
desarrollo productivo

Achieving educational quality: **W**hat schools teach us

Learning from Chile's P900 primary schools

Beverley A. Carlson



NACIONES UNIDAS



Restructuring and Competitiveness Network
Division of Production, Productivity and Management
Santiago, Chile, January, 2000

This document was prepared by Ms. Beverley A. Carlson (e-mail: bcarlson@eclac.cl), Social Affairs Officer, Division of Production, Productivity and Management of the Economic Commission for Latin America and the Caribbean of the United Nations (ECLAC). The views expressed in this document, which has been reproduced without formal editing, are those of the author and do not necessarily reflect the views of the Organization.

The author would like to express gratitude to the Ministry of Education of Chile and its P900 schools programme, provincial authorities and, especially, each of the schools in the study that shared their time, energy and knowledge, and are the center of this work. The author would also like to thank the following people for their support in carrying out the study: Pilar Bascuñán, David Cornejo, Françoise Delannoy, Juan Eduardo García-Huidobro, Lysette Henríquez, Mónica Jaramillo, Howard LaFranchi, Laura López, Elizabeth Love, Rosalía Manchego, Iván Ortiz, Isolda Pacheco, Walter Parraguez, Joseph Ramos, Juan Serrano, Alejandra Silva and Carmen Sotomayor.

United Nations Publication

LC/L.1279-P

ISSN: 1020-5179

ISBN: 92-1-121249-9

Copyright © United Nations, January, 2000. All rights reserved

Sales N°: E.99.II.G.60

Printed in United Nations, Santiago, Chile

Applications for the right to reproduce this work are welcomed and should be sent to the Secretary of the Publications Board, United Nations Headquarters, New York, N.Y. 10017, U.S.A. Member States and their governmental institutions may reproduce this work without prior authorization, but are requested to mention the source and inform the United Nations of such reproduction.

Contents

Abstract	5
I. Achieving educational quality	7
A. Introduction	7
B. Education performance in P900 schools	9
C. Criteria used to select schools for school visits	10
D. Characteristics of the selected schools	11
II. School reports	15
A. Taltal: Escuela Hogar Victoriano Quinteros Soto	16
B. Chañaral Alto: Escuela Básica Alejandro Chelén Rojas	21
C. La Florida, Santiago: Escuela Unidad Divina	25
D. San Antonio: Escuela Básica San José de Calasanz ...	30
E. San Antonio: Escuela Básica Movilizadores Portuarios	34
F. Trangol: Escuela Trangol G-214	36
G. Popoén: Escuela Particular No.158	39
H. Quicavi: Escuela Rural Aquelarre de Quicavi	42
III. What schools teach us	45
A. Lessons learned	45
1. Achieving educational quality: a renewed challenge every year	46
2. Achieving educational quality: making improvements sustainable	46
3. What makes a good school: it's the school principal	47
4. Jornada completa: full-day schooling	47
5. Accountability	48

6.	High student-teacher ratios.....	48
7	Overcrowded classrooms.....	48
8.	Teacher turnover, teacher qualification, teacher involvement	49
9.	School financing: a case of reverse targeting.....	49
10.	Special programmes competing with the basics.....	50
11.	“Home” work or supervised exercises at school?	50
12.	How do teachers teach?.....	51
13.	What to do about textbooks?.....	51
B.	What schools teach us about the P900.....	52
C.	What schools teach us about children in harsh environments	56
D.	What schools teach us about teachers and student performance	58
E.	What schools teach us about lack of parental involvement	63
	Bibliography	67
	Serie Desarrollo Productivo Issues published	71

Tables

Table 1	A summary of the six under-achieving P900 schools visited.....	12
---------	--	----

Figures

Figure 1	Chile: Achieving educational quality: What schools teach us	14
----------	---	----

Abstract

Education reform has been a major undertaking in Latin America in the 1990s. Extending the coverage of educational opportunities is a principal aspect of reform. Improving the quality of education delivered in schools is of equal importance, in some cases more important, in Latin American countries where education has been of a low standard in public schools.

It is not enough to study macro education policies as they are articulated by governments and operationalized by centralized ministries of education. What is promised or envisioned on paper is often quite different from what actually happens in school establishments. It is important to understand, at the micro level, how schools are functioning in practice as they implement educational policies for improving the quality of education.

The focus of this study is on schools and what they can teach us about achieving quality in basic education. Educational policies and social reality come together in classrooms in schools. This study is not just concerned with how well schools are implementing policies. Nor is it concerned with evaluating education reform programmes. It is concerned with learning from schools toward a better understanding of the practical realities of teaching children from the perspective of the school establishment, within its community and its student population. The study concentrates on the school as the center of learning and decision-making and studies what happens in school at close hand. It is hoped that these lessons can be useful and be taken into account in assisting education programmes, policies and strategies toward improving educational quality.

The special focus of this study is on poor children in poor schools. The Chilean education authorities provided an outstanding opportunity to study what schools can teach us in relation to their national programme aimed at improving the quality of education and educational outcomes in some of Chile's 900 poorest primary schools, known as the "P900 Programme".

The approach applies a macro quantitative methodology to identify the poorest performing schools based on their comparative school results on standardized examinations and trends in these results during the decade of the 1990s. At the micro level, a representative group of schools was then visited and in-depth interviews were conducted to obtain qualitative insights needed to understand school and pupil performance and to identify factors that might be subject to change. An original research methodology was developed for this purpose.

The study is organized as follows. The first section sets the stage, raises the policy issues with respect to achieving educational quality and describes the organization of the research approach. The second section presents the in-depth school reports that are in effect management audits. The third section synthesizes the lessons learned from the school interviews and makes proposals in a dozen or so key areas of school quality. It also presents in the words of the school officials, teachers, students, parents, and administrators, their views on the "P900 Programme", on children in harsh environments, on teachers and student performance, and on the problem of lack of parental involvement.

It is hoped that this macro-micro research approach will be implemented further in Chile and in other countries.

I. Achieving educational quality

A. Introduction

Education reform has been a major undertaking in Latin America in the 1990s. In Chile the emphasis of reform is on improving the quality and equity of education in the public sector. Chile is striving to improve education through initiatives in four main areas: curriculum reform; strengthening university teacher training programmes; extending basic education from half-day shifts to full-day schooling; and improving quality. These initiatives began in the early 1990s and will continue into the next millennium because the undertaking is a considerable one, and the impact of the reforms, to the extent they are successful, will necessarily take time.

The focus of this study is schools and what they can teach us about achieving quality in basic education. Because the school is the bottom rung on the bureaucratic ladder of important actors in delivering education, it is necessary first to understand the structure of basic education in Chile and the reasons for this unusual structure. The Chilean education system is a mixed, public-private system. There are three types of primary schools: municipal schools which receive central government financing (called a subvention) and are administered by municipalities; private schools which receive the same central government subvention and are administered privately; and privately financed, privately managed schools. This tripartite arrangement is the legacy of school reform in the early 1980s that transferred school management from central government authorities to

local municipal or private responsibility. It is also a result of government policy at the time to provide incentives for the private sector to provide educational facilities and introduce competition into the system. Effectively, only 8% of primary schools are fully private, i.e. the third category. 26% are in the mixed category of private schools that receive the central government subvention and 66% are municipal.

Educational policies and social reality come together in classrooms in schools across the country. In evaluating educational quality, it is not sensible or fair to compare student and school performance only on the basis of standardized test performance for obvious reasons. Students enter school with differential “quality” based on a multiplicity of factors ranging from their respective brain development, which is enormously affected by early childhood nutrition and care, to positive home learning environments and social interaction. These factors limit what schools alone can achieve in purely numerical terms when they are located in poorer socially, and economically disadvantaged neighborhoods where they face much greater challenges than do schools that are located in richer neighborhoods.

Quality education, therefore, cannot be evaluated only on the basis of which students and schools have the highest scores on standardized exams since different schools are teaching very different types of students. Ideally, we would like to be able to evaluate individual improvement in student performance as a child progresses through primary and secondary school. This is rarely possible. At best, in some countries, we have national and international educational testing, often in the fourth and eighth grades, which provides a cross-sectional evaluation of the performance of fourth and eighth graders that year. These results, when aggregated to the school level, provide a snapshot of the performance of fourth and eighth grade students in individual institutions.

This is the case in Chile with the Sistema de Medición de la Calidad de Educación (SIMCE). The annual SIMCE school results are widely available and are even published in the national newspapers. Parents and students are encouraged to consult them. These statistics have multiple uses and have been well used and misused. Ricardo Lagos, former Minister of Education and current presidential candidate, has said that SIMCE school results were the only way of objectively evaluating school performance on a national level in order to provide special help to poorer, more needy schools (Undurraga, 1998). On the other hand, schools have used good SIMCE results to market themselves, as a way of attracting more students, especially in the case of private schools receiving public subsidies. This is important because the great majority of school subsidies depend on per capita attendance. Parents also use the annual school results, published in local newspapers, to help them select the best school for their children.

Many school administrators and teachers have a different view. They find the SIMCE an unfair yardstick of their performance and the performance of their students, especially in poorer neighborhoods. They feel that it does not take into account the differential capacities of their student populations and the differential resources available to schools or the degree of parental interest and participation. Each of these views is meaningful.

In short, student outcome data are a very useful outcome measure if used appropriately. But they tell us only the end results —the “What”. But, more important than the “What” is the “Why”. In order to understand learning outcomes it is essential to understand what happens at school. What can schools teach us? The school is the center of learning for at least twelve years of a person’s life. Yes, we know that out-of-school factors are terribly important, even more so in poor neighborhoods and poor families. But the school is still the first level of institutional responsibility for student learning. For that reason it is essential to ‘get down to the school’ and study the ‘school reality’ because of the many factors that come into play in the school.

B. Education performance in P900 schools

The Chilean education authorities provided an outstanding opportunity to examine educational performance in relation to the national programme aimed at improving the quality of educational outcomes in Chile's 900 poorest primary schools, known as the 'P900 Programme'. The education authorities were interested to understand why some schools did not improve in spite of years of special inputs and attention from this programme and wanted help with understanding the reasons why this was so in order to take corrective action. ECLAC had proposed just the reverse: to study initially why some schools stood out in spite of common difficulties and to disseminate "lessons learned". In either case the same issues arise whether one is trying to measure why some schools and students excel or why some schools and students do not measure up to expectations. The main point was that the approach needed to combine an assessment of quantitative results with a qualitative investigation that would explain these results.

It was also decided to concentrate on the school as the center of learning and decision-making and to study what happens at school at close hand. Schools are where educational policies and programmes are put into effect and are put to the test within the context of all of the factors that play a role in achieving educational quality. The school is the "front line" where school authorities first confront the situation of children and their preparedness for learning. It is where the intangibles become tangible. Consequently, the key aspect of this study is the school visits since the school is where policy and practice play out.

ECLAC proposed a two-pronged methodology that in general terms used both quantitative and qualitative methods. The quantitative methods were used to identify the worst schools and to track their performance over time. From these, a small number of schools from domains of interest to school authorities and amenable to policy change were selected, i.e. urban and rural schools, small, medium and large schools, poorer and better off schools, schools in different geographic regions, and municipal and private schools receiving public support.

The research was carried out during the 1998 school year, which in Chile is March through December. It was essential that unbiased statistical methods be used to identify the so-called "worst schools" based on their SIMCE results during the life of the P900 from 1990 to 1998. At one time or another during this period of nine years over 2,100 municipal and private subvention primary schools participated in the P900 for one or more years. From this large number of schools, the core group of schools that had participated in P900 five or more years was identified and from those the lowest performing schools were selected. From this last group a small number of schools were chosen representing the domains of interest mentioned earlier.

The qualitative methods consisted of daylong visits made to each of the chosen schools by a two-person team comprising the project director accompanied by a journalist. In-depth interviews were conducted with all principal actors: students, teachers, school principals, parents, school administrators, and provincial and municipal education authorities. The principal group of interest was children in fourth grade. This is due to the fact that through 1997, the period of analysis, the P900 was targeted on children in the first cycle, i.e. the first four grades. Also the fourth grade was the grade tested by SIMCE every two years and therefore was a convenient output measure of fourth grade performance and indirectly P900 performance/impact at the school level.

Eighth grade school performance also proved to be useful for assessing school performance in the second cycle, grades 5-8, and for measuring whether the early P900 inputs were having a continuing impact as students progressed through the system.

The remainder of this paper provides the micro evidence from the school visits, and draws conclusions about the major quality issues. The school reports are purposely presented in a style

that tries to capture the flavor of the language and thoughts of the teachers, students and school officials which were obtained through in-depth interviews that were guided by the SIMCE school performance data and administrative statistics the schools report annually to central authorities in the Ministry of Education. A separate paper discusses the macro national performance of P900 schools based on quantitative evidence from the SIMCE and education sector statistics. Essentially, the macro-micro evidence can be distinguished as the ‘macro-what’ and the ‘micro-how’. At the macro level, performance indicators, statistics, policies, programmes and financing are the guiding forces. At the micro level schools tell us ‘how the what’s are implemented’ in practice and in the context of the client group, the student population served by the schools.

To be done well, the micro research is time consuming and must be carefully planned so as to obtain unbiased, truthful, unrehearsed feedback from the school. The project director should ideally visit each school to guarantee consistency and to build on lessons learned in earlier interviews. These interviews should be conducted privately, without the presence of Ministry of Education or local or provincial officials in order to give the respondents the best opportunity to provide candid comments. While the interviews were scripted insofar as questions were prepared in advance of school visits, and tailored to each type of interview (school principal, technical director, fourth grade teacher, all teachers, students, parents, provincial and municipal authorities), these questions were used flexibly and built upon, depending on the course of the interviews. To the extent that information may differ with that available at the national level it arises from differences of perception and knowledge of local authorities and school officials.

C. Criteria used to select schools for school visits

The schools were selected based on the following criteria:

- The schools had to be currently in the P900 programme.
- They had to have been in the P900 system for five years or more.
- Their average mathematics and Spanish Grade 4 SIMCE score in 1996 (the latest year available) had to be 60 or less.
- The past trend in average mathematics and Spanish Grade 4 SIMCE scores had to place them in the “hard-core” of under-performing long-term P900 schools. Thus their scores had to show a steady or periodic deterioration or an obvious lack of improvement in contrast to the steady improvement in the comparable scores shown by the P900 schools as a whole.
- Only one school in a region could be selected.
- One or two schools should be private subsidized schools as opposed to municipal schools, to reflect the fact that about 20% of the P900 schools are private subsidized schools.
- Half the schools should be urban and half, rural, reflecting the P900 school split of 46% urban 54% rural.
- The wide range of school enrolment sizes should be captured.
- The full range of years of participation in the P900 system of long-term schools (five to eight years) should be included.
- As many as possible of the five quintiles of the proportion of vulnerable children by commune, as assessed in the Junta Nacional de Auxilio Escolar y Becas (JUNAEB) Vulnerability Index, should be represented.

- Average mathematics and Spanish Grade 4 SIMCE scores vary consistently among regions. As one of the criteria for including a school in the P900 system is the relation between the school's SIMCE score and the average regional SIMCE score, the selected schools should reflect this regional range of SIMCE scores.

D. Characteristics of the selected schools

All these criteria and variables¹ were carefully classified and analysed for the nearly 900 current P900 schools and a stratified shortlist of 24 schools was established. It was decided, however, that it was possible to visit only six schools for reasons of resources, time and presentational purposes. Accordingly, six of the 24 shortlisted schools were selected using quota sampling techniques so as to include as many of the dimensions of each of the variables as possible. It can be seen from Table 1 that the six under-achieving P900 schools that were visited fulfilled these criteria and covered all the dimensions of the key variables.

Only when the final six schools were selected were the exact locations of each school plotted on the map. In this way, convenience and easy accessibility of the school were not factors in choosing a school. One school in Taltal involved a four-hour bus trip each way from the nearest airport (Antofagasta) and two overnight stays in the town. Another school in Chañaral Alto involved a one-hour drive from Ovalle, which was another two hour drive from the nearest airport (La Serena). The Popoén and Trangol school visits involved an extended period of travel over four days using the Osorno and Temuco airports respectively as starting points.

One of the original six selected schools had to be substituted. Originally, the Region 9, small, municipal, rural, very high vulnerability (poverty), low SIMCE scores school that was selected turned out to be in Lonquimay at the source of the Bio Bio river. This is the only area of Chile that is east of the Andes mountain chain, known in Chile as the "Cordillera", and Lonquimay had suffered a devastating earthquake some five years ago. After some discussion, Lonquimay was not visited because of its unique situation and thus it would not have been useful as a representative example from which generalizations to other schools could be made. A comparable substitute school was selected from the 24 shortlisted schools. This was the Trangol School, also in Region 9, small, municipal, rural, high vulnerability, and with low SIMCE scores. No other substitutions were made.

The summary description of the six selected schools that were visited (plus two "positive deviant" schools) are given in Table 1.

¹ A number of other obviously important factors that should have been considered could not be taken into account because reliable and reasonably comprehensive P900 school data could not be made available. These included teacher qualifications, teacher turnover, teacher-pupil ratios, pupil repetition and dropout, school structures and facilities, qualifications and experience of school principals, and school income and expenditures.

