an additional US\$1,500.

Technical Assistance Directory and Funds

Under the MECE-Media program, the Ministry of Education compiles a Technical Assistance Directory containing detailed information on universities, corporations and individual professionals who offer technical assistance in areas such as curriculum, teaching, assessment, management, and youth culture. The directory specifies the type of assistance available, the providers, their experience. It is distributed to all subsidized schools in the country. The ministry also provides funds of up to US\$2,780 per secondary school during the life of the program (1995-2000) for independent technical assistance.

Demand-Based Procurement

High-quality libraries are being set up in every secondary school through a process involving teachers and students. First, the ministry purchases and distributes 20 percent of the material for the library in a standardized process. The remaining 80 percent of

material is then chosen by each school. The ministry prepares a catalog with detailed information on over 2,000 titles recommended by experts; this catalog is distributed to all schools. The schools have a month to choose materials that will fill out the next 40 percent of the library (about 600 volumes). The ministry consolidates the information contained in the "purchase orders" of each school, and buys and distributes the requested books. Later, schools select the final 40 percent of materials in the same way. The selection and purchase of the school-chosen 80 percent of materials is broken into two phases with the idea that each school will learn during the process, and may thereby achieve a better sense of its educational mission and the best means to achieve it. The same mechanism is used in the procurement of teaching materials for secondary schools: the ministry prepares a catalog of options; schools make their selections; the chosen materials are consolidated, purchased and distributed by the central authorities. As in the case of libraries, the procurement of teaching materials is divided into two cycles, to allow for individual and organizational learning.

New Curricular Framework for Basic Education, 1996

In January 1996 the government announced a new curricular framework for basic education, which for the first time in Chile's history gives schools greater freedom in structuring study plans and programs. In accord with the requirements of the 1990 Constitutional Organic Law on Teaching (LOCE, *Ley Orgánica Constitucional de Enseñanza*), this new framework is couched in terms of "fundamental objectives" and "minimum content." Schools may, within these parameters, define their own complementary content.

This innovation in curricular organization has important implications for decentralization and for the strengthening of the teaching profession. Beginning in 1996, each school and each team of teachers must decide if they wish to tailor certain aspects of the curriculum to their own educational objectives, or if they prefer to follow courses of study set by the Ministry of Education. Further, the new framework makes significant substantive changes, incorporating current thinking in the various subject areas and up-to-date teaching methods. Examples of content changes include, in mathematics, the dropping of set theory, and in physical education, the addition of outings and other outdoor activities. New instructional approaches center on the concept of "significant learning," which attaches paramount importance to the experience and prior knowledge of students, as well as key aspects of the learning environment in which new concepts and skills are introduced.

Extending the School Day, Strengthening the Teaching Profession, and the Montegrande Project, 1996

After evaluating what still needed to be done to ensure that high-quality education would be available to all by the end of the century, President Frei in May 1996 announced the government's decision to invest an additional US\$1.5 billion in education. Primary

objectives included extending the school day to substantially increase the time students spend learning at school; strengthening the teaching profession¹⁴; and building a network of secondary schools with special features in terms of quality, capacity for innovation, and ability to serve the needs of disadvantaged students. This third objective initially was announced as the "Anticipatory Secondary Schools" project (*Liceos de Anticipación*); the Ministry of Education subsequently fine-tuned the plans and rechristened the initiative as the "Montegrande Project."¹⁵

Of the three initiatives, the one requiring the most resources and having the most immediate impact was the proposed change in the length of the school day. This would replace the existing schedule of two, six-hour shifts, with a single, full, eight-hour school day. Students then would spend more time working on the various academic subjects and would have longer recess periods. In addition, having one group of students per school—rather than two shifts of students—would free up facilities for extracurricular activities, yielding important benefits in terms of learning and equity (especially for students who have difficulty studying at home). The longer school day would result in a 38-hour week at the primary level and a 42-hour week at the secondary level. On average, there would be 200 more school hours (equal to five more class weeks) per year, for a total of 1,200 hours per year.¹⁶ Slightly more than 3,000 schools, representing 15 percent of the total enrollment, submitted proposals to apply the extended school day in 1997; these first participants are schools that do not require any new infrastructure investment in order to put the reform into practice.¹⁷