Table 1

A SUMMARY OF THE SIX UNDER-ACHIEVING P900 SCHOOLS VISITED

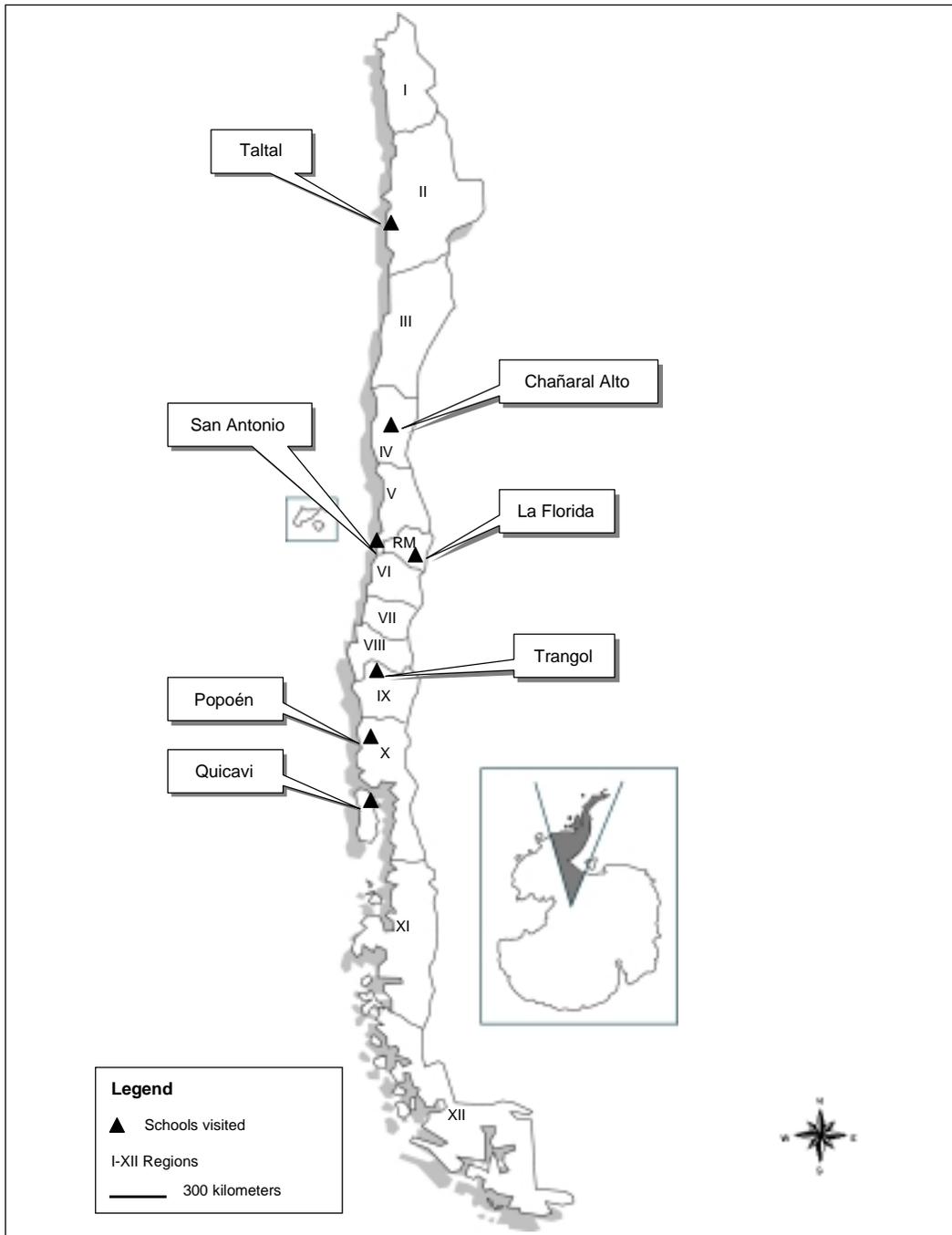
Region	Locality	Mun/ Private Subv.	Urban/ Rural	Enrolment 1997	Junaeb Level 1997 ^b	Years in P900	4 th Grade SIMCE Scores ^a			
							1990	1992	1994	1996
10	Popoén	Subv	Rural	80	4	6	53	47	38	49
9	Trangol	Mun	Rural	72	5	8	30	32	41	39
13	La Florida	Subv	Urban	642	2	7	41	44	46	47
5	San Antonio	Mun	Urban	518	3	8	46	56	56	57
4	Chañaral Alto	Mun	Rural	681	4	7	55	62	67	57
2	Taltal	Mun	Urban	1,110	2	5	53	64	64	60
Well performing schools interviewed ^c										
10	Quicavi	Mun	Rural	..	3	6	55	..	68	70
5	San Antonio	Mun	Urban	1,158	1	6	54	67	68	..

^a Average of mathematics and Spanish scores.

^b JUNAEB Vulnerability Index Quintiles
 1= Minimum Vulnerability (0-32)
 2 = Low Vulnerability (33-44)
 3 = Medium Vulnerability (45-56)
 4 = High Vulnerability (57-66)
 5 = Very High Vulnerability (67-100)

^c In San Antonio, just a short walk away from the under-achieving school visited, a contrasting, well-performing school that had recently graduated from the P900 system, was selected as a comparator. A school visit to a successful, poor, rural, residential school in Chiloé is also reported as a contrast to the under-achieving rural schools in regions IX and X that were visited.

Figure 1
CHILE: ACHIEVING EDUCATIONAL QUALITY: WHAT SCHOOLS TEACH US



Source: ECLAC, in cooperation with the Chilean Ministry of Education, "900 Schools Programme".

II. School reports

School interviews were conducted in²:

- Escuela Hogar Victoriano Quinteros Soto, Taltal, Region II.
- Escuela Básica Alejandro Chelén Rojas, Chañaral Alto, Region IV.
- Escuela Unidad Divina, La Florida, Santiago, Region Metropolitana (RM/XIII).
- Escuela Básica San José de Calasanz, San Antonio, Region V.
- Escuela Básica Movilizadores Portuarios, San Antonio, Region V.
- Escuela Trangol G-214, Trangol, Region IX.
- Escuela Particular 158, Popoén, Region X.
- Escuela Rural Aquelarre de Quicavi, Quicavi, Chiloé, Region X.

² School interviews were conducted by Beverley A. Carlson, Pilar Bascuñan and Elizabeth Love, with reporting assistance from Pilar Bascuñan and Elizabeth Love. The Quicavi school is included courtesy of Howard LaFranchi, Correspondent, The Christian Science Monitor. Interviews were also conducted with Provincial and Municipality authorities in selected regions.

**A. Taltal:
Escuela Hogar Victoriano Quinteros Soto**

“A poorly managed school, rich in frills, but lacking the basics”

It is the shiny new equipment that first catches a visitor's eye at the Escuela Hogar Victoriano Quinteros Soto. There are six sleek black microscopes, a beautiful long telescope and a fully equipped portable lab with beakers and test tubes still neatly packed in a long wooden box. There are also thermometers and brass weights, a full-sized skeleton and a wide array of audio visual aids. Downstairs are nine new IBM computers wired for interactive educational programmes. As one of the largest public schools in the arid province of Antofagasta, Taltal attracts equipment donations like the surrounding mineral-rich desert attracts miners.

Yet most of these gifts appear to have been seldom used. Stored in a narrow room set apart from the regular classrooms, the science tools look more like museum pieces than classroom aids. Much of the fancy equipment arrived within the past six months and most teachers have yet to learn how to use it properly. The lab tools are part of a grant awarded to the municipality of Taltal — sought by municipal planners without prior consultation with the school or teachers. Already six months into the school year, teachers have never met in any serious way to discuss how they might use the new equipment or integrate it into their lesson plans. The telescope arrived just last month from the European Southern Observatory and so far the nights have been too cloudy to test it. The computers are covered by their plastic covers and CD ROMS of interactive programmes are stored in a cardboard box.

Seventh and eighth graders get one hour a week at the computers. Before increasing that time school officials prefer to wait for the completion of a new computer room, lab and library at year's end. The plans also include the construction of a school annex on a campus several blocks away to absorb half of the current students when full-day schooling begins next year. The Escuela Hogar currently lacks the physical space to move from half-day to full-day schooling. Classrooms are now bursting at the seams with a double shift of 1,150 children in kindergarten through eighth grade.

So while the sophisticated tools to prepare Taltal's student body for the 21st century gather dust, an 80-chair deficit in the cafeteria forces students to eat lunch in three shifts. The schoolgrounds are clean and painted a cheerful mixture of primary colours but inside the crowded classrooms the desks and chairs are up to 15 years old and shabby. There is no vice-principal or inspector and insufficient supervision at recess makes the children seem particularly excited and out of control. The school's 34 teachers struggle to manage classes with 40 or more students in rooms that are supposed to hold no more than 35.

While the high tech equipment comes from special projects and donations, basic equipment like chairs come from the already strapped municipal budget. Once the bustling center of the now obsolete saltpetre industry, Taltal has fallen on hard times, bringing the average monthly income down to 150,000 pesos (then US\$320.) Copper mines, which replaced saltpetre as the leading industry, are feeling the pinch resulting from a drop in international prices. The largest mine recently fired one-fifth of its 350 workers. In addition, even small fishermen find their catches are dwindling due to effects from El Niño and overfishing. “These are times of crisis,” said Horacio Méndez, Provincial Coordinator of the P900 programme.

That was not always the case. When the school was founded in 1942, Taltal was booming. An imported English train arrived on a regular basis, the town had its own telephone company and the elite flocked to the local Riding Club. The Escuela Hogar began as a boarding school for the children of saltpetre labourers and of workers from smaller towns along the train line. Although today there are only 14 boarders, school officials still resist eliminating the dormitories and even

changing the boarding-house name. “Since 1992 we’ve had deficit after deficit, but they won’t close the dorms because the heart is stronger than the head,” said Mario Acuña Villalobos, financial director for Taltal’s Department of Education. In 1999, if all goes according to plan, most of the old dormitory space will be used for the new laboratory, library and computer room as part of the remodeling for all-day schooling.

The local government finds itself increasingly short of funds since most of its income comes from the sale of mining and commercial patents, driving and construction permits. “You have to fight hard to get the municipality to give money to the educational system,” said Acuña Villalobos. In 1997 the government earmarked 31 million pesos (US\$66,000) for the four schools in its jurisdiction but paid out only 21.6 million pesos (US\$46,000). This year, again, the schools were budgeted 31 million pesos but halfway through the school year, Taltal’s schools had only received 8 million pesos (US\$17,000). The municipality justifies the difference with a loophole it wrote into the budget stating the funds will be transferred “in accordance to the resources available.” The resources have not been available. Said Acuña Villalobos, “Instead of increasing its investment in education, the municipality has steadily decreased it. Apparently they consider investment in education a waste of money.”

The two municipal elementary schools in Taltal earn enough money from government subsidies based on enrolment to pay all their staff and have funds left over for other projects. But the municipality combines all the educational subsidies in the same account to finance secondary schools that cannot make ends meet. After the funds are redistributed, the Escuela Hogar can only cover the wages of 95% of its staff with the subsidy money. While administrators acknowledge the approach is unfair to primary schools where attendance is mandatory, they argue it is the only way they can fund the secondary schools with smaller enrolments. With 1,150 students, the Escuela Hogar is the largest elementary school in Taltal and thus earns the lion’s share of subsidy funds. There is room to increase the efficiency of the high schools—the night school sometimes has only 12 students—but tough decisions would have to be made. Until then, the subsidies from children who attend primary school regularly in overcrowded classrooms go toward supporting high schools where teens are more cavalier about attendance.

Exacerbating this problem is the micro-management of Guillermo Hidalgo Ocampo, the mayor of Taltal and himself an alumni from the Escuela Hogar. School and municipal officials say he insists on being consulted on even minor decisions, and once even called a councilman to ask why a student had been punished for bad behaviour. (In spite of repeated phone calls and messages, Hidalgo Ocampo could not be reached for comment). Current laws grant the mayor legal representation of the schools, while a bureaucrat called a “sustainer” takes care of the daily operations. But school officials are still unable to make any move without the mayor’s approval. “They don’t allow any room for personal initiative,” complained Juan Rojas, the principal of the Escuela Hogar since 1992.

When Rojas recently switched two employees in the boarding school and school office in the interest of efficiency, the mayor challenged the move and told him he lacked the authority to make it. The workers went back to their original jobs. When the Escuela Hogar advertised the positions of vice principal and inspector in local papers, the mayor stepped in and cancelled the hiring process on a technicality—after the candidates had been chosen. “He likes to decide everything” said Porfirio Alfaro who worked as a P900 supervisor in Taltal from 1996 to 1997.

Management problems occur also at the provincial level: half way through the 1998 school year Alfaro’s replacement as P900 supervisor had yet to visit the school for the first time even though, Alfaro says, “it is essential to have a dynamic supervisor”. Without a vice-principal or inspector, the principal and other administrators have had to pick up the slack. “Sometimes we are drowning in work,” said Rojas. To compensate for the extra hours Rojas receives a 25,000 peso

bonus (US\$53) in his monthly pay check. But the psychological price paid for the lack of full control over the everyday school operations is bigger. Two different Education Ministry officials said Rojas has resigned himself to working his required hours without adopting any new initiatives that might spark another clash with the mayor. “He just got tired and decided it wasn’t worth it,” said former supervisor Alfaro.

The bulk of the students who attend the Escuela Hogar, meanwhile, are struggling with problems of their own like broken homes and the need to work. These students do not receive sufficient support or reinforcement at home of what they are learning at school. Some of the older boys must alternate between jobs and classes, working one day and going to school the next. “There is a lot of social work involved,” said eighth grade teacher Rosa Ovalle Fernández, who has taught at the Escuela Hogar for 16 years.

Trifeña Tarita Chirino is a fourth grader who reads with a fluency appropriate to her nine years, despite being one of 17 brothers and sisters who work collecting and selling sea algae. Her teacher says she is enthusiastic about learning, and sometimes will knock on the door after school hours to ask for a pencil or for help with a question. “I talk to Trifeña’s mother and tell her to help her daughter, but it is as if I were speaking a different language,” said teacher Patricia Jiménez Rojas. Trifeña’s grades—an average 4.4 out of 7—reflect the lack of parental concern. Yet in the same class, Cristián Astudillo Collao boasts grades averaging 6.2. Happy and confident the nine-year-old announces he will be a paleontologist when he grows up. His father works in a thermoelectric plant, his mother paints and Christian appears to have his lessons reinforced at home.

So far, the school’s relationship with parents has been spotty—only about 50% of parents attend regular meetings. Yet by sheer happenstance they play a critical role in the success or failure of their children by selecting their teachers. After years of fending off complaints by teachers over the composition of their classes, Principal Rojas changed the system of deciding the makeup of each class in the elementary school. When parents arrive to register their children for school, they are told to select the teacher that will accompany him or her from first grade to fourth. If a particularly good teacher’s class fills up quickly, parents will have to settle for a different teacher. Those who arrive last to the registration process will most likely get the worst teachers and condemn their children to mediocrity for four straight years. So in the end it is the children with parents who do not fully understand the value of education who pay the cost for the school’s reluctance to take responsibility for the makeup of classes.

This unfair system allows the principal to avoid complaints and ideally provides a motivation for bad teachers to reform. “We do this precisely so that the teacher will improve his teaching because there shouldn’t be any mediocre teachers,” said Rojas. Unfortunately, he admits, there are teachers who do not care if they are chosen last, so in practice the incentive does not work. If, however, a child is lucky enough to have an excellent teacher from first to fourth grade, he or she is likely to continue being a good student in fifth grade and beyond under a normal, “one-teacher-per-subject” system.

One teacher can indeed make a difference, even at a poor school. In 1994, for example, Escuela Hogar’s fourth grade children turned in mathematics and Spanish results far above those of previous years (62 and 65 respectively out of 100), a result attributed to three particularly good teachers. More recent scores (1996) registered a drop of two points in Spanish and seven points in mathematics, largely because the teachers had changed.

Two of the teachers responsible for the commendable 1994 scores have since retired, and recruiting new teachers is a difficult if not impossible task. Taltal is a desert town of 12,000, a four-hour bus ride south of the nearest city, Antofagasta. Because of its isolation and the necessity of

trucking in most goods, the cost of living is high, all factors that conspire to keep young professionals away. “If you advertise a job opening in Taltal nobody will apply. They all prefer the big cities,” said former supervisor Alfaro. As a result, most of the Escuela Hogar’s 34 teachers have been there more than a dozen years —four of them are alumni. Among the staff there are five marriages between teachers, one set of brothers and two nephews of school administrators. “You can’t speak ill of anyone here because they’re all related,” joked Rojas.

One advantage of older teachers is a sense of tradition and community. The Escuela Hogar is very involved in town anniversaries and holidays, staging dances and shows. “The school is the heart of the community,” said Alfaro. But many of the older teachers are also resistant to change, preferring to stick to the same lessons given in the past. “They have a lot of bad habits and it is hard to make them understand that there are new methods and technologies,” said Rojas. A second disadvantage is the sheer cost of paying a staff with years and years of seniority. “If the teachers were young then we could cut costs significantly,” said Rojas. A beginning professor earns 327,515 pesos (US\$700) monthly while one teaching for ten years or more might earn twice that amount.

If some veteran teachers resist change, an equal number of them embrace it and use it to their advantage. The first to fourth grade teachers put together a project that won funds from the education Ministry for an audio-visual room. Since the project was put together by the teachers themselves, they also use it more frequently and have integrated it into their lesson plans. In any given week they might project cartoons for kindergartners, movies in English for teens learning the language, or science videos for the younger grades. One programme on the growth of a fetus prompted fourth-grader Daniela to announce recently that she wanted to become the kind of doctor that “helps babies be born.” Those kinds of dreams are encouraged by her teacher, Jiménez Rojas, who has taught the same class since the children were in first grade. Jiménez Rojas is enthusiastic about the special materials sent by the P900 programme. “The children are familiar with the material and like it,” she said. But the quantities supplied often fall short of their requirements so she routinely divides her class into groups to work with the new material.

Proof of teacher interest in upgrading their skills is the fact that several are currently taking a course on building children’s self-esteem and paying the 24,000 peso (US\$50) fee out of their own pockets. Another group organized a conference last year that included teachers from Mejillones and Antofagasta. They housed the visiting teachers in the empty dormitory bunks and swapped experiences on education. “We saw that we were doing okay,” said Juan Beltrán Berenguela, who oversees the school’s technical aspects.

One of the Escuela Hogar’s more dynamic teachers is Rosa Ovalle Fernández, an expert in sparking the imaginations of her eighth grade students. Faced with teaching the proper punctuation of a letter recently, Ovalle devised a lesson in which a famous Chilean football player declares his undying love for three different women —depending on where the commas and periods were placed. Seated in groups of four, most of the children listened and participated in the class. “You have to make them laugh and get them involved,” said Ovalle Fernández.

The P900 material is only moderately useful to Ovalle Fernández. “I wish they would make the material a little more functional and a bit less dependent on memorization,” she said. When the Ministry of Education sends questionnaires on which textbooks teachers wish to receive Ovalle Fernández makes her choices carefully —to no avail. “We always choose the best and we always get whatever is available,” she complained. So instead of sticking to boring texts, Ovalle Fernández has her class write their own comic strips with titles like “Mujer Flach”, film their own monologues, or finish stories they began reading on the computers. “The kids like to leave the classrooms and do something new,” she explained.