The financing of this crucial aspect of the new agenda depends on the passage of a law which, as of this writing, has been agreed to in congress with regard to those schools that said they would institute the longer school day in 1997, but not for the rest of the system. The debate surrounding this law has brought to light unresolved issues concerning the relationship between state and society in the area of education, such as whether it is appropriate to use public funds for the construction of infrastructure in private schools, or whether a mandatory extension of the school day would encroach on academic freedom. Likewise, the question of whether to keep the national value added tax (VAT) at 18 percent in order to finance the school-day reform—a policy advocated by the president—will provide a good test of the consensus behind government policies targeting educational quality and equity.

National Commission for the Modernization of Education, 1994

Upon taking office in 1994, the current government commenced its management of the education system with a national campaign to enunciate—in political and technical terms—the agreements reached on education policy, as well as to highlight education's strategic importance for the development of the country. With these aims in mind, President Frei convened a top-level Technical Committee on Educational Modernization, with strong representation by the opposition, which analyzed the situation and produced an education policy proposal. This proposal was reviewed by a second agency, the National Commission for the Modernization of Education, also convened by the

president, which at the end of the year presented a truly national plan for education policy reform.

Both of these proposals contributed in important ways to framing the issues and enriching the education policy debate, particularly among the nation's political, business and cultural leadership. The proposals offered a sophisticated analysis of the situation and spelled out a set of high-priority reforms, which were highly consistent with changes already underway. In particular, they pointed to the urgent need for radical reform of secondary education, a longer school day, updated teaching methods, and greater flexibility and management capacity in the schools. Of the two proposals, it was actually the first, known as the Brunner Report, which produced the greatest political impact. The report openly criticized the regulatory framework governing teachers' activities as per the 1991 statute, as well as what it saw as inadequate funding for education. It proposed the establishment of a National Fund for Education to address the latter problem.¹⁸

The government's effort to forge a national agenda for education reform culminated in January 1995, when the administration and all political parties represented in congress signed the "Framework Agreement for the Modernization of Chilean Education." This agreement is broadly consistent with the recommendations of the National Commission for Modernization and proposes reforms in the management and financing of subsidized education, which in part were taken up by the new Teachers Statute, passed later that year. Since the Brunner Report appeared, the opposition's approach to the education policy debate has been predicated on what it sees as the government's noncompliance with the report's proposals concerning the management and financing of subsidized education.

Implementation: Actors, Strategies, and Tensions in the Implementation Process

A broad spectrum of policy initiatives has been described in this paper; our examination of issues related to implementation will focus on the programs designed to improve quality and equity by directly targeting the education process in schools, namely the 900 Schools Program, MECE-Básica, and MECE-Media. Three points are of particular interest: the redefined role and new instruments of the state, the characteristics of the teams responsible for these programs, and the strategies that the Ministry of Education favors for organizing the intervention process as a whole.

The State and Its Role in Education: New Characteristics of the Center in a Decentralized System

A recent conceptualization of the role of the state in Chile characterized the 1970s as the era of the "maximalist" state, the 1980s as that of the "minimalist" state, and the 1990s as that of the "capable" state (Grindle, 1993). This is a fitting characterization of the role now played by the state in education, which underlies the policies described here. Now, the central government acts through new means within a decentralized system. It has new

capabilities for managing and orchestrating change, and it combines its action with market-based regulations.

Thus, the central government is not so much an "oarsman" (producer of services), but, instead, a "rudder" (Osborne and Gaebler, 1992). It employs not only conventional regulatory and budgetary tools but also makes increasing use of information, evaluation, and incentive; it externalizes functions and creates support networks in civil society; and it believes that one of its essential functions is to proactively safeguard the quality and equity of the system through explicit and sustained programs and strategies, and through positive discrimination.

These central principles are reflected in the programs aimed at improving overall quality and reducing the gaps between different types of schools, as well as in the specific methods and mechanisms selected to implement these changes. Most notable among the latter are the voluntary nature of schools' decisions to participate in certain programs; the PME project competitions; the participatory, demand-based procurement processes; the building of institutional networks to support the schools; and the use of positive discrimination and modification of programs to meet the needs of disadvantaged student populations.

The Actors: New Profile and Stability

The foregoing education policies, particularly the quality and equity improvement programs, have a combined technical and political component that is managed by a new brand of state officials who act as technical authorities for the Ministry of Education. As in Argentina, Uruguay, and Brazil, they are "reform researchers or teachers," "symbolic analysts" (Reich, 1991; Braslavsky and Cosse, 1996), who are highly experienced in socioeducational research and capable of not only designing programs but also putting them in practice. To operate its new programs, Chile has installed a new type of management team at the Ministry of Education, noted for its design and implementation capabilities, multidisciplinary makeup, comparatively high-level professional training, lack of political affiliation, and connections with international networks for the circulation of knowledge and experts.

Another fundamental feature that has greatly influenced the effectiveness with which the programs have been implemented is the stability of these professional teams. Although since 1990 Chile has had five successive ministers of education and two governments, the technical staff responsible for the programs has remained in place since the beginning of the transition in 1990. This has ensured the consistency and growth of the different programs, and kept in focus the lessons gained from their operation. On one hand, the policies of this decade have been growing more specific, but on the other hand, they have been expanding in scope, on their path of steady progress. It is the stability of their guiding principles and executive teams that has made it possible to learn from experience, that is, to discover what is effective and what is not; to discern what is missing and what needs to be designed to keep responses finely honed. In this way, the design of MECE-

Básica took advantage of the lessons derived from the implementation of the P.900 project; three years of MECE-Básica made it possible to produce a more ambitious and sophisticated design for secondary education, in terms of innovation and decentralization. The legal statute regulating the teaching profession has also been modified in two important respects. And five years' experience in implementing policies to improve educational processes and practices indicated the discrepancy between the new forms of teaching methods being advocated and the time frame in which the system is supposed to operate.

Strategies: Four Unifying Guidelines

Perhaps the starting point of Chile's education strategy for the 1990s was the realization that quality cannot be imposed by decree, and that competition between schools for enrollment is not enough to achieve nationally acceptable levels of learning quality. In order to ensure high-quality education for all, it is necessary to develop the capabilities, ideas, and incentives of the teachers as well as strengthen the institutional components of the system. This can only be done through a complex and protracted process of human and institutional capital-building. To reiterate, every primary and secondary school must gradually develop new capabilities that will enable them to decide for themselves what course they should plan and follow if they are to provide high-quality education in their individual establishments. The ministry's policies and programs have taken a systemic approach to meeting these needs, investing in new material resources and direct technical assistance, emphasizing incentives to promote innovative thinking in teachers, and building external support networks to primary and secondary schools. The guiding principles behind the reform effort are to provide a learning experience to individuals and organizations and to promote institution building, both from the summit and from the base, and not to impose new aims and tasks by statute. This is the only way to achieve real change in teaching and learning practices, and in the organizational culture of the sector (Box 6). Hence the following strategies have been found appropriate for the 1990s.

Box 6

Principles of Change in School Culture

1. From a center concerned with the compliance of rules to a center responsible for results.
2. From individual work and pyramidal organization to team work and the organization of networks.
3. From a culture of compartmentalization and self-absorption to a culture of communication.
4. From novelty and change perceived as interruption or "noise" to novelty and change

perceived as an opportunity for improvement.

5. From change as the implementation of a recipe or panacea to open systems of differentiated development, testing, and incremental improvement.

6. From evaluation as a threat and risk to be avoided to evaluation as a necessary and permanent element of effective action in a rapidly changing environment.