So far, the eighth graders are doing better in SIMCE scores than the younger children, and the rate of students repeating a grade has dropped from a high of 13% in 1993 to a steady 9% over the past four years.

One current source of difficulty for the children is the requirement for state schools to teach two foreign languages. While it is proposed to change to just one language under the current educational reform, the new curriculum cannot be applied to the fifth and sixth grades until next year when the school adopts the full day. Until then, fifth to eighth grade students have to learn English and both French and English from the seventh grade to eighth. "This is really really hard for the kids," said teacher Jiménez Rojas, whose daughter is struggling with French. In effect, the learning of foreign languages competes directly with learning the basic foundations of Spanish in the restricted half-day schoolday and in already large classes.

The implementation of full-day school will be the Escuela Hogar's real challenge to improve education. The new installations should be in place next year and both students and teachers will be able to enjoy the new laboratory, computer room and library.

But if any of the new installations are to be truly effective, the Escuela Hogar must deal with old problems like mismanagement, under-funding and the lack of clear lines of authority. Unless this is done, the new frills and buildings will not translate into improved test scores and students will still lack the basics like chairs.

B. Chañaral Alto:

Escuela Básica Alejandro Chelén Rojas

“The challenge is getting teachers to stay”

The main challenge for the 714 students of the Alejandro Chelén Rojas elementary school in Chañaral Alto is not so much getting to know their subjects as getting to know the teachers who arrive only to search for a way to leave. Chañaral Alto is located two hours from any important urban centres, lacks a sewage system and even a shower is a luxury to the teachers. "You have to be brave to stay here," says one professor. No one wants to remain long in Chañaral Alto. Even the principal is temporary. Of the school's 26 teachers in 1998, seven are new.

The town of Chañaral Alto revolves around the farming of table grapes, both for export and to supply four of the main "Pisco" manufacturers in Chile. But jobs are temporary. The majority of residents work during the harvest: from October to December. During the feverish three-month harvest, the town of three thousand inhabitants becomes a mecca of temporary workers of almost triple its usual population. They call it the Far West. "We are invaded every year by all kinds of people, even prostitutes. A lot of money changes hands," says Claudina Rodríguez the acting principal of the Alejandro Chelén Rojas elementary school.

In June groups tie up the grapevines and by August the demand for temporary workers increases. In October everyone in the town begins to chip in: children, mothers, fathers, and grandparents. During the peak of the harvest the municipality sets up a programme for working mothers, to care for the more than 100 small children and babies who would otherwise be watched by children only six or seven years old themselves.

The Alejandro Chelén Rojas elementary school is located on the only street in Chañaral Alto. The newly painted aqua and pink building stands in stark contrast to the dusty, unpaved street. The town's adobe houses collapsed after the last year's earthquake and several are still windowless or sealed off. They have yet to clear away all the rubble. Most of the houses in the town are made of wood and even an ordinary two-floor cement structure stands out. The tower of the age-old adobe church is cracked and its cross bent over, giving the impression it will tumble and fall any minute.

But the school boasts lush trees, a clear bell and a gold plaque announcing the foundation date: April 19, 1958. A Chilean coat of arms and an unusually large flagpole dominate the front gate. Within its walls, 714 students study in cramped classrooms in two shifts. About half the children from kindergarten to eighth grade get served JUNAEB lunches containing 700 calories.

The school is full and cannot accept any more students for lack of room. This same shortage of space and land for a new school prevents it from joining others in switching to a full schoolday. The school was built for approximately 250 students with 6 classrooms and includes an apartment for the principal and a room with a kitchenette for one unmarried teacher. As the years passed enrolment increased and the school became more and more cramped. New sections have been built but their quality is inferior. Some grades are crowded into classrooms that seem dwarfed by the sheer number of students.

But the main problem is not so much space, but the high turnover of its staff, which in the long run affects the student's academic performance. The children's SIMCE scores are erratic, ranging from 55 points in 1997 to a high of 67 in 1994 only to drop to 57 in 1996. This year's results for eighth grade increased by 15 points after remaining static around 50 points over the past six years.

The constant comings and goings of teachers is one reason why this rural school cannot maintain an improvement in performance. The students who graduated from elementary school in

1996 went through 12 different teachers in a four-year period, three of them in fourth grade alone. Most of those teachers lacked degrees. When the class took the SIMCE test, results were poor. Those in eighth grade, meanwhile, had just one excellent teacher from first grade to eighth and the 15-point increase in scores reflected that.

The turnover of teachers can be attributed to difficult living conditions in Chañaral Alto. "I'd worked in the city but never in the countryside. I had to get used to the absence of showers, of comfortable bathrooms. We don't have the minimum comforts to do a good job," explained one teacher who lives in the town with her little daughter.

Only 13 of the 26 teachers currently live in Chañaral Alto, the rest arrive in public transportation from Ovalle or Monte Patria. This means that when classes are over they rush to take the last bus of the afternoon and are unable to remain for after-school activities.

As soon as they can most teachers assigned to Chañaral Alto apply for a new position. Their goals are to transfer to larger cities, where they can go to a movie and dinner, send their children to schools or universities and attend classes themselves for self-improvement.

Claudina Rodriguez, acting principal and technical chief says teachers want a job closer to their real homes. "After working here for three or four years they want the perks of a big city and to be close to their families. The economic incentive to teach in Chañaral Alto is not enough, only 5% of the salary, which is not enough to grab anyone." A case in point is the successful eighth grade teacher, responsible for the 15 point increase in SIMCE scores: this year she transferred to Monte Patria.

The turnover of the teachers is not the only problem the school wrestles with. Faced with the lack of volunteers to fill the empty positions, the municipality has had to recruit people with only high school educations. Almost half of the teachers, 11 out of 26, lack degrees. None of the seven new teachers have one. The technical unit helps those lacking degrees and academic training by showing them how to develop lesson plans. Eventually most of them take courses to earn degrees in Ovalle.

Even the administrators of the Alejandro Chelén Rojas school experience the revolving door syndrome. When the principal of many years retired, a new one arrived only to join the new Municipal Department for technical-pedagogical training months later. The position was advertised again, another principal was hired but after a year in the position he too was hired to become a part of the same municipal office. Now the position of principal is available once more.

Another considerable problem is absenteeism. During the months of April and May, 26 requests for time off landed on the desk of the principal, for one to four days off. Claudina Rodriguez figures that after subtracting medical leave, at least one professor is absent with administrative leave daily. "The problem is as serious as the constant staff turnover. These are classes that are not taught, it isn't the same for the children to have a substitute, which we can't always get," she adds.

Overcrowding is another problem. The kindergartens have been reduced to two 35-student classes. No new children are accepted. There are three classrooms for first grade because by law the school must accept all students who apply. But the three rooms are only a temporary respite, because in fourth grade the students must cram into two classrooms of some 43 to 45 students each.

The effect of overcrowding? "Their performance drops. Last year I had 32 kids, of whom 6 had learning difficulties. But now I have 42 students and 16 with learning problems. Some don't know how to read or even write their names. The technical unit is trying to reinforce but it is very difficult to move forward on a subject when some kids are fine and others are far behind. Then the

classroom itself is small, uncomfortable and has pillars in the middle," said the fourth grade teacher.

The residents of Chañaral Alto are no strangers to adversity. Over the past three years they've faced a long and worrisome drought, floods and finally an earthquake. Still the economic situation of the town has improved over the past decade. Teachers notice it in the shoes, clothes, and homes of their students. Most homes have drinking water and electricity and construction recently began on a sewage system. The town boasts 40 telephones, and the Index of Vulnerability that measures poverty, also changed for the better. Still many refute the current numbers.

"The new index is determined according to a poll of the parents in first grade. But the teachers don't fully understand the importance of the questionnaire and the parents generally fib: they increase their schooling, deny they sleep three or four to a bed or say they have a stove instead of cooking over a fire. It's hard to get people to be honest and realize it's for their own good," said Espiro Pleticosil, P900 supervisor for the school, based in the Provincial Department of Education of Ovalle.

As a rule the students come from stable homes. On average, parents have a sixth grade education while the younger ones with smaller children tend to be elementary school graduates, with some high school graduates.

Two years ago the school began night classes for adults, with teachers paid the extra hours by the municipality. Most of the night school's 50 students are parents and their enthusiasm was such that the applications exceeded the students they could accept.

Still, the teachers consider the participation of parents in the school lacking. Only a fourth of the parents attend meetings and commit to the education of their children. Most pay the annual fee of \$1,000 pesos and many participate in a parents center to support the school in fund-raising activities for improvement projects.

On the last Saturday of May, for example, the folk group Zarinas Andinas performed for an audience which paid 300 pesos (65 cents) a ticket so the school could buy a mimeograph machine that cost three million pesos. The goal is to earn half the needed amount with the municipality paying the other half. The teachers, particularly those who live in town, also sponsor fund-raising activities to pay for school improvement projects like new trash cans for the patio, library books, and even desks and chairs.

The chronic shortage of teaching material prompts school officials to be constantly on the lookout for new Education Ministry programmes that could help. The P900 programme received high praise in spite of the fact that sometimes supervisors failed to come to workshops, failed to bring promised guidelines or failed to give an effective training session. "We take full advantage of it. It gives us new material that we wouldn't have a way of getting otherwise. Some teachers use it better than others but all of them use it," said Claudina Rodriguez.

Teachers complain that until this year the P900 workshops have been repetitive, relying on the same booklet as in prior sessions or analysing school texts. "There were the teachers reading and re-reading the same paragraphs yet we didn't know how to use some of the educational material and the supervisor didn't know how to explain it either. There should be some kind of instruction booklets that suggest the ways in which the material can be used," said Luis Olivares, third grade teacher.

The classroom libraries are considered one of the best parts of the P900, as they encourage children to read. "The books are there, the children can take them out and read them, and after that they can write or converse. If a teacher is absent, the substitute doesn't arrive with empty hands",

said Luisa Rodriguez, counsellor. Instead, they let the teacher wheel in the portable bookcase that serves as the "classroom library."

The school recently made a three-year commitment to the new P900 but demanded a new supervisor as well. The Provincial Department of Education, meanwhile, requested the municipal department of Education to do what it could to encourage the staff to stay put for three years to be able to complete the training job well.

This year the teachers are pleased with their new supervisor, Espiro Pleticosic, with whom they schedule weekly workshops to develop lesson plans for the next three years. These workshops provide teachers lacking degrees with the tools they need for class. So far the new approach is sparking praise from teachers who find the meetings more dynamic and practical.

Claudina Rodriguez explains that the new educational reform initially confused the school. "With the help of the P900 supervisor we began to understand it. The teacher is no longer the center of everything, now it is the child and the teacher is the guide. The student works at a round table and not looking straight ahead at the teacher. He investigates more, and is no longer mute."

Another factor that helps encourage student expression is a Project for Educational Improvement (PME) won by the school in 1995 for written and spoken Spanish. The project included special training in theater, Spanish and composition. The project took up so much time that teachers temporarily dropped out of the P900 programme that year because they lacked the time for the workshops.

Theater has long been a school tradition. The town enjoys it and over the years the school staged several plays and assemblies. Teachers sought the PME with theater in mind. Although training for the staff only began halfway through the PME timetable, the programme received high marks in improving the children's writing skills.

"We dramatized local legends and the history of Chile. We put on plays in every subject, even science. Every anniversary provided fodder for writing, everything was useful. We requested an extra year because we ran out of time for completing the project," said Claudina Rodriguez.

Self esteem improved considerably. SIMCE Spanish scores improved as well. Luisa Rodriguez, counsellor, said "the theater is what really makes us improve the most."

Chañaral Alto is close to the place where national poet Gabriela Mistral was born and worked as a schoolteacher. As a result the school makes a point of dramatizing her poetry, singing her songs, dancing to her lyrics, and recalling her anniversaries.

The school also won the Links (Enlaces) programme and now boasts a modern computer room that is used constantly and includes email. Altogether with the P900 and grants, the school has new teaching material, videos and a television all of which are used often in the classroom.

But the school has yet to convince its new teachers to stay.

C. La Florida, Santiago: Escuela Unidad Divina

“The challenge of improving education in a slum”

Children of La Florida readily admit they like school better than home. Teresa says she would love to stay there every day until nightfall and return home only to sleep. Sofia says she is better off in school than at home. "There you're fighting all the time while here we almost never fight," she says. Cristóbal prefers school because "at home it's always a hassle," and Diego is bored on the weekends.

For children like Sofia, Cristóbal and Diego, whose ages range between 9 and 11, the private subsidized school Unidad Divina is an island of peace in the midst of Villa O'Higgins, a slum where drugs, poverty and alcoholism are a part of daily life.

But Unidad Divina is one of the worst performing primary schools in the entire Metropolitan area of Santiago. Four years ago the principal began a series of changes to improve things, but they have not been enough. There are too many students per class and often teachers have to struggle to be heard over the outside din, a situation that threatens any progress.

Since 1990 the school formed part of the P900 improvement programme. But improvement has been scarce. In 1990 the average score in the national SIMCE tests was 41 points, and in 1996, 47 points, an improvement far below the average of most P900 schools.

What went wrong in Unidad Divina? Why cannot the school improve the quality of education more?

It is an average weekday and stray dogs wander along the dusty, dirty street of Lircay where children are greeted at the school door by the kind smile of Don Bernardo. Some students arrive walking and others, who live in the more distant areas of La Pintana and La Granja, by yellow school bus.

In contrast to the street, the school is clean and orderly. It even boasts a little flower bed and the sign "every task undertaken with love stands out." The 722 children registered at the school go to classes in two shifts, from kindergarten to eighth grade. They wear uniforms, are neatly combed and many girls wear ribbons.

The classrooms have clean curtains with prints of letters and numbers, informative bulletin boards, paper trains, calendars and age-appropriate decorations for inspiration. Supply closets are neat and backpacks hang from hooks along the wall. The bathrooms are impressive, with tiled floors and walls and small sinks and toilets, which are cleaned frequently during the day.

It is obvious the 16 Unidad Divina teachers make an effort to have a pleasant classroom. They are almost all young professionals, between 24 and 32 years old, who work at the school full-time and appear committed to the children.

The environment is happy, the children seem active but not aggressive and they approach the teachers frequently. During recess, the teachers are available to the children and monitor the schoolyard. It is forbidden to smoke. One teacher comforts a child who fell down, another chats with three students. The principal made clear that recess is for the children, not the staff, because "in an area of children at high-risk, the task of counseling occurs when the child is free and there is an opportunity to talk to him, to correct him. It is not a time to lock yourself in the teachers lounge," she explains.

The school includes a programme for special education and another for tutoring as well as workshops in music, sports, ecology and personal training.

At first glance there is no indication that it is one of the worst performing schools in the country.

A look at Unidad Divina's history might shed light on its predicament. The two owners and administrators have been the same since the foundation of the private subsidized school in 1981. This is their only school and their influence is felt through the current principal Dora Muñoz.

Muñoz began as a primary school teacher 17 years ago and has since worked as a counsellor, chief technician and principal since 1994. A pleasant, intelligent woman, Muñoz recently finished a post graduate course in educational administration at the Universidad Mayor, financed by the school owners. "It was necessary. I have the ability to lead, but I learned strategies for organizing my work. I was eager to do things but I lacked a familiarity in administration." She learned to be optimistic but also to be patient. Changes "never occur from one day to the next, they are slow and one must go through stages."

Before Muñoz, the school had two other principals. It was a time when the school came to be called the "Unidad Cochina", meaning "Filthy Unity" instead of "Divine Unity". The school lacked an educational project, teachers worked in their own private bubbles and discipline was non-existent. The school doors, permanently open, allowed anyone to enter and they did. Parents walked in to rant at teachers and passers-by stepped in to use the bathrooms. Students used empty classrooms to sniff glue under the tables and absences needed no justifications nor did homework need the signatures of parents. Threats and a general lack of respect toward the staff became the norm.

The student body comes from a low socio-economic status with serious family problems such as violence, drug-addiction, alcoholism and broken homes. The social risk is high: according to teachers, groups of young teens smoke crack (pasta base) every morning a block from the school. "In general our children are not consumers but they see how it is bought and sold, the slang that is used, everything. It is not something they are unaware of," explained one teacher. The technical director noted "we have a lot of children with problems who suffer from a lack of affection because nobody bothers with them."

A high number of students suffer from violence of one kind or another. One first grader's limbs show signs of cuts and scratches: a car ran over him the previous week. The child practically lives on the street since his mother shows little concern for him. His teacher sent messages daily for her to come in for an appointment after the accident but she never appeared. The child never misses school, however, because that is where he gets his meals. Two weeks before, a stepfather raped a 10-year-old girl. In 1997 the third grade teachers took a little girl to the health clinic so the social workers could find her another home because her stepfather constantly assaulted her sexually.

The household income of parents is a scarce 80,000-120,000 pesos (US\$170-250). Those earning far above that amount spark suspicions among the school staff at Unidad Divina. Past experience proves it is usually due to drug dealing.

Most of the parents hold informal jobs such as street vendors, construction workers or singers on the public buses and metro stations. Women tend to be maids or laundresses. Few of the parents have a high school education, most finished elementary school but some are illiterate.

During this period low self-esteem haunted both teachers and students, as became evident in a 1995 study by the teachers themselves. Teacher turnover was high and those that could leave the school did. Those that remained seldom got treated as professionals and seldom felt like them. Absenteeism soared. The private subsidized school depends on student registration for funds to

survive, and the number of students dropped from 700 one year to 400 the next prompting a large number of teachers to be hired or fired in a short period of time.

The self-esteem of the children fared even worse. The same 1995 study revealed that only 30% of the students were happy with themselves and that too many thought suicide was feasible.

Parents in the community who had a choice would take their children to other neighborhood schools, be they public or private. The only ones to arrive at the doors of "Unidad Cochina" were those who wouldn't be accepted elsewhere or who had been expelled.

"We lost a lot of years. Even within the P900 there was a lot of wasted time without improvement," said one professor.

In 1994 Muñoz took the helm as school principal and the school began to experience a period of change and organization. First she appointed Don Bernardo as a gatekeeper to keep strangers out of the school and parents from classrooms during school hours. The uniform changed as well, as part of a strategy to forge a new, more positive identity for the school.