1. Systemic Interventions: The "Direct Intervention-Incentives-Networks" Triad.

As should be clear by now, the Chilean reform does not single out any one factor or "package" of factors as the key to improving education. Rather, it sees educational change as a cultural process that must be approached systemically. In the simplest of terms, this process can be compared to a set of interconnected vectors converging on the school, acting both as an organization and as a collection of players and meanings. Hence major changes can only be achieved from both the summit and the base of the system. Change takes place by means of long, open, and "inductive" process, operating under certain guiding principles. Incentives and competition have a role to play, as does the central agency, especially with regard to the more vulnerable sectors. New ideas are crucial, but so are "factual pressures" brought to bear by the new media (libraries, computers, teaching materials) and facilities in which the new practices are implemented (project competitions, independently contracted external technical assistance, demand-based procurement processes).

A triad of strategies is used to put this systemic approach into practice:

- (a) direct action on schools,
- (b) incentives and competition, and
- (c) support networks and externalization.

Direct action is understood to mean state intervention, designed at the center of the system. The state acts on its operational units "from top to bottom," for example, through material investments in schools and changes in the education process. Such actions are applied universally or to part of the subsidized school system. Direct action is literally an "injection of energy" into the veins of the system, a "driving" action from the center that seeks to eradicate inertia and enable the system to operate within a new framework of conditions and practices, encouraging differentiation and individual response at each school.

The strategy of direct action calls for a variety of investments in learning resources—or education technology—directed at radically changing the learning possibilities of a majority of the school population, through comprehensive programs that modernize teaching methods in general (helping teachers adapt to new conceptual distinctions and practical tools) as well as provide specific support to poorer schools, both urban and

rural. Both the P.900 and a large proportion of the components and resources of the two MECE projects correspond to a strategy of direct intervention.

Financial and professional incentives within a framework of competition help education establishments take independent action in pursuing certain objectives. This is a decentralized strategy that operates "from the bottom up," in the sense that it seeks to produce self-designed responses at the base units of the system (primary and secondary schools). In this case, the results are achieved through "self-propelled" action. Since 1992 this has been the basis of one of the highly innovative components of Chile's education policies: the Education Improvement Projects (PME).

The importance of the support networks created by universities throughout the country cannot be overstated. They have provided essential institutional backup, resources, and stability to every school that enters the *Enlaces* communications network, assisting them in the use of computers and computer science education. A second noteworthy network consists of thousands of consultants who provide technical assistance to primary and secondary schools. A directory of their names has been put together by the MECE-Media Program, and schools can obtain valuable assistance from them in resolving specific problems. The first of these can be characterized as a rigid network, directed by a central node with clear and long-standing contractual relationships between its components and the schools; the second is a flexible network, in which there is no contractual relationship between the providers of technical assistance and the Ministry of Education, and the relationship with the schools is less protracted.

2. Active Center and Autonomous Units: Quality-Producing Tension between the Base and Summit of the System

Just as the system achieves quantitative growth through centralized mechanisms, its quality improves by increasing the autonomy of the operational units and enhancing teacher initiative. The policies outlined in the preceding sections define a new relationship between the state as a regulatory body and the institutions and its players as an autonomous entity. That is, the former has established a broad framework in which the initiative and creativity of the decentralized units and individuals can be encouraged and applauded, as can be seen in the institutions' voluntary decision about whether to enter the programs; the multiple opportunities teachers have to select and design items during the procurement processes involving libraries and teaching materials for secondary education, as well as in contracting technical assistance; and above all, the opportunity for the independent design and execution of projects provided by the Education Improvement Projects (PME), which is also referred to as the "teaching decentralization component." This component provides an important point of contact between the deductive planning of the central Ministry of Education (from the top down) and the projects inductively produced by the schools (from the bottom up).

3. Incrementalism: Open Systems and Continuous Change

As mentioned earlier, the concept of change that guides the Chilean reform is not geared toward achieving comprehensive reform by means of regulatory mechanisms, or attempting every twenty or thirty years to achieve a "great" or "spasmodic" reform, as is typical of centralized systems. Rather, the process in Chile is moving in the direction of incremental and continuous change, as is more typical of decentralized systems. Relations between the education system and society are not "frozen" into a specific institutional and curricular arrangement but are more open and have infinite points of contact with their external environment, allowing for continual adaptation and change.

Incrementalism is apparent in many of the ongoing changes. To take one example, the major initiatives have not been organized by executive decree at any one point in time but rather consist of a succession of evolving actions and stages of development. Furthermore, programs operate in a gradual manner: not all eligible schools enter a program at the same time; nor do the programs set all their components in motion at the same time. As already mentioned, the process of change is organized around conceptual learning and cultural change rather than juridical and political logic, which means that innovations follow a rhythm and order of appearance that is incremental. Note, too, that establishments in both the P.900 and MECE programs "graduate" from one specific intervention to another. For example, primary or secondary schools that have overcome certain barriers or reached certain targets (of student learning or a certain stage in the intervention) "graduate" and can apply for access to more demanding programs.

4. A New Concept of Equity

One of the primary objectives of Chile's current program of education reform is to offer equal opportunities in terms of processes and results in an increasingly differentiated but not segmented society. Therefore equity is no longer based on the notion of a homogeneous national form of education, but rather on the understanding that education should vary in its inputs and processes to meet the needs of the different groups involved. The ultimate goal is to achieve similar results. Thus equity in the 1990s can be defined as using different means to obtain similar ends; giving special attention to the requirements of groups that are more removed from the mainstream, both socially and culturally; and employing positive discrimination in the provision of inputs and technical support. The "900 schools" program, as well as actions focused on the rural basic education system, are organized around these principles; the order in which the secondary schools were included into the MECE-Media program also followed criteria of positive discrimination.

Tensions in the Implementation Process

Tension, conflict, and problems arise in any process of cultural change, educational or otherwise. A full analysis of these forces is beyond the limits of this discussion. Suffice it to say that the reform process is indeed encountering several obstacles at the present stage.

To begin with, different spheres of policy intervention have not yet been brought into alignment. Although the different initiatives have certainly had an impact on primary and secondary schools, they have worked more in parallel than in concert, with the result that major problems remain unaddressed. In particular, there is not enough coordination between the regulations governing the school system and the curricular, teaching, and evaluation principles behind the Ministry of Education's programs of change; greater consistency should be exercised in degree of preparation and resources invested in reaching primary and secondary schools through improvement programs, so as to weed out partial, controversial or dubious initiatives; and more attention should be given to the progress of teaching methods at primary and secondary schools and to the comparative backwardness of basic teacher training. As the Ministry of Education has emphasized, an evaluation scheme is essential to the system, but the current mechanism used to measure educational quality is somewhat isolated from the rest of the policies.

Agenda overload is another problem. If a distinction is made between political time, technical time, bureaucratic time, and pedagogic or teaching time (Braslavsky; Cosse, 1996), the last item in this list has the most requirements. The rate of change and the number of interventions set forth above were based on political and technical concepts. For teachers, however, the most pressing issue may be that "one new thing after another" is being expected of them without giving them enough time to adapt to the new concepts and practices promoted by the reform policies. This has not been sufficiently taken into account by decision makers: the agenda is probably overloaded, so that it is beyond the ability of any individual player to absorb so much cultural change in such a brief period of time. It should be recalled, however, that one of the more favorable conditions of the Chilean reform is that it has a flexible time-frame, to accommodate the "protracted time" required to implement changes in teaching practices and meanings.

Something that might be considered yet another obstacle to reform is the lack of political discourse or communication about the issues that need to be resolved in order to effectively coordinate the vast set of different initiatives that have been undertaken in Chile, and in turn integrate them with the actions significant to the teaching profession. Little attempt has been made to consider why public education is an obligation and crucial function of the state, why ethics and formulations of "duties" is a core aspect of teacher identity, or whether education is an essentially moral or only subordinately instrumental activity. Numerous other issues await examination as well: What should be the central of the Ministry of Education? What weight should be given to solidarity versus competition? To participation versus technocracy? Nor has any attempt been made to build a new and common bond between the state and the teaching profession (with regard to the organization and functions of subsidized education) that would integrate state policy with the teachers' academic traditions. Although the reform has been very successful in producing new practices at the primary school level, discourse at a more general level that would satisfy the teaching profession has been lacking. This is not to suggest, by any means, that teachers are against the reform, but simply that they need to integrate the new aspects into a vision that they can consider their own while revitalizing their traditional values.