Disciplinary measures were adopted and teachers worked to change student attitudes. They corrected their language, prohibited cuss words and tried to eliminate slang used by street delinquents.

The changes also sparked clashes with parents, who tend to be aggressive and take little responsibility for the education of their children. "The parents have a very convenient vision of their child's education, they expect the school to teach everything from toilet training to academic content," said the principal.

There is no center for parents at the school, after the existing one was closed.

Ramón, an eighth grade teacher, considers the total absence of parental support one of the school's most serious problems. "There is no commitment on the part of the parents, the children only get what you teach them in school. At home their backpack gets thrown in a corner, they don't open it and in most cases they lack a place to study. If they do try to study it is at a table with a radio on, a television blaring and a bunch of kids yelling."

Jacqueline, a second grade and special education teacher believes the participation of parents in the school is indispensable. "Since the educational level of the parents isn't the highest, we must teach them as well so they can help us when we give the children homework." Jacqueline appreciates the new format for meetings with parents. They are no longer called with requests for money to fund one thing or another but rather for teachers to use the meetings as a kind of school for parents.

In 1996 Unidad Divina began charging parents a fee for the first time. The 3,000 peso (US\$6) charge went toward investments to prepare the school for full-day sessions. But the fee also increased the parents' commitment to the school. The fee collection process still requires work. In some grades 25% of the parents still have not paid it while in other grades debtors are a whopping 76%. Still, the principal considers the general effect of the fee positive in giving the school more value.

Muñoz also renewed the team of teachers by hiring graduates fresh from college. The Unidad Divina staff and teachers took full advantage of the weekly workshops sponsored by the P900. They used the forums to analyse their teaching styles, examine their concerns and correct their errors. During the meetings teachers drew up a plan to establish basic academic content, an institutional project and a set of rules for the staff.

The team of teachers learned to work well together and the turnover decreased. Most of the 16 teachers come from professional institutes. Almost all of the teachers spend the entire day at the

school, since their contracts stipulate a workweek of 44 hours. Teachers currently earn a basic salary of 322,000 pesos (US\$685). This year the school started awarding raises of about 30,000 (US\$65) as incentives for efficient and effective teachers.

So far the teachers appreciate the principal's efforts and the ease with which she approves their new projects. But low wages continue to be a source of frustration, particularly when additional studies do not translate into higher salaries. "It doesn't pay to get extra training" said Ramón, who said the school only financed a small amount of his graduate degree in counseling and did not raise his pay after his additional studies.

Most teachers have little contact with the Ministry of Education, which they consider distant and unhelpful. Ramón comments that he only saw the school's former supervisor once in three years. The other link with the Ministry comes in the form of the textbooks that arrive annually. There are also occasional courses for self-improvement, such as one taken early in 1998 that they considered "good." As for the P900, the material supplied by the programme is often insufficient for the number of students in a class or it arrives without clear instructions for the teachers. Still, the principal and teachers say things have improved since a new P900 supervisor was named in late 1997. This supervisor makes regular visits to the school and "supports" it in its endeavours.

Muñoz appreciates the P900 programme's underlying philosophy. "Each school has to be independent, autonomous and search for solutions to its problems without depending on other sectors." The material that comes with the programme also earned high marks.

Two years ago teachers at the school, together with the principal, tried to put together a PME project in hopes of earning a government grant to carry it out. But the Ministry did not approve the plans. Teachers continue to believe they planned the project well and they fail to understand why the Ministry rejected it. "Maybe they give preference to the public schools," mused one.

Another example of misunderstanding with Ministry officials concerns the school lunches. No one understands why the entity which provides the lunches, JUNAEB, eliminated 70 of the rations this year. Last year when students numbered 630, they received 300 rations and this year when students number 722, they eliminated 70. They view with cynicism a letter explaining that the school does not suffer the level of economic vulnerability that is necessary for all the rations they had been receiving. The school is currently requesting that the missing rations be replaced.

The good news is that the process of change started four years ago by Muñoz is beginning to pay off. National SIMCE scores in mathematics and language for 1997 soared to 58, almost a 50% increase in only two years. These students are profiting from the institutional changes carried out by Muñoz and her team at Unidad Divina with help from the P900 programme

Why have not these changes been reflected in the achievement test scores of the fourth graders?

Perhaps the lack of space is a decisive element. Classes are too numerous and classrooms too small. There are more children in them than those who could comfortably fit: between 35 and 45 students, depending on the grade.

In one of the second grade classes there are 43 children in a room the size of 38 square meters. While seated in an orderly fashion at their desks, student's elbows bump and movement within the classroom is difficult. The tables seat eight, although a larger table has 11 students around it. Copying a neighbor would be easy and virtually impossible for a teacher to catch, particularly since there is only one teacher per class. The overcrowding makes it increasingly difficult to conduct the interactive classes which teachers consider the most effective. Any movement within the class causes disruptions.

The problem of overcrowding is heightened by the fact that many of the children have learning difficulties. Fourth grade teacher Hugo explains that of the children in his class, ten are very poor students and another three are borderline. Yasna, who teaches the other fourth grade, explains that her class includes children with serious learning difficulties. "We make a commitment to these children because we know that if we don't the kids will continue a downward slide and will be lost. We have to continue receiving them," says Yasna. But the wear and tear on the teachers is enormous because they simultaneously have to help these children and maintain the interest of the class as a whole.

Last year the third grade classes of these two teachers numbered a little over 30 students each so teaching them was easier. The smaller size allowed them to divide the students into groups according to their performance, which made teaching them easier and more effective.

The third grade children also had the advantage of large classrooms, so the classes could be interactive. Teachers divided the room into segments for different interests, and assigned homework to the children according to their individual needs. The class even included a rug for children to read on. "But now the classroom is smaller and we have more children so the classes are more expository. If we make the children move, they bump into each other and start fights. An interactive class requires a lot of organization, they have to move in a certain direction and allow other children to pass. It is hard to prevent copying."

The other problem is integrating new children into the school. Yasna describes her experience this year. "It is like starting from zero. They have other habits and use slang and curse. Little by little they've been adjusting to the rest of the class, becoming more orderly, but we have had serious problems with their performance."

Gloria, the technical director, blames overcrowding for low academic performance. "There are always three groups, one that is good and progresses quickly, another that is mediocre and a third group that is always behind. But if there are 45 students with just one professor it is difficult to maintain the different paces. I think if we reduced the number of students in each class we would see more progress."

The increase in students is due mainly to two situations. First, La Florida is one of the communes with the greatest growth in Santiago, almost doubling in size over the past ten years. Second, the school recently launched a marketing plan for new students because the size of its student body determines the funds it receives to survive and prosper. The teachers participated in the successful marketing campaign, increasing the student body from 636 to 722.

The lack of space prompted school officials to pack up the library so the room could be used by a class that had made the change to a full-school day. They do have a computer room which is used little at the moment.

The grounds of the school are too small for so many students, who cannot even enjoy recess at the same time because of overcrowding in the schoolyard. Instead they break for recess in shifts. While students are not allowed to talk in school hallways where others are studying, there is a constant level of noise outside the classroom that keeps students from concentrating and makes it hard for teachers to make themselves heard over the din.

Unidad Divina's dilemma is not uncommon among Chile's private subsidized schools. Its very existence and funding hinges on a large student body but the sheer size of that student body hinders efforts to improve the quality of education.

D. San Antonio: Escuela Básica San José de Calasanz

“Energetic principal-entrepreneur struggles to defeat adversity”

Juan Luis is 14-years-old and a drug addict. He walks with his mother into the office of Elsa Carrasco, principal of San José de Calasanz Elementary School. Elsa asks him, "What are we going to do?" He answers, "Now I am going to study. I give my word as a man."

Juan Luis is in eighth grade and is still in school thanks to Carrasco and his mother who convinced a judge to allow his rehabilitation there instead of a reform school. But the youth's battle is a tough one because the environment he lives in can only offer more hurdles.

"He is an adolescent with a lack of affection, he lives some of the time with his mother and then he has to go with his grandmother because his stepfather won't accept him. But the grandmother has a lot of people at home so she sends him to his real father, and the cycle begins all over again," Carrasco explains.

His school is surrounded by poverty. It is located in the "Población 30 de Marzo", tucked along the hills of the San Antonio port. Traditional families units are few, and most people make a living from informal jobs. Some barely scrape together some 90,000 pesos (US\$190) a month. The men are small fishermen, port workers, market vendors, and construction workers. The women untangle and bait fishnets, wash clothes, cook or sell fish on the streets. Many of them are the heads of their households. Few finished primary school and many are illiterate. For people such as these who make a living from the sea, the year has been dismal. The El Niño current prompted nine of the ten fisheries of San Antonio to close. The capture of jurel, a fish similar to tuna and the main catch of the zone, dropped 90% during the first five months of the year according to a government report.

The 490 students at the school are badly fed and their academic performance is below the average for the municipality of San Antonio. A fourth of the students' height and weight fall below that which is appropriate for their age. Of four children interviewed, none had milk at home during the past several days. Half of the students live in three terribly poor makeshift camps, which surround the school, or with other families. Of the 490 students, 220 receive free school lunches of 700 calories, supplied by the JUNAEB. In spite of being a year of scarcities, JUNAEB reduced the number of school lunch rations.

More than a fourth of the students, 101 children, suffer from learning difficulties. They omit letters or confuse them, and are very slow learners. The school became part of the P900 programme in 1990. Its academic performance, as measured by the national SIMCE tests, increased from a score of 46 in 1990 to 57 in 1996. While the scores improved, San José de Calasanz continues to figure among the worst schools in the region of Valparaíso and the country.

The public school was founded in 1988, although the principal and some teachers came from another school that was destroyed in the 1985 earthquake. The key purpose of the school was to serve the people from "Población 30 de Marzo" which has been joined since then by other camps of desperately poor people.

"We started by taking in children who had dropped out, flunked, or who had never entered the system. We went to the houses with colleagues to register students, because we had to make ourselves known. At first the community just observed us. Our first results were bad in terms of performance. It was a tough job for the teachers, we had no support from the parents. We were few: 350 children and 17 teachers. We began to study our students, to acknowledge their difficulties and

weaknesses but also their qualities and strengths. We discovered they had big dreams," the principal recalled.

The school is the result of active participation by parents. "We have to make the school into the kind of place the children don't have at home. The rooms must be waxed and the parents wax them. The school must be painted and the parents paint it twice a year. They help with the upkeep of the furniture. Together we've been acquiring things," explains Carrasco.

The school has a shiny new gate and the blocks of classrooms are painted yellow and red. A small garden with flowers and bushes adorns the entrance, the product of one teacher's efforts. The school includes nine classrooms. Six of the rooms can fit up to 30 students while the remaining three can fit 45. Most classes have between 30 and 36 students. One of the classrooms is for students of special education with learning difficulties.

Carrasco, an indomitable and energetic woman, seeks funding in the most diverse organizations to make the schoolwork. Among those tapped for donations or aid are the Ministry of Education, Fosis, Digider, the municipality, private businesses and Santiago schools. Even the parents feel her reach: they donate fish which is later fried with proceeds deposited in a savings account.

The 12 new computers arrived after the school earned participation in the Enlaces project sponsored by the Ministry of Education. The multinational Esso donated the computer room. The alarm system was financed partly by the municipality and partly from the proceeds from fried fish. "Here there are more things to work with, there are computers, they have everything," said Juan Luis, the troubled eighth grader.

This year the principal's goal is to raise funds to donate to the municipality so it will build a roof over the ball courts. They are also seeking support to get hot running water for the showers and that way alleviate the problems caused by the lack of running water in the camps.

"The school has been like a beacon, a focus for the community. The surroundings have improved tremendously. In the beginning the residents would break the windows, steal, and teachers had to leave in a bunch to avoid getting mugged. Now these same people search for any item that was stolen and make sure it finds its way back. This school has had a tremendous positive influence in the community," said Gladys Hernández, P900 supervisor for San José de Calasanz since March.

Over the years the school has become an instrument for change in the community. The change is evident not only in academic performance but in the way parents view the school and the incentives they have for sending their children there. María Soto, a separated mother of four, travels almost an hour by bus so her youngest can go to San José de Calasanz, although she should be enrolled in a different school. "Miss Eliana, her homeroom teacher, did all she could until we got them to allow her to continue studying here," she said. Her other children currently do not live with Soto as she cannot support them. "The children wanted to be with (Miss Eliana), talk with her. She helped my fifth grader a lot because he is a slow learner since he was run over in kindergarten. I thank God I managed to come out ahead," she added.

The advantages have also spread to the school's parents center. Almost 30% of the parents, mostly mothers, participate in the education of their children and cooperate with the school administration. "We worry about the school, but also about the community, about people needing clothes, about the sick, of supporting families with loved ones who have died," explained Pamela Castro, a member of the board of the parents center. Parents appreciate the information the school gives children on drugs and alcohol and the parents center pitches in by alerting mothers when a child is "in bad company."

The school is also the proud publisher of the biannual newspaper "The Calasanz Star" whose logo is: "a reason to live." The mayor came to the inauguration of the publication as part of a school policy to invite as many and as varied authorities as possible. This makes the children, parents and teachers feel support for their efforts. The seventh and eighth grade students work as reporters for school activities and the youngest participate in smaller sections like "alphabet soup" or puzzles. The newspaper was born of a PME project grant awarded to the school to increase self-esteem. The school also joined the Portales University project Business-Press-Education and receives a packet of newspapers every week.

But the progress not only benefits the children but also their parents, thanks to an Adult School which began three years ago with three teachers and 63 students. One of the beneficiaries is Nancy Molina, the mother of four children and head of her household. "I wanted to improve myself, I knew how to read and write but I couldn't add or subtract well, so I joined the school. My head is hard, because I had flunked second grade five times when I was a child but the principal, who is now my teacher, had the patience to teach me. It was a marvelous experience, I felt myself growing as a woman, a mother and a parent because before I couldn't even help my girls with their homework. I finished the seventh grade," she says proudly.

But the daily struggle at San José de Calasanz is not exempt from problems, some from outside and others from within.

Most of the parents do not participate in school activities. Many are drug addicts or alcoholics and it is not uncommon for them to send their children to work in the market, watch over cars or beg in the streets instead of going to school. In spite of these pressures, the children continue studying thanks to "special commitments." Explained one teacher, "One of my students was absent a lot but one day I told him I missed him when he was absent and now he comes every day. I said it to him with all my heart and he believed me," said the teacher.

Many of the children arrive without school supplies and teachers have to give them some. One teacher recalled seven students whose mothers never came to pick up the school books sent by the Ministry of Education. "I gave them directly to the kids, we couldn't continue to wait for their parents," he said.

The school also experienced problems with the application of the P900 programme, which it has formed part of since its beginnings in 1990. Although the teachers like the materials and consider them "valuable" the programme repeats itself some years, such as when workshops consisted only of reading a text sent by the Ministry of Education. There were supervisors who never visited the school but this year things have changed. Gladys Hernández, the new supervisor, visits the school every week and supports the teacher workshops.

Teachers consulted on the low scores achieved by students in the SIMCE, were unanimous about their opinion of the test. They consider it absurd that their school is measured with the same yardstick as schools in the upper class neighborhood of Vitacura when their reality is so different. "These children are deprived of affection, they often lack even the most minimal sign of parental concern and the teachers have to be both their fathers and mothers and give them all their love. That way the child who arrives aggressive, sassy, irritable, and hypersensitive because of all his suffering and frustrations has the opportunity to change," says one professor.

All the tensions, suffering and poverty of the children ultimately affect their teachers in the form of depression. This is why they value the mutual support they give one another so highly, as it serves almost as group therapy.

There are 26 teachers on staff in addition to two assistants and three cafeteria workers. In general, the teachers work 30 hours a week; 28 of them teaching and two more in meetings with

parents, workshops or giving adult education. Most of them also moonlight at another school, which is almost always private.

The teaching staff is stable. There are two new teachers, several with four years at the school and the rest with more than 10 years behind them. "You have to give them a lot of support. The teachers really made a commitment and we know that a committed team can achieve everything," said the principal.

P900 Supervisor Gladys Hernández confirms that view. "The relationships are harmonious and horizontal. There is no vertical decision-making, they are all taken by the group," she said.

At the head of the group is Elsa Carrasco. The principal strives to achieve the best work environment possible while she juggles her job with constant fund-raising to broaden the school's possibilities.

No opportunity escapes Carrasco when she is in a fund-raising mode. Her "group of friends" include the Hispano-American High School, the Calasanz congregation, a priest from a nearby parish, some businesses, the families of several teachers. Together they come up with new resources, ideas and material. The school unites and presents projects to increase its income and learning tools to use with the children.

In a word, Elsa Carrasco is a true entrepreneur.

E. San Antonio: Escuela Básica Movilizadores Portuarios

“Parents, teachers and students make a difference”

Elementary School 479 in San Antonio boasts such a good reputation and attracts so many parents that its only serious problem is finding enough room for all of its students. Located a five-minute walk from the struggling elementary school 480 —San José de Calasanz, this school proves what can be achieved when administrators and parents work together.

From the moment one passes through the white and blue gate of the Movilizadores Portuarios school, the effort put into the school is apparent. First there are enormous, colorful murals of boats setting out from port, religious scenes and landscapes. The play area includes large garbage cans with lids. A janitor receives the uniformed children at the gate of the white and blue school. Around the school are low neat houses, paved streets and small storefronts.

The area residents tend to be the rising middle class, although the neighborhood was born out of a squatter settlement in 1962. This year 1,370 students are registered at the school, almost twice the number in 1990. The students are divided into 34 classes and the scores for the national SIMCE tests rose from 54 in 1990 to 68 in 1994. The Index of Vulnerability measuring poverty is low. Parents of children at the school generally have an education which falls short of high school completion although some have university studies. Family life is stable with three quarters of the students' homes composed of both parents and siblings. So far no serious cases of domestic violence, drug addiction or alcoholism have been detected. They are considered an exception.

School infrastructure is adequate, although somewhat overcrowded. The 17 classrooms are roomy, with high ceilings and with a capacity for 45 children. There are four classes for each grade from first to sixth, and three classes each for seventh and eighth.