In addition, teachers and education authorities differ in their view of participation. For their part, the authorities believe that the PME and rural microcenters, the new curricular framework and the opportunity it opens up to independent decisions by each educational community, and the procurement of education technology based on definitions established by the teachers of each secondary establishment all demonstrate real and effective participation involving tens of thousands of teachers. Teachers, however, argue that participation is lacking because they were not consulted in a number of decisions, such as extending the school day, or because there has been no debate regarding the "type of individual" and society that education is supposed to shape (Dastres and Spencer, 1997). Whereas some conceive of participation in terms of professionalization and effective autonomy, others are seeking an opportunity for public discussion and ideological debate at a social level.

The current reform policies are only beginning to address the equity needs of the population, while new forms of exclusion and inequality continue to emerge. In spite of the efforts to achieve positive discrimination, still more resources need to be allocated to the more vulnerable schools (E. García-Huidobro, 1996; Hopenhayn, 1996). In addition, the legal framework hinders or makes it difficult to counteract the practices followed by state-subsidized private establishments and also by some municipal schools in selecting or rejecting students. Some of the reasons cited in this regard are low performance, marital situation of parents, adolescent pregnancies, and AIDS (Núñez, 1996).

Conclusions

Chile's education reform of the 1990s has applied an unprecedented strategy consisting of systemic intervention, sustained over a long period of time and oriented toward transforming teaching and learning contexts and practices, while leaving the system's curriculum, structure, and evaluation systems untouched during the first five years. In keeping with the gradual approach, changes in the curriculum of basic education were not introduced until 1996, and a national discussion of a new curricular framework in secondary education did not take place until 1997. Curricular changes come hand in hand with changes in textbooks and evaluation systems. These new reform policies are paving the way for such a restructuring.

The new methods and principles introduced thus far are already proving to be effective in the key areas that determine a country's level and quality of education. In the future, the rhythm of educational change and the effects on the cognitive and moral learning of students will very likely be based on cultural changes and processes of discovery, and on an appreciation and learning of new practices at the base of the system, rather than on political and technical decisions imposed from above. Perhaps most significant, for the first time in this century Chile has arrived at a social and political consensus regarding the central importance of education and the kinds of changes required to achieve the desired results. This suggests that no time constraints will be imposed on implementing this cultural change, and it will be safeguarded by a stable policy framework.

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Endnotes

¹ Under President Patricio Aylwin, this administration's first priority was achieving national reconciliation.

² Two books synthesize the views generated in the independent academic centers, which provided an important basis for the policies of the 1990s: J.E. García-Huidobro (editor), *Escuela, Calidad e Igualdad*, Santiago: CIDE, 1989; PIIE, *Educación y Transición Democrática: Propuesta de Políticas Educativas*, Santiago, 1989.

³ On the Jomtien meeting, see World Conference on Education for All, *Satisfacción de las necesidades básicas de aprendizaje: una visión para el decenio de 1990*, New York: UNICEF, 1990. The new paradigm is articulated in its most complete form in UN Economic Commission for Latin America and the Caribbean (ECLAC) and UNESCO, *Education and Knowledge: Basic Pillars of Changing Production Patterns with Social Equity*, Santiago: United Nations, 1992.

⁴ Subsidy reductions are applied progressively based on the amount of fees paid in excess of certain limits. If the fees paid by a family are equivalent to less than half the value of a subsidy, there is no reduction; if

the value of fees is between one-half and one subsidy, the reduction is 10 percent; between one and two subsidies, the reduction is 20 percent, and so on.

⁵ See: Ministry of Education, *Programa P-900: Comparación SIMCE-Escuelas P-900*, Santiago, 1997. The P-900 has been the object of several external evaluations. See, for example, Swedish Development Agency, *Informe de evaluación del Programa de las 900 Escuelas, "Pedagogía y Gestión,"* Santiago, 1993.

⁶ The annual spending on MECE-Básica, US\$40 million on average, represented approximately 5 percent of total spending on primary-level subsidies, averaged over the period 1992-96.

⁷ Access to textbooks is one of the factors—along with time—that is considered key for achieving improvements in learning outcomes. Between 1988 and 1990, the state invested an average of US\$1.6 million per year in textbooks. Between 1991 and 1996, the average annual spending on textbooks (three books per student in first through fourth grade, and five books per student from fifth through eighth grade) was US\$4.7 million (using December 1995 exchange rates).

⁸ Between 1992 and 1995, the program made repairs to 2,232 schools (89 percent of its original goal). All students in first through fourth grade got a medical check-up; 322,241 students were seen by specialists (e.g., ear, nose and throat specialists, ophthalmologists, orthopedic surgeons); and 233,739 students were treated (receiving, for example, eyeglasses, hearing aids, or medicine). The numbers surpassed the original goals of the health program.

⁹ "Learn from what is near, in order to arrive at that which is far away," is the slogan associated with this strategy.

¹⁰ All schools in the *Enlaces* Network will have access to the Internet within two years; prior to that, domestic and international communication has been done via e-mail. The network is coordinated by seven Regional Centers (*Centros Zonales*), which are universities that have established "Education Information Centers" (*Centros de Información Educativa*) responsible for planning and managing the *Enlaces* project in their regions and for providing training and technical assistance to schools. Over a two-year period, the Regional Centers are expected to train 20 teachers from each school, incorporate them into the *Enlaces* Network, and seek out the best ways to integrate the new technology into the classroom, extracurricular activities, and school administration.

¹¹ The expansion of *Enlaces* was planned for 1,000 additional schools in 1997; by the end of 1999 the program should extend to about 5,000 establishments, both primary and secondary, selected by the Ministry of Education, with total funding of about US\$120 million.

¹² MECE-Media will invest an average of US\$34.5 million per year from 1995 to 2000. This annual figure is equivalent 13 percent of the subsidies given to secondary education in 1996.

¹³ The financial resources are equivalent to about US\$2,780 per school in the life of the program. For a description and analysis of reform at the secondary level, see Lemaitre (1997).

¹⁴ There is not enough space here to describe the various elements of this initiative in detail. It includes a systematic and unprecedented effort to modernize teacher training; the sending of 5,000 teachers for study abroad; and the provision of teacher training in subject areas—in courses equivalent to one month, full time—to 25,000 teachers.

¹⁵ Within MECE-Media's efforts to raise the quality of subsidized schools, the Montegrando Project will provide special help to a number of schools with a total enrollment of 40,000 students—roughly 35 to 60 institutions—which have especially promising projects for promoting innovation, quality and equity, as well as outside support (e.g., from the local community, businesses, or institutions of higher education).

Schools will be chosen in all regions of the country. Through this program the ministry seeks to establish a core of institutions that help energize the rest in regard to "best practices," in both teaching and administration.

¹⁶ In 1990 the school system was operating on the basis of a school year of about 880 hours (which varied by level). Decisions made during 1991-95 lengthened the school year by two weeks—increasing annual hours to approximately 940—and granted supplemental funding to low-income schools that would extend the school day. The extension and intensification of the work time of students and teachers has been a constant in the reform policies of the 1990s.

¹⁷ Most of the first participants are rural schools, although just over 180 secondary schools, representing more than 13 percent of all subsidized schools at the secondary level, are also among this group.

¹⁸ The Brunner Report, named after its coordinator and principal author, secretary of government José J. Brunner, proposed the establishment of a special fund to finance changes in education. The opposition urged that the funding come from the privatization of Codelco (the largest copper mining company in the world) and other state-owned enterprises. The proposals of the Technical Committee, as well as of the National Committee on Modernization, appear in *Los desafíos de la educación chilena frente al Siglo XXI*, Edit. Universitaria, Santiago, 1995.