Movilizadores Portuarios school began with two dynamic principals who left a legacy of work, responsibility and determination which serves the school well to this day. The first founded the school "with an iron fist and a silk glove," according to the current inspector. The second principal focused on improving the infrastructure as well.

The staff of teachers is cohesive and dedicated. "It is impossible not to climb aboard because if you don't you will get dragged behind," said one kindergarten teacher, Blanca Santander, who has been at the school for 18 years. Most teachers are school veterans and would not transfer, although some moonlight at other schools to boost their wages. "It is a very good working environment," said Marta Canales, with 20 years of tenure at School 479.

The parents center also works actively with the school, and maintains an excellent relationship with the appreciative staff. Their efforts have raised funds to improve the floors, buy books for the library, finance a new ball court, build bathrooms for the kindergarten, and cover the play area with concrete. Parents also bought a photocopier and currently pay assistants to clean the classrooms.

In exchange, parents hold the teachers to high standards as far as the education they give to the children in the classrooms. They are very interested in the school results of the SIMCE test and many of them are willing to help out the school not only with money, but time. Some work as workshop monitors, others volunteer for special projects. Last year in kindergarten they worked on three special projects focusing on family, "the month of the sea", and national holidays. All subjects in the classroom echo the chosen theme and the parents pitch in with family anecdotes, working with children and school monitors to build models and displays.

The teachers work well together and often band together in an effort to increase school materials and resources. They are open to innovations, to acquiring new material and do not just settle for what is sent by the Ministry of Education, which some consider insufficient. "I was indignant when I discovered that the language book from the publisher Arrayán supplied by the Ministry is sold in bookstores with a workbook which we never get. So that means we are already at a disadvantage before we even begin," complained one professor. Some teachers review the new school texts every year, buy the most useful ones with their own funds, photocopy them for their students and charge only for photocopying.

Because of these efforts, the school's most serious problem today is the growing demand of parents who wish their children to study there. Teachers fear this could hinder the performance of the children. There are too many classes with 45 students which hampers the ability to give the interactive classes they consider best for learning. It is also virtually impossible to bridge the differences between slow and advanced students.

This school formed part of the P900 from 1990 to 1996, but asked to drop out. Teachers said the supervisors visited infrequently or held workshops of little value, which consisted mainly in reading some texts. "The material was good, but the spirit of what they wanted to achieve with the P900 never reached us," said Marta Canales. Teachers preferred to hold their own workshops with the technical director, which they considered more worthwhile. They feel the relationship with the Ministry of Education is too distant.

Today, the school staff are concerned about how they will come up with additional classrooms they will need in the next few years when all grades will have four classes. Plans for full-day schooling only exacerbate this preoccupation: there is no physical space to accommodate the students. The municipality is currently studying the situation but no clear alternatives have emerged. In effect the school's very success is attracting the overflow of students which may become a key factor in diluting its quality.

F. Trangol: Escuela Trangol G-214

“Before learning to read, Mapuche children must learn Spanish”

On paper, the Trangol public school looks terrible: the school poverty index is an eye-popping 83, making it one of the highest in Chile; scores in the Ministry of Education’s national reading test were on average only 37 out of 100 and repetition of grades is high. Even basic infrastructure such as electricity and telephone lines is lacking. Yet a visit to the hard-scrabble school in the heart of a Mapuche Indian community near the town of Victoria reveals a different reality: enthusiastic students, hardworking teachers and ambitious projects that spark the children’s imagination.

Resting on a hill overlooking lush green fields, tall trees and an occasional farmhouse, the Trangol school radiates the care put into it over the past two decades by its principal Iván Rodríguez Mercado. The kitchen and dining room are clean and cheery, the long hallway which feeds into the schools’ three classrooms boasts plenty of sunlight while an old-fashioned wood-burning stove provides warmth. Walls are decorated with multicoloured stars, a poster of Mapuche words with Spanish translations and a mini exhibit of Mapuche tools and weavings brought in by the children. In the kitchen the cook is kneading bread for breakfast and outside the caretaker is splitting wood under the watchful eye of “Ballica,” the pregnant pig who has become the school mascot.

What sets Trangol apart from other rural schools are two modest structures built outside the regular classrooms. The first is a greenhouse used to teach students the proper use of fertilizers and to help them transfer technology to their parents, who are mostly subsistence farmers and temporary agricultural workers. The second is a fully operational woodworking shop with top-notch electric tools powered by a generator set up by Trangol’s principal.

The key to the seeming contradiction between innovative educational projects and poor scores in the national SIMCE tests lies within the student body itself. Almost 100% of the children in Trangol are full-blooded Mapuche Indians who speak virtually no Spanish when they enter the school for the first time. Their parents enrol them more for the daily school breakfast and lunch than the food for thought they might get during class. This is understandable considering the minimal education of the parents themselves. On an average, the men have just four years of formal schooling, and half of the women are “illiterate from lack of use” of reading and writing skills. These parents seldom take an interest in their children’s class activities and sometimes do not even know what grade their offspring are in. At a recent parent-teacher meeting at the school only 10 of 68 parents bothered to come.

“I’ve never had a parent come to me and ask me how his child is doing in school -- never,” said Mary Torres, who has taught at Trangol for nine years and is currently in charge of first and second grades. “Parents think chores like feeding the pigs and gathering firewood are more important than schoolwork,” she added. “We get no reinforcement at home of what they are learning. One day the kids know it and the next day they forget.”

Principal Rodríguez Mercado first became aware of Mapuches in college when classmates began teasing students with Mapuche roots. “I hated to see them discriminated against, as people would call them thieves and pigs,” he recalled. After earning his teaching credentials Rodríguez Mercado was assigned to Trangol where he began using textbook strategies. When his class was evaluated several months later, only six of 20 students had learned to read. “I sat down alone in my classroom and cried,” recalled Rodríguez Mercado. But then the principal of the school came in

and explained to him that things were different with these children, that they required different approaches. “He said “It is here that you will truly learn to be a teacher.”

The principal who counseled him left shortly thereafter and Rodriguez was appointed to replace him. Today, with 22 years of experience behind him, Rodriguez Mercado continues adjusting lessons to better reflect the circumstances of his students. After his first tough year, he even took a correspondence course in the Mapuche language with an expert in Santiago. Then came a minor breakthrough: in 1978 a special experimental programme was developed by the Ministry of Education for work with bilingual children. Trangol participated and began to show results, but the programme ended as quickly as it began. “It was financed in part by the Ministry and in part by the municipalities,” he said. “Our municipality could not pay for their part of it.”

Times have changed since then. Before the principal’s reforms, students were forbidden to speak Mapuche in the school grounds. Today they are still taught only in Spanish but they are also encouraged to take pride in their roots and often speak Mapuche among themselves. Teachers are more flexible with students who arrive late to class —usually it is because they have to finish a chore at home before walking several kilometers to school. Ten-year-old Juan Plácido must wake at 6:30 a.m. when it is still dark to take two cows, a calf and four horses out to pasture in fields an hour away from his home. Then, after the two-hour walk, he must set out on the dirt road to Trangol, another hour’s trek. “They can’t say all schools are similar because they don’t know our reality here,” said Rodriguez Mercado.

Communicating this reality to locals and the Ministry of Education has been a mixed experience. For the past seven years, in which the school has been in the P900 programme, the specialized materials have been extremely useful and the supervisor was particularly helpful in designing approaches that worked with the material. But when the Ministry of Education transferred him without notice the programme went downhill, and municipal and provincial Ministry of Education bureaucrats refused to heed Rodriguez Mercado’s appeals for his reinstatement. “They said they decide who goes and who stays,” he recalled with frustration.

The next supervisor was an expert in special education who admitted she knew nothing about the P900 programme. After just two visits in 1997 she wrote a negative report on Trangol saying the teachers did not know how to use the P900 materials appropriately. As a final blow, enrolment dropped from 80 to 68 students, causing Trangol to lose a teacher and its qualification for P900.

As a result, Trangol is now part of the rural “micro centers” programme which schedules monthly overnight meetings for schools with one to three teachers so educators can swap experiences and strategies, events that Rodriguez Mercado says are extremely useful and worthwhile. The exchange of teaching materials and videos help stretch rural school budgets that are already at the breaking point. During 1996 Trangol received 1,007,810 pesos (US\$2,145) for the entire year, based on attendance records. Yet the school paid out 1,209,000 pesos (US\$2,570) in salaries alone. “Don’t ask me how it all works because I’m not so sure myself,” said the principal. “We’re always in red numbers.”

Down the hall in Mary Torres’ classroom, first and second graders are learning letters and vowels. The walls are covered with bright posters and two small three-dimensional houses made of straw left over from the harvest. The key to teaching these grades, said teacher Mary Torres, is that nothing can be taken for granted. When the children received small individual blackboards to use with chalk, most had to be taught first how to hold the chalk before they could even begin with the shape of letters. Few knew how to sit properly in a chair because most of them lacked furniture at home. “If a refrigerator comes up in a picture you have to explain what it is, or what the difference is between a cup and a glass,” she said. The grades most repeated are first and second, to help students adapt to educational structure and learn Spanish before they go on to other subjects.

In spite of the lack of parental support, Trangol tries hard to give something back to the impoverished, agricultural community that could not even drum up the cash to hook into the municipal power lines. In the greenhouse, students learn to use fertilizer and saltpetre in proper amounts for crops such as tomatoes and spinach. The children then take plants home and transfer the knowledge to their parents. “We’ve realized that the concerns and expectations of the parents are centered on problems of nutrition and improving their crops,” said Rodriguez Mercado. “They can’t even produce enough food for their own consumption and they can’t afford to let the fields recover by laying fallow, so with each passing day they produce less,” he added.

The students are especially enthused about the school’s generator-operated wood working shop, which is funded by a grant from the Ministry of Education for “curricular innovations,” and was set up by Rodriguez Mercado during his free time. The objective is to teach the children the skills of basic carpentry with tools such as a circular saw, lathe, jigsaw, a sanding machine and manual tools. Last year students used the equipment to make small tables for their homes.

The wood shop generator also powers a television, VCR and projector the school won in 1994 through a PME. But the children are not wasting their time. The videos help the Mapuche-speaking students attune their ears to Spanish, and the colour images help them hold and retain their attention. Videos have been steadily acquired through the P900 in the past and exchanges have also been made with other teachers and a nearby rancher.

A reading and writing test of four Trangol fourth graders showed that students lack the fluidity associated with this age, reading with the somewhat robotic rhythms associated more with first and second grade. One ten-year-old who still cannot write his full name correctly, chided classmates when they denied they spoke Mapuche at home.

So far Trangol’s efforts are paying off in a very gradual climb of test scores. The school’s SIMCE results went from a low of 30 in 1990 to only 39 in 1996. Still, Rodriguez Mercado chafes at the use of SIMCE scores to evaluate schools. These rural students are often confused about test instructions and teachers are not allowed in the room to explain the guidelines in a way they can understand. “The children told us they didn’t understand what the examiners were trying to say, but they didn’t dare tell them they didn’t understand,” said Rodriguez Mercado. Some students skipped questions they did not know but instead of passing over the blank on the answer sheet, they filled that blank in with the answer to the next question. He suggests that a different measure be applied to schools like Trangol. Of the 17 children that finished the sixth grade last year, 15 opted to continue their studies. Very small schools stop at the sixth grade and children must transfer to another school to complete seventh and eighth grades. “This shows that we have managed to inspire them to keep studying, that they’ve learned that education can give you a future,” he said.

G. Popoén: Escuela Particular No.158

“A poor subsidized private school’s struggle to stay afloat”

It is lunch time at the “Popoén” state subsidized private school and children bundled in sweaters and jackets are seated elbow-to-elbow slurping up a hearty soup of wheat, beans and vegetables. Located near the southern city of Osorno in one of the poorer communes of Chile, Popoén attracts students more for its meals and boarding facilities than for the quality of its education. Of its 86 students, 65 are boarders who sleep in spartan bunks in a long wooden clubhouse warmed by a woodburning stove. The children, even some first graders, go home to sleep only on the weekends. Some of those who do not board have to walk up to six kilometers to get to school in the morning. Their parents, almost 70% Huilliche Indian, generally work as farm labourers, selling firewood or tending cattle.

“The children who come to this school live in the most absolute poverty,” said Popoén principal Luis Andrés Reiser, who has held his post for 12 years. He estimates that almost half the parents have trouble with alcohol, and monthly earnings hover around 50,000 pesos (about US\$100), less than the minimum wage. With an average 3.5 years of schooling, parents take little or no interest in their children’s class activities. Only 30% of the parents showed up at a recent monthly meeting in spite of the fact that the school buses drove by all the homes to pick them up. Of those that came, several yawned through the meetings. “The children here have a tremendous scarcity of affection and that affects their ability to learn,” said Reiser.

Popoén is an hour’s drive west from Osorno, 16 kilometers down a dirt road, which becomes virtually impassable in the winter rains. Cows and pigs amble across the roads and weather-beaten farmhouses dot the surrounding countryside. The school itself consists of a long wooden structure divided into three classrooms. The floors are clean and wood burning stoves heat most classrooms, but the walls are dirt-smudged and most of the equipment is shabby. There is no telephone. Yet the school’s old-timers say it has come a long way from the cheerless, muddy building where classes began in 1968. “Everything we’ve got was the result of work and sacrifice,” said school owner Marta Catalán Osorio, who has also been teaching there for 23 years.

Trying to make ends meet is a constant battle for Catalán Osorio, who receives 16,000 pesos (US\$35) per month per student in subsidy money from the Ministry of Education. “This amount has to move the entire school machinery: pay teachers, feed students, pay utilities, pay janitors,” she said. “To get the school going I have to take out a loan every year because the funds from the Education Ministry are always a month late.” Catalán Osorio also pays a monthly 180,000 peso (US\$380) installment for the school bus she purchased to drive students back home every Friday.

Her determination to provide the children with a good education is beginning to pay off. Popoén’s SIMCE fourth grade test scores climbed from 38 to 49 between 1994 and 1996 (in contrast to the dramatic fall in the previous four years from 53 to 38), while in 1997 the eighth grade history and science scores nearly doubled. Popoén’s teachers credit the impressive performance in science to the frequent use of educational videos on a VCR and television won through a PME, a three-year Education Ministry grant awarded to innovative projects to improve the quality of teaching. The same grant also got the school a Bunsen burner, test tubes, a globe of the world and posters on the ear and respiratory system. But history teacher René Alfred Feast credits the improvement in that subject to materials he has purchased himself, primarily from the Spanish publisher, Salvate. “A person in Santiago is never going to understand the kind of students we have here or what they need,” he added.

Popoén also forms part of the P900. “The P900 is a programme that has come up with some fantastic ideas, but they don’t always work out in reality,” said Reiser. The P900 materials and training courses also earned mixed reviews from Popoén’s other teachers who said some of the material they received has been irrelevant and often comes without proper guidelines for use. Said Reiser, “We get the material and then have to sit down and discover for ourselves how we are supposed to use it. We could really use someone to explain it to us in depth.”

The person responsible for implementation is the provincial supervisor, scheduled to visit to the school every fortnight. But a constant turnover of supervisors only heightens the frustration in Popoén’s classrooms. “Every year they change our supervisors so there is no continuity,” said Reiser. “Each one comes and says whatever he thinks is best.” Responding to that complaint the Provincial office had Popoén’s current supervisor, Angelica Pufchel, sign an agreement stipulating she would remain until the year 2000. She is currently trying to strike a balance between the Ministry of Education’s demands for paperwork and the school’s pleas for practical and timely help. “No one gives us a course in how to be supervisors,” she explained.

As Popoén’s coordinator for the application of the P900 programme, Pufchel noted with frustration that four months into the school year the 1998 P900 materials had yet to arrive. Once they do arrive all she can do is send them on to the school, unopened, since she herself receives no instructions for usage. Another frequent complaint among Popoén teachers is that they lack sufficient numbers of copies receiving enough for only three or four students out of a class of 20. Asked about the chronic shortage of material, Pufchel cited lack of co-ordination in requesting additional copies. “Everything is done with paper,” she said. “I understand how teachers feel, but the whole administrative system is very cumbersome.”

Language teacher Hugo Enrique Añasco, who has taught at Popoén for two years, noted that while the school received a small “library” with dozens of books, the teachers were never consulted on its contents. “They never asked us what kind of texts would be useful, they just sent them all on from the Ministry,” he said. While many of the books are in use, others, such as *The Three Musketeers*, gather dust on the shelves. “The sheer size of it scares the kids away,” he said. Instead of using classic literature, Añasco tries to engage the children’s imagination and sense of humor in class. He asks them to make funny headlines out of newspaper clippings, for example, or has them answer silly and philosophical questions posed in a children’s book by Nobel-prize winning poet Pablo Neruda.

Teachers at Popoén also encourage their students to try their hand at poetry themselves. In 1996 Popoén, together with the nearby Pinique school, published a small booklet of poetry composed by children. Many of the poems reflect the tough life of the farmer, featuring potatoes, the harvest and oxen; but others are paeans to love, the moon and flowers. Others find expression through other outlets. During a recent visit two older boys were hard at work with a local weaver using rich brown wool to create their own geometric designs for a book bag, an activity aimed at instilling pride in indigenous roots.

Some educational exercises prompt less enthusiasm. The Ministry of Education’s P900 workshops to boost performance, in which local youths act as “monitors” to help struggling third and fourth graders, were considered ineffective. “I found them a waste of time,” said history teacher René Alfredo Feest. The indigenous roots of the bulk of Popoén’s student body, according to Feest, doom the tactics used in the workshops. “The Huilliches are very sombre. They will never want to sing and hop about. They are methodical and slow and repetition works better with them.”

Instead of the performance workshops, teachers would like more audio-visual material and courses to improve their teaching in mathematics and Spanish, two subjects that the students continue to score low in. But before the specialized courses can be approved the teachers must

submit a detailed “Plan of Action” on the status of their last year of the PME grant. “We need practical things, workshops, but all we are getting is paperwork and more plans, we won’t get anywhere with this nonsense,” said Reiser. “We need things now, not things that will work in three or four years.” While supervisor Pufchel claimed to understand his frustration, she insisted that the Plan of Action is needed to make a diagnosis of the schools failings, mainly grammar and mathematics.

When not battling bureaucracy, Popoén’s teachers encourage students to continue studying after graduation from the eighth grade. At the end of the 1997 school year, Catalán Osorio personally took her graduating students’ records to their schools of choice for continuing education. “If we left it in the hands of the parents it might never get done because they are country folk and wouldn’t know which offices to go to and would be looked down upon.” The effort paid off: eleven of last year’s students have gone on to high school.

There have even been some particular success stories. The son of the school cook graduated, continued on to the Austral University and recently won a two-year scholarship to study in Germany. Another former student is currently in her third year of auditing at the Universidad de Los Lagos. A third student took a different approach and, fueled by an unusual thirst for adventure, is now working on a ship somewhere near Australia.

As a subsidized private school, Popoén shares the same challenges and frustrations as 120 other similar elementary schools in the province of Osorno. Many of these private subsidized schools are run by charitable organizations, others are run as businesses. The catch is that it is increasingly difficult to hold subsidized private schools accountable in the case of irregularities. Ministry of Education officials had to go to court to close down the boarding portion of one school in which the walls of the sleeping area for children were painted black. Only last September did they allow subsidy checks to be held back if teachers were not paid at the private schools.

In spite of some irregularities, Pedro Martínez, Provincial Department head for the Ministry of Education, believes that subsidized private schools often outperform their municipal counterparts because they administer their funds better. Yet the real key to the quality of a school, according to Martínez, is the principal. While Popoén has improved only recently in test scores, other public or subsidized schools in and around Osorno have achieved a higher degree of excellence. One subsidized school in Chamilco, also 100% Huilliche Indian, scores high in SIMCE tests and boasts a principal who made the list of Chile’s best 50 teachers. “The great success of a school depends upon the leadership of its principal. If you have a good principal, you will attract good teachers who will put together good projects to win good grants,” concluded Martínez.

H. Quicavi: Escuela Rural Aquelarre de Quicavi “On the air in Chiloé”

It's 1:58 p.m. in the television studio of the Aquelarre Rural School in Quicavi, Chiloé, and what gives the cramped quarters the feel of a real studio are the frantic last-minute adjustments before the school's daily two o'clock broadcast.

"...And go!" calls out teacher Arsenio Aguilar Macias, as the elementary school's local air time kicks in. Student presenters give a weather report, student technicians stand ready with cassettes of documentaries on local affairs. TV sets in Quicavi and around its emerald hillsides are tuning in.

For the next hour, local residents can get news from the school, watch a student-produced documentary, reflect on a thought for the day, maybe even laugh at a student-recited joke previously reviewed by a teacher for suitable content, of course.

Six years ago Aquelarre elementary was considered one of Chile's poorer schools, both in terms of local income and the school's academic performance. Chile's Education Ministry found that Quicavi, a picturesque but marginalized fishing village on the rocky East Coast of the island of Chiloé, was not serving its community well. Many children dropped out to help their families chop wood or harvest shellfish. Only a few went on beyond the school's eighth grade.

"Now the story is very different," says Sergio Pérez, Aquelarre's principal for the last five years. "The spotlight's on us for what we've accomplished, not for what we've failed at, and that makes a big difference for the teachers, the kids, and their families," he says. "There's an enthusiasm and a desire to succeed."

Aquelarre is not the only school in Chile that has pulled itself up over the last few years of an intense focus on education reform. What makes this rural school in an isolated environment stand out is how, with a little money and a lot of teacher dedication, it has taken its students out of the 19th century and tried to prepare them for the 21st.

"My goal each day is to do everything I can so that every child can go on studying after he leaves here," says Pérez. "That doesn't mean the goal is that they leave Quicavi. It is that they broaden their options and help them be all they can be."

Aquelarre's most obvious measure of success is the rate by which students continue to study after eighth grade. Before the school's academic makeover no more than three or four of a graduating class of 20 went on to high school. Over the last two years, however, the numbers have reversed. Today, all but two or three go on to further studies.

Pérez managed this significant change in part by instituting a project and a goal around which everyone could rally. After considering various factors the students' low achievement in oral and written expression, their generally introverted nature, and the area's isolation from the technological advances of urban areas, teachers, students and parents together decided to create a school television station that would produce its own programming.

Tapping into the resources of the PME programme, Pérez acquired some basic studio equipment, a transmitter, five television sets, and some video players. Now, grammar and writing classes are involved in preparing texts for the school's documentaries. Social studies classes develop themes for the documentaries, such as the local salmon industry or the area's legendary history of witches. Older students have even written and produced a television drama based on a local legend of lost treasure.

"The [TV] project is great because it gets us out, talking with new people and learning about new things through our own investigation," says Sonia Yáñez, 13, who is the school's leading news and documentary presenter. "I discovered a fascination for journalism that makes me want to make it my profession."

Of the school's 130 students, more than half live on-campus, going home no more often than once a month. Many of these "boarders" come from small islands an hour or more away by boat. In the past, it was the children who had difficulties traveling so far to school who used to be the early dropouts, although some officials say it was the disinterest on the part of the previous government that was to blame. "Under the military dictatorship the interest was in keeping the masses ignorant and introverted," says Hediberto Macías Aguilar, mayor of Quemchi, the municipality that includes Quicavi. "Certainly there was no interest in developing inquisitive, inquiring minds."

Another important change that Pérez introduced was the concept that all teachers should share in school administration. "When you share the responsibilities and decision-making, you get a more committed staff," he says. "It's democracy." Out went the heavy memorization that typified the school's instruction before. In came more discussion, explanation, and discovery. The PME also paid for teachers to get special training in using the school's new equipment, and in such subjects as speech skills.

Out, too, went the school's low results in national testing. In language skills, for example, grade 4 went from the 57 in 1990 to 67 in 1996, a steady improvement. Class repetition fell from as high as 25% to 1%. And last year Aquelarre had no dropouts. Pérez credits his staff of seven teachers with the school's turnaround. "Once we got beyond some initial resistance to giving up old [teaching] ways, everyone adopted the project like a team, and we found we could have fun while doing a better job," he says. Teachers take turns living at the school a week at a time to supervise the interns. It makes for long days, but both teachers and students mention the sense of community when listing the school's strong points.

While posing for their official class photo on a recent afternoon, mathematics teacher Patricio Rios asked the graduating students to call out their next destinations: a well-regarded polytechnic high school in the Chiloé capital of Castro, a general high school in nearby Ancud. Of 14 Aquelarre students who applied to the "poli," 12 were accepted. "A few years ago most would have just mumbled something about scraping by, bagging shellfish," said Rios.

III. What schools teach us

A. Lessons learned

What makes a good school? Or conversely, what keeps a school from being a good school? Our school stories tell many realities and bring home the truths that parents and educators and students know: one factor alone does not make the difference. Educating young people is a complex process; many factors come into play at school. The factors are additive: good teachers; children ready to learn; an accomplished school principal, an effective curriculum, enough money to carry out programmes, well-fed children motivated and prepared to learn, parental involvement, good facilities, small classrooms, schools close to home, creative teaching, stable student-teacher population.

The reforms being undertaken by central authorities to improve education are medium-to-long-term investments. At least five to ten years will pass before all schools will see them functioning effectively. The impacts of curriculum reform, teacher training, and full-day education will need time.

However, our school stories do tell us very clearly that while quality factors are additive, individual factors can make a difference, either positively or negatively. These factors are the critical ones to identify and understand because they are the ones that can be acted on in the short term. The school stories tell us, reinforcing international experience, that the single most important factor at the school level is having a top-notch principal with the authority to act. Our school experiences make it crystal clear that a stable, qualified, motivated

teaching staff makes a measurable difference. On the contrary, high teacher turnover and low teacher qualification and interest immediately result in lower student performance.

But how can these lessons be put into practice? Educational authorities could institute *school management reviews*, like the ones that have been carried out here, to identify significant problems and practices that are correctable. While quantum leaps in quality are not realistic in most settings, finding and correcting one or more acute problems can make an important difference in children's learning, as the school audits demonstrate. In Chañaral Alto it is getting teachers to stay; in Taltal it is negotiating with the mayor, changing the school principal and correcting the school financing, and so on. Let us review the lessons from these schools in difficult circumstances, lessons that reflect their struggle to raise student achievements.

1. Achieving educational quality: a renewed challenge every year

Schooling in poor neighborhoods provides the biggest challenge to school officials and students. Using trends in SIMCE scores to measure success can be misleading because the assumption is that they should continue to rise as special attention and special inputs are directed at the school. With good teaching and good school direction, test performance should go up. But that is not necessarily the case because each year a new cohort of kindergarten or first grade students starts afresh and presents school authorities with the same challenges all over again. This is important when as much as 60% of achievement is attributable to the social context in which children grow up—the out of school factors like the home environment and parental support or lack of support (World Bank, 1995). “The household's educational climate (years of education of the adults in the household) is the most important factor among these, and accounts for between 40% and 50% of the socio-economic and family factors”.

If the characteristics of the student population change markedly from year to year then this would affect the potential school achievement results. Probably, for the most part, the student population does not change that much and so teachers face similar large challenges each year. But, in a sense, the SIMCE performance is misleading. The biennial fourth grade performance is an independent event and each time a fresh set of fourth grade students is tested. Therefore, trends in SIMCE scores are not a very accurate measure of whether a school continues to need compensatory intervention programmes such as the P900 or is ready to graduate from them. (Subsequent to these school reports, P900 introduced additional qualitative factors in deciding whether a school is ready to graduate). A school may have had success having participated in the programme for a few years, and the SIMCE results reflect this. But is that the best time to leave or is it the right time for the school to stay in and help a new cohort of first grade students receive a higher quality education? Why should the school be expected to perform as well when their resources are being reduced?

2. Achieving educational quality: making improvements sustainable

In order for schools to graduate from P900 they need to experience a central change in the way they do business. School administrators and teachers, and not just students, need to learn from the programme. The P900, must find ways to provide sustainable inputs so that the school can manage on its own better than it had before it participated in the programme. It is the school that should be tested, not just its students, to monitor what the school has learned. The fact is that P900 is only one complementary programme with limited resources. Probably, and the school stories bear this out, the factors that matter in schools improving in a sustained way are school-wide factors, and not special programme factors. P900 has provided excellent materials to stimulate teachers and students and school management and outreach strategies that are valuable, but may not be sustainable.

Overall test scores do not tell the story either. In each and every school visited, even the poorest and most backward, some children stood out; they hungered for knowledge and were getting as much as they could from what the school offered. In San Antonio at the San José de Calasanz School, it was possible to observe a large number of students with learning problems needing remedial help. The school was doing its best to attend to these children. But side-by-side with these children were others being challenged in their classrooms and with special programmes and after school activities such as the school newspaper. The school had many sponsors from the community who gave their money, their time and their skills to make the school better.

3. What makes a good school: it's the school principal

The one factor that seems to matter most is the school principal. The school principal can turn a school around. The changes brought about by Dora Muñoz at Unidad Divina have taken three years but they are beginning to pay off as the SIMCE 1998 eighth grade test results show. She has orchestrated a sea change in her difficult, poor, overcrowded school, from changing the teachers to changing the level of hygiene in the school. Another example is Elsa Carrasco, principal of San José de Calasanz Elementary School, whose dedicated, creative, entrepreneurial drive has overcome adversity, making her school a center of her community and a place where children of all abilities are challenged. And Ivan Rodríguez Mercado, the principal at Trangol school, continues after two decades to make his tiny, remote school a warm and welcoming learning experience for its ultra-poor Mapuche children.

But leadership was clearly missing in Taltal's Escuela Hogar, as much a product of the authoritarian mayor as the tired school principal. Chañaral Alto's Escuela Básica Alejandro Chelén Rojas school awaits a new school principal and in the meantime Claudina Rodríguez, has her heart in the right place and gives her best, filling in as temporary principal, but is clearly handicapped by the lack of mandate. What the Escuela Básica needs to shift gears is a dynamic, tough leader to turn around the teacher situation and shake up the complacent municipal authorities and Ministry managers.

Pedro Martínez, Provincial Department head for the Ministry of Education in Region X, believes that the key ingredient in making a good school is the principal. "The great success of a school depends upon the leadership of its principal. If you have a good principal, you will attract good teachers who will put together good projects to win good grants," concluded Martínez.

Incentives are needed to attract more dynamic leaders to take on school principalships, especially in these tough schools. It is not really different from turning around a failing company. Why not actively search for school managers with entrepreneurial and managerial and people skills and give them the authority they need to make a good school? It is clear that the quality of the students entering school is not going to change significantly until the problems of inequality and poverty are addressed and these are long term problems. In the meantime the school system can confront the special challenge of difficult schools by allocating its best leaders to them.

4. Jornada completa: full-day schooling

It should be remembered that the school visits were being carried out during the implementation of many of the educational reforms mentioned above and while it is anticipated that these reforms will result in a higher quality of education, this will take time. While the process is going on it can be disruptive as well as helpful. The move from half-day to full-day education means in practice that many schools must find double and sometimes triple the physical space to put this reform into practice. It is not just a question of financing. In poorer schools like the ones in this study, there is simply insufficient space left in the current physical plants of many schools. The schools are already overcrowded after many years of growth in the same infrastructure. The

logistics of dedicating the available space to one shift means that, at a minimum, the number of classrooms must be at least doubled. In most of the schools visited this was not feasible. The municipalities are having to search for alternative campuses and the logistics of implementing the change has wide-ranging implications on other school inputs such as teachers, recurrent costs, and building new premises where old ones are not able to accommodate. There is now a special Ministry programme to help schools solve these problems.

5. Accountability

The quality of education in schools is suffering from an almost total dependence on outside decisions and outside financing coming from three principal actors: the Ministry of Education; the Provincial Department; and the Municipality or private administrator. The bulk of financing continues to come from the central authorities in Santiago in the form of a subvention or payment per child. This is calculated based on monthly attendance records and handed over to the municipality to administer (this will be further discussed later). The municipalities manage the schools and are expected to provide additional financing for equipment and school operations. The Ministry of Education in Santiago is responsible for curriculum and pedagogical aspects. The provincial departments supervise how schools implement ministry programmes.

There needs to be more coordination and accountability among these three actors. At the moment, schools are being “graded” only on their SIMCE performance. In large part school SIMCE school performance is determined by the quality of school staff, e.g. teachers and administrators in the schools. However, decisions about school staff are not made by schools but by the local municipal authorities. Where is the Municipality’s grade? Somehow the articulation between the School, the Municipality, the Ministry and the Provincial authorities needs to be improved, and some checks and balances instituted.

6. High student-teacher ratios

According to Chilean law, schools can assign as many as 45 students to a classroom and receive a subvention for each of them; there is no subvention for students above 45. Thus schools have a very powerful economic incentive to have classes be as close to 45 as possible. How can one teacher manage a classroom of 45 students and provide them a high quality education? Certainly it is not optimum. As a comparison, the average class size of private schools throughout the country is 24 students per teacher, compared to 38 for private subvention schools and 35 for municipal schools. This problem was particularly notable in the poor private subvention schools; the schools that are privately owned but which receive the per-head student subvention. A case in point is the Unidad Divina School. Because of its limited resources, it depends heavily on the subvention to pay for its major operations, especially for paying reasonable teacher salaries. Consequently, the teachers themselves, together with the administration went on a campaign to recruit more students. The Popoén School, operates mostly in the red according to its owner who had to return to teaching at the school to save on paying another teacher.

7. Overcrowded classrooms

How can quality learning take place when large numbers of students are packed into small classrooms? Crowding was found in a number of the schools visited but it was particularly evident as a serious problem in Unidad Divina School located in the commune of La Florida in Santiago. Some 40 or more children were packed into classrooms and seated so closely together that they were literally ‘shoulder-to-shoulder’, filling their small-sized classrooms. This problem was exacerbated by the move to full-day schooling as some classes were operating all-day and displacing classes that would otherwise use classrooms in the afternoon shift. In Taltal’s Escuela

Hogar, 40 plus children were stuffed into classrooms designed for no more than 35 kids. Overcrowding was observed in all but the smallest schools.

8. Teacher turnover, teacher qualification, teacher involvement

Chañaral Alto's Escuela Básica Alejandro Chelén Rojas teaches us how much teachers do matter. Its schoolchildren are starved for teacher involvement. Children must question their own worth when they experience their teachers' lack of commitment, watch them rush off at the end of the day for the long drive back to civilization in the nearest big town, call in sick as often as possible, or quit as soon as they can. Only 13 of the 26 teachers currently live in Chañaral Alto, the rest commute. The SIMCE scores for 1996's fourth grade took a plunge because that cohort went through 12 different teachers in a four-year period. Those in eighth grade, meanwhile, had just one excellent teacher from first grade to eighth and their 15-point increase in SIMCE scores reflected that. Because of the difficulty in finding teachers, 11 out of 26 teachers lack degrees. None of the seven new teachers has one. The school has had three principals within the space of a year and the position is vacant again. This is clearly a disaster that needs to be corrected. If the school cannot keep teachers then why keep the school in the town. Why not transfer the school to the nearest large community and bus the children? The cost-benefit and impact of such a change warrants consideration.

The Chañaral Alto example may be representative of an underlying problem worth investigating further —the problem of getting good teachers for rural schools that are too far for convenient travel but not so distant that teachers would choose to live in the community.

9. School financing: a case of reverse targeting

The Taltal School provided a major discovery about how educational reform works in practice or, in this case, does not work in practice. The Taltal School was visited because it represented a case of a very large school, whose performance had improved, stagnated and then started to slide down again, in spite of P900 and other project and programme interventions. The Ministry had hypothesized that large schools were likely to be the especially difficult ones to show sustained improvements. At the same time, the Taltal School is not a particularly poor school as measured by the Index of Vulnerability, used as a basis for allocating school lunches. On a scale of 1 to 5, the Escuela Hogar registered a 2, placing it in the low vulnerability category. The physical infrastructure and the children seen during the visit appeared to be better off than in any of the six under-performing schools visited.

The discovery was the local mayor, who had the decision authority over how the school financing for the municipality would be spent, elected to take funds from the poorest, and biggest school in his town, the Escuela Hogar, in order to pay for the operation of the secondary schools and the night schools that were operating inefficiently due to their smaller enrolment and unreliable attendance. The Escuela Hogar, with 1,110 primary students, where attendance is compulsory, was producing a reliable source of income, but part of it was being transferred out to finance the rest of the system. Meanwhile the school lacked sufficient chairs in the lunchroom, among other basic infrastructure that was wanting.

This case is a perfect example of the importance of studying micro as well as macro performance; why one has to observe first hand the "how", and not just rely on the facts that reach the top. Without this local information, the assumption would normally be that child-based subventions to schools would be spent as they were allocated in the schools for which they were intended. It may also help explain why some senior Ministry of Education officials were of the opinion that the serious "hard cases" were the very large schools. There may be other examples whereby municipalities reallocate funds from larger primary schools to cover the costs of smaller

schools, more costly secondary schools, and schools where attendance is not mandatory and therefore irregular, resulting in lower subventions. During the current recession and economic crisis, municipalities are seeing their budgets cut even further and this practice may well intensify. It is truly a case of reverse targeting.

10. Special programmes competing with the basics

Many schools are receiving special programme inputs designed to improve the quality and relevance of education. In addition to the P900, most schools that were visited had won a PME project, meaning a project to improve education. In 1995, 736 projects were awarded in primary school competitions in a range of learning areas: language, integration of subjects, social integration, mathematics, natural sciences, social sciences, art and physical education. The equivalent of over US\$4 million was awarded to primary schools averaging US\$6,000 per school in current dollars, for projects with durations of two to three years. The overwhelming majority of these projects were awarded in the language area, over 60%. A typical example is the television project won by the Quicavi School in Chiloé, which was so instrumental in bringing learning alive for those students.

While these projects and programmes provide enriching opportunities for students, they also compete for the time and attention of teachers and administrators. More than one school commented about this conflict. In Chañaral Alto, for example, in the school with the most serious difficulties in attracting and maintaining qualified teachers and staff, school officials while being very proud of their PME project, also expressed concern about the less than optimal implementation of P900 due to the time demands of the PME and other projects. Winning the PME project involved allocating time to write the project and when the school won it, time implementing and supervising it. In addition, schools receive a number of different special programme inputs for which they must compete. This is not to say that these are not useful projects and programme inputs but there is a resource cost involved.

The innovative Enlaces project to give students hands-on experience with computers is another example. The project requires a special secure dedicated room. Teachers must be trained first to use the computers and then train and supervise their students. In Unidad Divina School in La Florida, the library had been sacrificed to the Enlaces project since there were no spare rooms available. The impression that one is left with is of a two-tiered quality effort, on the one hand, innovative projects, but on the other, falling down with the basics in the classroom. In Taltal, the Escuela Hogar was long on frills and short on the basics, with computers still sitting boxed up and a donation of laboratory equipment proudly displayed in the multimedia room while kids were pursuing for the most part the same old routine in the classrooms.

11. “Home” work or supervised exercises at school?

Homework may be assigned but it is very difficult for many poor students to find a quiet place to work at home. Many households have no private facilities. Instead, children most likely have to share the dining room table with other family members while they are watching TV or talking or visiting with friends. Parents with little education are less prepared and less aware of how to support their children, as with homework. Ramón, an eighth grade teacher at the Unidad Divina school in La Florida, Santiago considers this a serious problem: “at home their backpack gets thrown in a corner, they don’t open it, and in most cases they lack a place to study. If they do try to study, it is at a table with a radio on, a television blaring and a bunch of kids yelling”. This type of comment was echoed in most schools having achievement problems while in the ‘successful’ Port Worker’s school in San Antonio parents hold the teachers to high standards and are very interested in the school’s SIMCE results. They give their time not just at home but at

school, working as workshop monitors and volunteering for special projects. Rather than complain about these hard truths, the more constructive solution could be to provide a “home” work setting at the school and provide supervised exercises in homework rooms after school.

12. How do teachers teach?

The school visits did not aim to evaluate classroom teaching *per se* in a rigorous way. This would have required a specialized, in-depth study aimed at that topic alone and more time. Classrooms, especially fourth grade classrooms, were visited at all schools and some teaching was observed and is described in the school reports. Students in some classrooms had been divided into groups, in others not. A lot of information emerged from the interviews with teachers, principals and students. There was a fair amount of rhetoric about child-centered learning, in part a result of the current Ministry of Education policy recommendations from teachers participating in Ministry teaching improvement workshops.

The problem of course is to translate norms into practice. There is a clear contrast in the average age of teachers in municipal schools where teachers have a job for life and private subsidized schools where teachers can be let go. The high average age of teachers in many of the schools visited was notable. In Taltal the school principal said this is because he could not get new teachers to come to that remote place. Whatever the reason, continuing education for experienced teachers is as important as changing the way new teachers are taught. Good videos of “ideal” classrooms and classroom teaching methods could go a long way in demonstrating to teachers and students the methods and practices that would improve their teaching and learning. These would be especially effective if real examples, taken from poor schools and difficult settings, were used.

However, large class sizes and overcrowding stood out as a major challenge to even the most innovative teacher. Very large differences in the quality and quantity of classroom learning materials, textbooks and student notebooks were readily evident, even among these troubled schools. Some schools and classrooms were especially deficient, such as the Chañaral Alto school which is not even one of the schools with the highest vulnerability. The poor quality of student notebooks and individual work in them stood out. In some cases, student notebooks were hardly legible.

13. What to do about textbooks?

Textbooks give concrete expression to curriculum and allow students to study independently. Each year the Chilean government sends out a bid for school textbooks for children in state supported education, accounting for 93% of the total enrolment in the country. The unsatisfactory supply of textbooks is still a serious handicap to quality education and further efforts to improve the quality of textbooks are needed.

Frequent complaints were heard from teachers about the poor quality and insufficient number of textbooks. When the Ministry of Education sends questionnaires on which textbooks teachers wish to receive, Ovalle Fernández, a teacher at the Escuela Hogar in Taltal, makes her choices carefully to no avail. “We always choose the best and we always get whatever is available,” she complained. A teacher in the San Antonio Movilizadores Portuarios school said “I was indignant when I discovered that the language book from the publisher Arrayán supplied by the Ministry is sold in bookstores with a workbook which we never get. So that means we are already at a disadvantage before we even begin.” Some teachers review the new school texts every year, buy the most useful ones with their own funds, and photocopy them for their students and charge only for photocopying.

Although textbook evaluation was not the focus of the study, the issue was pursued. Whereas in 1990 many children had to share textbooks, in the ten years since then, the Ministry of Education has tripled the number of textbooks provided to schools and has stated that in the school year beginning March 2000 all students in basic education will have their own textbooks. Efforts are also ongoing to improve textbook quality in connection with the curriculum reform.

Given the centrality of textbooks to educational outcomes, why are they not better and what needs to be done to change the situation? A large research study by the Center of Public Studies (Centro de Estudios Públicos—CEP) provided an in-depth assessment of the quality of textbooks being used in Chilean schools receiving government subventions (Eyzaguirre and Fontaine 1997). The CEP study put together two commissions: one to evaluate mathematics texts and another to evaluate language (Spanish) textbooks. The expert panel included people from rich, middle class and poor backgrounds, university teachers, and users of mathematics and Spanish texts and school principals. They agreed that Chilean textbooks do not measure up to foreign textbooks from countries such as Spain and England which were used as a means of comparison and made conclusions and proposals about language and mathematics texts.

Textbook reform could be a relatively quick way to make an impact on educational quality at the student level. Good textbooks can lead to immediate improvements in classroom and personal learning. There is not much of a range of choice among texts available in the market. However, the Ministry is evaluating the bidding process and the texts being used. This is very welcome but the critical issue remains that Chilean texts are below international standards and there cannot be a real change in the near future unless the basic issue of standards is addressed. As basic education is undergoing curriculum reform, the accompanying textbook reform is an urgent priority.

B. What schools teach us about the P900

The purpose of the school visits was to understand why school performance was not improving despite additional help from the P900 programme directed at poor primary schools over many years. However, P900 was only one element in the overall story. In that sense it provided an opportunity to observe at close hand the reality of teaching poor children in poor communities in schools with limited resources. P900 is just one of the many factors at play. The P900 programme provided the analytical framework and performance context, reflected in longitudinal SIMCE performance of schools participating in the P900. From there the “hard cases” in the programme were selected, visited and studied in order to understand how the multitude of factors that contribute to quality come together at the school level, which is the main agent of educational change.

The purpose of the school visits was not to evaluate the P900 programme as such. The Ministry of Education wanted to know why these schools, among other poor performers, were not improving enough to graduate from the P900 programme. In this sense, it was necessary to probe to look for the reasons. Among the reasons revealed were features of the P900 programme and its administration. The comments and opinions by school staff and provincial administrators speak for themselves. They show, as can be expected, many different views.

Several themes arose in virtually every school. The school officials in most every case thought highly of the programme materials designed by the P900; the comments reflect this. An exception was the Popoén School where it was felt that the materials could have been more adapted to the local reality of an isolated, poor school of Indian language and culture.

The negative critiques concerned two things. Firstly, the untimely and often very late delivery of materials and their insufficiency in numbers. This comment was echoed in every school

visited. It would seem that this logistical problem could be corrected without too much difficulty and with better communication of what can be expected in terms of quantities.

The second, and more serious issue, was the almost universal dissatisfaction with the performance of Provincial Supervisors who are the front line supervisors working with the schools, interfacing between the Ministry of Education in Santiago and visiting schools and interpreting the materials. A common complaint was infrequent visits by the supervisors. One had not been seen in years. Another was frequent supervisor turnover.

A third serious issue, was an excessively bureaucratic approach on the part of one P900 supervisor. This lack of communication emerged first at the school where the principal and teachers complained about their lack of understanding of what the supervisor was asking them to do: "prepare a Plan of Action". A "Plan of Action" was not understood and not appreciated by school officials working in one of the poorest, neediest and least sophisticated schools in all of Chile. They were looking for concrete advice and expertise in improving learning in their challenged school.

The school's views were followed up with a long discussion with the supervisor in her office. It appeared that her principal concern was to have correct paperwork to satisfy her bosses and report to Santiago together with a lack of concern for helping children in her school to learn. Normally she would look good because her paperwork was well done. This is the type of problem that would seem to pose the most important challenge for the P900 management.

Trangol

For the past seven years, in which the school has been in the P900 programme, the specialized materials have been extremely useful and the supervisor was particularly helpful in designing approaches that worked with the material. But when the Ministry of Education transferred him without notice the programme went downhill, and municipal and provincial Ministry of Education bureaucrats refused to heed Rodriguez Mercado's appeals for his reinstatement. "They said they decide who goes and who stays," he recalled with frustration.

The next supervisor was an expert in special education who admitted she knew nothing about the P900 programme. After just two visits in 1997 she wrote a negative report on Trangol saying the teachers did not know how to use the P900 materials appropriately. As a final blow, enrolment dropped from 80 to 68 students, causing Trangol to lose a teacher and its qualification for P900.

Popoén

"The P900 is a programme that has come up with some fantastic ideas, but they don't always work out in reality," said Popoén's principal. The P900 materials and training courses also earned mixed reviews from Popoén's other teachers who said some of the material they received has been irrelevant and often comes without proper guidelines for use. "We get the material and then have to sit down and discover for ourselves how we are supposed to use it. We could really use someone to explain it to us in depth", he explained.

The person responsible for implementation is the provincial supervisor, scheduled to visit to the school every fortnight. But a constant turnover of supervisors only heightens the frustration in Popoén's classrooms. "Every year they change our supervisors so there is no continuity," said Reiser. "Each one comes and says whatever he thinks is best." Responding to that complaint the Provincial office had Popoén's current supervisor, Angelica Pufchel, sign an agreement stipulating she would remain until the year 2000. She is currently trying to strike a balance between the Ministry of Education's demands for paperwork and the school's pleas for practical and timely help. "No one gives us a course in how to be supervisors," she explained.

As Popoén's coordinator for the application of the P900 programme, Pufchel noted with frustration that four months into the school year the 1998 P900 materials had yet to arrive. Once they do arrive all she can do is send them on to the school, unopened, since she herself receives no instructions for usage. Another frequent complaint among Popoén teachers is that they lack sufficient numbers of copies —enough for only three or four students out of a class of 20. Asked about the chronic shortage of material, Pufchel cited lack of co-ordination in requesting additional copies. "Everything is done with paper," she said. "I understand how teachers feel, but the whole administrative system is very cumbersome".

Language teacher Hugo Enrique Añasco, who has taught at Popoén for two years, noted that while the school received a classroom library with dozens of books, the teachers were never consulted on its contents. "They never asked us what kind of texts would be useful, they just sent them all on from the Ministry," he said. While many of the books are in use, others, such as *The Three Musketeers*, gather dust on the shelves. "The sheer size of it scares the kids away," he said.

The Ministry of Education's P900 workshops, in which local youths act as "monitors" to help struggling third and fourth graders, were considered ineffective. "I found them a waste of time," said history teacher René Alfred Feast.

Instead of the performance workshops, teachers would like more audio-visual material and courses to improve their teaching in mathematics and Spanish, two subjects that the students continue to score low in. But before the specialized courses can be approved the teachers must submit a detailed "Plan of Action" on the status of their last year of the PME grant. "We need practical things, workshops, but all we are getting is paperwork and more plans, we won't get anywhere with this nonsense," said Reiser. "We need things now, not things that will work in three or four years." While supervisor Pufchel claimed to understand his frustration, she insisted that the Plan of Action is needed to make a diagnosis of the schools failings, mainly grammar and math.

Chañaral Alto

The chronic shortage of teaching material prompts school officials to be constantly on the lookout for new Education Ministry programmes that could help. The P900 Programme received high praise in spite of the fact that sometimes supervisors failed to come to workshops, failed to bring promised guidelines or failed to give an effective training session. "We take full advantage of it. It gives us new material that we wouldn't have a way of getting otherwise. Some teachers use it better than others but all of them use it," said Claudina Rodriguez.

Teachers complain that until this year the P900 workshops have been repetitive, relying on the same booklet as in prior sessions or analysing school texts. "There were the teachers reading and re-reading the same paragraphs yet we didn't know how to use some of the educational material and the supervisor didn't know how to explain it either. There should be some kind of instruction booklets that suggest the ways in which the material can be used," said Luis Olivares, third grade teacher.

The classroom libraries are considered one of the best parts of the P900 programme, as they encourage children to read. "The books are there, the children can take them out and read them, and after that they can write or converse. If a teacher is absent, the substitute doesn't arrive with empty hands," said Luisa Rodriguez, counsellor. Instead, they let him wheel in the portable bookcase that serves as the "classroom library".

Like other schools in the P900, the school recently made a three-year commitment to the new programme but demanded a new supervisor as well. This year the teachers are pleased with their new supervisor, Espiro Pleticosic, with whom they schedule weekly workshops to develop lesson plans for the next three years. These workshops provide teachers lacking degrees with the tools they need for

class. So far the new approach is sparking praise from teachers who find the meetings more dynamic and practical.

The PME project took up so much time that teachers temporarily dropped out of the P900 programme that year because they lacked the time for the workshops.

Altogether with the P900, PME and grants, the school has new teaching material, videos and a television—all of which are used often in the classroom.

La Florida, Santiago

Since 1990 the school formed part of the P900 programme aimed at improving the quality of the nation's poorest schools. But improvement has been scarce.

"We lost a lot of years. Even within the P900 there was a lot of wasted time without improvement," said one professor.

Dora Muñoz, the school principal, renewed the team of teachers by hiring graduates fresh from college. Then Unidad Divina staff and teachers took full advantage of the weekly workshops sponsored by the P900.

The P900 material supplied by the programme is often insufficient for the number of students in a class or it arrives without clear instructions for the teachers. Still, the principal and teachers say things have improved since a new P900 supervisor was named in late 1997. This supervisor makes regular visits to the school and "supports" it in its endeavours.

Muñoz appreciates the P900 programme's underlying philosophy. "Each school has to be independent, autonomous and search for solutions to its problems without depending on other sectors." The material that comes with the programme also earned high marks.

San Antonio: San José de Calasanz

The school experienced problems with the application of the P900 programme, in which it has participated since its beginnings in 1990. Although the teachers like the materials and consider them "valuable" the programme repeats itself some years, such as when workshops consisted only of reading a text sent by the Ministry of Education. There were supervisors who never visited the school but this year things have changed. Gladys Hernández, the new supervisor, visits the school every week and supports the teacher workshops.

San Antonio: Movilizadores Portuarios

This school formed part of the P900 from 1990 to 1996, but asked to drop out. Teachers said the supervisors visited infrequently or held workshops of little value, which consisted mainly in reading some texts. "The material was good, but the spirit of what they wanted to achieve with the P900 never reached us," said Marta Canales. Teachers preferred to hold their own workshops with the technical director, which they considered more worthwhile. They feel the relationship with the Ministry of Education is too distant.

Taltal

Half way through the 1998 school year Porfirio Alfaro's replacement as P900 supervisor had yet to visit the school for the first time even though, Alfaro says, "it is essential to have a dynamic supervisor".

Jiménez Rojas is enthusiastic about the special materials sent by the P900 programme. "The children are familiar with the material and like it," she said. But the quantities supplied often fall

short of their requirements so she routinely divides her class into groups to work with the new material.

One of the Escuela Hogar's more dynamic teachers is Rosa Ovalle Fernández, an expert in sparking the imaginations of her eighth grade students. The P900 material is only moderately useful to Ovalle Fernández. "I wish they would make the material a little more functional and a bit less dependent on memorization," she said.

C. What schools teach us about children in harsh environments

Located near the southern city of Osorno in one of the poorer communes of Chile. **Popoén** attracts students more for its meals and boarding facilities than for the quality of its education. Of its 86 students, 65 are boarders who sleep in spartan bunks in a long wooden clubhouse warmed by a woodburning stove. The children, even some first graders, only go home to sleep on the weekends. Some of those who don't board have to walk up to six kilometers to get to school in the morning. Their parents, almost 70% Huilliche Indian, generally work as farm labourers, selling firewood or tending cattle.

"The children who come to this school live in the most absolute poverty," said Popoén principal Luis Andrés Reiser, who has held his post for 12 years. He estimates that almost half the parents have trouble with alcohol, and monthly earnings hover around 50,000 pesos (about US\$100), less than the minimum wage. With an average 3.5 years of schooling, parents take little or no interest in their children's class activities.

The children of **Unidad Divina** know first hand about drugs, alcohol, delinquency and violence. Four fourth graders were chosen to give a description of their daily life in the hardscrabble La Florida slum in the heart of Santiago, a megacity of almost six million people.

Teresa, 9, lives with her parents, her three brothers and a cousin in a small apartment in Villa O'Higgins. She doesn't know what her father does except that "he buys things from junkies." There's a guy who comes called Zamorano who is always drugged and lives on the street and had his fingers cut off from a knife fight. He always comes around asking my dad for money. The other day he got mad and started throwing rocks at the windows. There's also a man they call the Pear, who works with drugs and also steals merchandise from his mom, and my dad buys that stuff from him. All the junkies come to my dad to ask him for money." Teresa says her mom spends a lot of time afraid. In her building there is a terrace where the drug addicts always get together.

Diego, 9, lives in a room with his stepfather, mother and half brother. His mother works four days a week as a maid and his stepfather works in a tile factory. Diego experiences first hand the consequences of the detoxification treatment his stepfather is currently undergoing. "The worst part is when he longs for a drink but can't take one because they gave him some pills that are like poison," he explains. "If he takes a drink, he dies. But he still wants to have a drink and he has to just bear it. That's when he gets into a bad mood and starts ragging on my mom. When he fights with her I defend her and throw things at his head but I have to take off for the streets so he won't go after me too." Diego knows little about his real father.

Cristóbal, 11, lives with his grandmother together with his stepfather, mother and another 20 relatives. He's new to the neighborhood; he used to live in Quilicura as part of another big family. His father abandoned him when he was four and all he knows about him is that he has a good job. His stepfather and uncles smoke marijuana, crack and drink alcohol, although his stepfather is now in rehabilitation. He hits his mother and Cristóbal tries to defend her but he almost never succeeds. On Saturday his stepfather slapped him hard across the face. His 12-year-old cousin from Tula is a drug addict but he still goes to school every morning. He buys the crack for 1,000 pesos (US\$2.50)

from Jorge, who is 16, and whiles away the afternoons. Cristóbal knows when his cousin is high because his eyes get bloodshot, he starts to cuss and he plays cards. His best friend Cristián always gets beaten at home and often he can be spotted with green bruises around his eyes. Cristóbal says they hit him too, but less.

Sofia, 9, is the only one of the group who has no direct contact with drugs or alcohol. She lives with her grandmother, who is the head of her household and works as a day maid. Her mother and four brothers live there too. Her 11-year-old brother works as a gardener's assistant with his godfather, and he contributes his earnings to the household. In her home everyone is an evangelist and they are very strict: they can't play on the streets, they can only watch the news on television and they must go to bed early.

At **Trangol School** teachers are more flexible with students who arrive late to class. Usually it is because they have to finish a chore at home before walking several kilometers to school. Ten-year-old Juan Plácido must wake at 6:30 a.m. when it is still dark to take two cows, a calf and four horses out to pasture in fields an hour away from his home. Then, after the two-hour walk, he must set out on the dirt road to Trangol, another hour's trek. "They can't say all schools are similar because they don't know our reality here," said Rodríguez Mercado.

Some children at the **Escuela Hogar** in Taltal are struggling with problems at home, the need to work and a lack of parental support for learning at school.

Trifeña Tarita Chirino is a fourth grader who reads with fluency appropriate to her nine years, despite being one of 17 brothers and sisters who work collecting and selling sea algae. Her teacher says she is enthusiastic about learning, and sometimes will knock on the door after school hours to ask for a pencil or for help with a question. "I talk to Trifeña's mother and tell her to help her daughter, but it is as if I were speaking a different language," said teacher Patricia Jiménez Rojas. Trifeña's grades, an average 4.4 out of 7, reflect the lack of parental concern.

Yet in the same class, Cristián Astudillo Collao boasts grades averaging 6.2. Happy and confident the nine-year-old announces he will be a paleontologist when he grows up. His father works in a thermoelectric plant, his mother paints and Cristián appears to have his lessons reinforced at home.

Going to school gets second shrift when Chañaral Alto becomes the "Far West" during grape harvest season. Class sizes at **Alejandro Chelén Rojas** drop dramatically and going to class competes with going to work every day during October to December, when farming duties interfere with learning at the critical moment at the final three month push at the end of the school year.

For some, there is work in June and August too. But beginning in October, everybody in the village works. Children in fifth grade and above almost all work, and even some of the younger ones during the whole packing season. Hugo Valenzuela, 11, boasts of having packed five pallets per day last season during working days of 8 hours or longer, long after dark.

"Most children continue attending school but they work on their off-shift; their grades go down and there is no spare time to do homework. Children dash to work, leaving their school lunches behind", declared Luisa Rodríguez.

At **San José de Calasanz** elementary school in the middle of San Antonio's poorest neighborhood, Juan Luis is 14-years-old and a drug addict. He walks with his mother into the office of Elsa Carrasco, principal of San José de Calasanz Elementary School. Elsa asks him, "what are we going to do?" He answers, "Now I am going to study. I give my word as a man."

Juan Luis is in eighth grade and is still in school thanks to Carrasco and his mother, who convinced a judge to allow his rehabilitation there instead of a reform school. But the youth's battle is a tough one because the environment he lives in can only offer more hurdles.

"He is an adolescent with a lack of affection, he lives some of the time with his mother and then he has to go with his grandmother because his stepfather won't accept him. But the grandmother has a lot of people at home so she sends him to his real father, and the cycle begins all over again," Carrasco explains.

D. What schools teach us about teachers and student performance

Taltal

One teacher can indeed make a difference, even at a poor school. In 1994, for example, Escuela Hogar's fourth grade children turned in mathematics and Spanish results far above those of previous years (62 and 65 respectively out of 100), a result attributed to three particularly good teachers. More recent scores (1996) registered a drop of two points in Spanish and seven points in mathematics, largely because the teachers had changed.

Two of the teachers responsible for the commendable 1994 scores have since retired and recruiting new teachers is a difficult if not impossible task. Taltal is a desert town of 12,000, a four-hour bus ride south of the nearest city, Antofagasta. Because of its isolation and the necessity of trucking in most goods, the cost of living is high, all factors that conspire to keep young professionals away. "If you advertise a job opening in Taltal nobody will apply. They all prefer the big cities," said former P900 supervisor Alfaro. As a result, most of the Escuela Hogar's 34 teachers have been there more than a dozen years; four of them are alumni. Among the staff there are five marriages between teachers, one set of brothers and two nephews of school administrators. "You can't speak ill of anyone here because they're all related", joked the Principal Juan Rojas. One advantage of older teachers is a sense of tradition and community. The Escuela Hogar is very involved in town anniversaries and holidays, staging dances and shows. "The school is the heart of the community," said Alfaro. But many of the older teachers are also resistant to change, preferring to stick to the same lessons given in the past. "They have a lot of bad habits and it is hard to make them understand that there are new methods and technologies," said Rojas. A second disadvantage is the sheer cost of paying a staff with years and years of seniority. "If the teachers were young then we could cut costs significantly," said Rojas. A beginning professor earns 327,515 pesos (then US\$700) monthly while one teaching for ten years or more might earn twice that amount.

If some veteran teachers resist change, an equal number of them embrace it and use it to their advantage. The first to fourth grade teachers put together a project that won funds from the Education Ministry for an audio-visual room. Since the project was put together by the teachers themselves, they also use it more frequently and have integrated it into their lesson plans. In any given week they might project cartoons for kindergartners, movies in English for teens learning the language, or science videos for the younger grades. One programme on the growth of a fetus prompted fourth-grader Daniela to announce recently that she wanted to become the kind of doctor that "helps babies be born." Those kinds of dreams are encouraged by her teacher, Jiménez Rojas, who has taught the same class since the children were in first grade.

Proof of teacher interest in upgrading their skills is the fact that several are currently taking a course on building children's self-esteem and paying the 24,000 pesos (US\$50) fee out of their own pockets. Another group organized a conference last year that included teachers from Mejillones and

Antofogasta. They housed the visiting teachers in the empty dormitory bunks and swapped experiences on education. "We saw that we were doing okay," said Juan Beltrán Berengueta, who oversees the school's technical aspects.

One of the Escuela Hogar's more dynamic teachers is Rosa Ovalle Fernández. Faced with teaching the proper punctuation of a letter recently, Ovalle devised a lesson in which a famous Chilean football player declares his undying love for three different women—depending on where the commas and periods were placed. Seated in groups of four, most of the children listened and participated in the class. "You have to make them laugh and get them involved," said Ovalle Fernández.

When the Ministry of Education sends questionnaires on which textbooks teachers wish to receive Ovalle Fernández makes her choices carefully to no avail. "We always choose the best and we always get whatever is available," she complained. So instead of sticking to boring texts, Ovalle Fernández has her class write their own comic strips with titles like "Mujer Flach", film their own monologues, or finish stories they began reading on the computers. "The kids like to leave the classrooms and do something new," she explained.

So far, the eighth graders are doing better in SIMCE scores than the younger children, and the rate of students repeating a grade has dropped from a high of 13% in 1993 to a steady 9% over the past four years.

One current source of difficulty for the children is the requirement for state schools to teach two foreign languages. While it is proposed to change to just one language under the current educational reform, the new curriculum cannot be applied to the fifth and sixth grades until the school adopts the full-day. Until then, fifth to eighth grade students are to learn English and from the seventh grade to eighth both French and English. "This is really hard for the kids," said teacher Jiménez Rojas, whose daughter is struggling with French. In effect, the learning of foreign languages competes directly with learning the basic foundations of Spanish in the restricted half-day school day and in already large classes.

Chañaral Alto

But the main problem is not so much space, but the high turnover of its teachers, which in the long run affects the student's academic performance. The children's SIMCE scores are erratic, ranging from 55 points in 1997 to a high of 67 in 1994 only to drop to 57 in 1996. This year's results for eighth grade increased by 15 points after remaining static around 50 points over the past six years.

The constant comings and goings of teachers is one reason why this rural school cannot maintain an improvement in performance. The students who graduated from elementary school in 1996 went through 12 different teachers in a four-year period, three of them in fourth grade alone. Most of those teachers lacked degrees. When the class took the SIMCE test, results were poor. Those in eighth grade, meanwhile, had just one excellent teacher from first grade to eighth and the 15-point increase in scores reflected that.

The turnover of teachers can be attributed to difficult living conditions in Chañaral Alto. "I'd worked in the city but never in the countryside. I had to get used to the absence of showers, of comfortable bathrooms. We don't have the minimum comforts to do a good job," explained one teacher who lives in the town with her little daughter.

Only 13 of the 26 teachers currently live in Chañaral Alto, the rest arrive in public transportation from Ovalle or Monte Patria. This means that when classes are over they rush to take the last bus of the afternoon and are unable to remain for after school activities.

As soon as they can most teachers assigned to Chañaral Alto apply for a new position. Their goals are to transfer to larger cities, where they can go to a movie and dinner, send their children to schools or universities and attend classes themselves for self-improvement.

Claudina Rodriguez, acting principal and technical chief says teachers want a job closer to their real homes. "After working here for three or four years they want the perks of a big city and to be close to their families. The economic incentive to teach in Chañaral Alto is not enough, only 5 % of the salary, which is not enough to grab anyone." A case in point is the successful eighth grade teacher, responsible for the 15-point increase in SIMCE scores: this year she transferred to Monte Patria.

The turnover of the teachers is not the only problem the school wrestles with. Faced with the lack of volunteers to fill the empty positions, the municipality has had to recruit people with only high school education. Almost half of the teachers, 11 out of 26, lack degrees. None of the seven new teachers have one. The technical unit helps those lacking degrees and academic training by showing them how to develop lesson plans. Eventually most of them take courses to earn degrees in Ovalle. This situation occurs in many rural areas of the country and is not unique to the province of Limarí.

Even the administrators of the Alejandro Chelén Rojas School experience the revolving door syndrome. When the principal of many years retired, a new one arrived only to join the new municipal department for technical-pedagogical training months later. The position was advertised again, another principal was hired but after a year in the position he too was hired to become a part of the same municipal office. Now the position of principal is available once more.

Teacher absenteeism is another considerable problem. During the months of April and May, 26 requests for time off landed on the desk of the principal, for one to four days off. Claudina Rodriguez figures that after subtracting medical leave, at least one professor is absent with administrative leave daily. "The problem is as serious as the constant staff turnover. These are classes that are not taught, it isn't the same for the children to have a substitute, which we can't always get," she adds.

La Florida, Santiago

The team of teachers learned to work well together and the turnover decreased. Most of the 16 teachers come from professional institutes. Almost all of the teachers spend the entire day at the school, since their contracts stipulate a workweek of 44 hours. Teachers currently earn a basic salary of 322,000 pesos (US\$685). This year the school started awarding raises of about 30,000 (US\$65) as incentives for efficient and effective teachers.

So far the teachers appreciate the principal's efforts and the ease with which she approves their new projects. But low wages continue to be a source of frustration, particularly when additional studies do not translate into higher salaries. "It doesn't pay to get extra training," said Ramón, who said the school only financed a small amount of his graduate degree in counseling and did not raise his pay after his additional studies.

Most teachers have little contact with the Ministry of Education, which they consider distant and unhelpful. Ramón comments that he only saw the school's former supervisor once in three years. The other link with the Ministry comes in the form of the textbooks that arrive annually. There are also occasional courses for self-improvement, such as one taken early in 1998 that they considered "good."

San Antonio: Movilizadores Portuarios

The staff of teachers is cohesive and dedicated. "It is impossible not to climb aboard because if you don't you will get dragged behind," said one kindergarten teacher, Blanca Santander, who has been at the school for 18 years. Most teachers are school veterans and would not transfer, although some moonlight at other schools to boost their wages. "It is a very good working environment," said Marta Canales, with 20 years of tenure at School 479.

The teachers work well together and often band together in an effort to increase school materials and resources. They are open to innovations, to acquiring new material and do not just settle for what is sent by the Ministry of Education, which some consider insufficient. "I was indignant when I discovered that the language book from the publisher Arrayán supplied by the Ministry is sold in bookstores with a workbook which we never get. So that means we are already at a disadvantage before we even begin," complained one professor. Some teachers review the new school texts every year, buy the most useful ones with their own funds, and photocopy them for their students and charge only for photocopying.

Because of these efforts, the school's most serious problem today is the growing demand of parents who wish their children to study there. Teachers fear this could hinder the performance of the children. There are too many classes with 45 students, which hampers the ability to give the interactive classes they consider best for learning. It is also virtually impossible to bridge the differences between slow and advanced students.

Trangol

So far Trangol's efforts are paying off in a very gradual climb of test scores. The school's SIMCE results went from a low of 30 in 1990 to only 39 in 1996. Still, Rodriguez Mercado chafes at the use of SIMCE scores to evaluate schools. These rural students are often confused about test instructions and teachers are not allowed in the room to explain the guidelines in a way they can understand. "The children told us they didn't understand what the examiners were trying to say, but they didn't dare tell them they didn't understand," said Rodriguez Mercado. Some students skipped questions they didn't know but instead of passing over the blank on the answer sheet, they filled that blank in with the answer to the next question. He suggests that a different measure be applied to schools like Trangol. Of the 17 children that finished the sixth grade last year, 15 opted to continue their studies. Very small schools stop at the sixth grade and children must transfer to another school to complete seventh and eighth grades. "This shows that we have managed to inspire them to keep studying, that they've learned that education can give you a future," he said.

Popoén

"Everything we've got was the result of work and sacrifice," said school owner Marta Catalán Osorio, who has also been teaching there for 23 years. Trying to make ends meet is a constant battle for Catalán Osorio, who receives 16,000 pesos (US\$35) per month per student in subsidy money from the Ministry of Education. "This amount has to move the entire school machinery: pay teachers, feed students, pay utilities, pay janitors," she said. "To get the school going I have to take out a loan every year because the funds from the Education Ministry are always a month late." Catalán Osorio also pays a monthly 180,000 peso (US\$380) installment for the school bus she purchased to drive students back home every Friday.

Her determination to provide the children with a good education is beginning to pay off. Popoén's SIMCE fourth grade test scores climbed from 38 to 49 between 1994 and 1996 (in contrast to the dramatic fall in the previous four years from 53 to 38), while in 1997 the eighth grade history and science scores nearly doubled. Popoén's teachers credit the impressive

performance in science to the frequent use of educational videos on a VCR and television won through a PME, a three-year Education Ministry grant awarded to innovative projects to improve the quality of teaching. The same grant also got the school a Bunsen burner, test tubes, a globe of the world and posters on the ear and respiratory system. But history teacher René Alfredo Feest credits the improvement in that subject to materials he has purchased himself, primarily from the Spanish publisher, Salvat. "A person in Santiago is never going to understand the kind of students we have here or what they need," he added.

When not battling bureaucracy, Popoén's teachers encourage students to continue studying after graduation from the eighth grade. At the end of the 1997 school year, Catalán Osorio personally took her graduating students' records to their schools of choice for continuing education. "If we left it in the hands of the parents it might never get done because they are country folk and wouldn't know which offices to go to and would be looked down upon." The gamble paid off: eleven of last year's students have gone on to high school.

Quicavi

An important change that Quicavi's dynamic principal introduced was the concept that all teachers should share in school administration. "When you share the responsibilities and decision-making, you get a more committed staff," he says. "It's democracy." Out went the heavy memorization that typified the school's instruction before. In came more discussion, explanation, and discovery. The PME school programme also paid for teachers to get special training in using the school's new equipment, and in such subjects as speech skills.

Out, too, went the school's low results in national testing. In language skills, for example, grade 4 went from the 57 in 1990 to 67 in 1996, a steady improvement. Class repetition fell from as high as 25% to 1%. And last year Aquelarre School in Quicavi on the island of Chiloé had no dropouts. Pérez credits his staff of seven teachers with the school's turnaround. "Once we got beyond some initial resistance to giving up old [teaching] ways, everyone adopted the project like a team, and we found we could have fun while doing a better job," he says. Teachers take turns living at the school a week at a time to supervise the interns. It makes for long days, but both teachers and students mention the sense of community when listing the school's strong points.

While posing for their official class photo on a recent afternoon, math teacher Patricio Rios asked the graduating students to call out their next destinations: a well-regarded polytechnic high school in the Chiloé capital of Castro, a general high school in nearby Ancud. Of 14 Aquelarre students who applied to the "poli," 12 were accepted. "A few years ago most would have just mumbled something about scraping by, bagging shellfish," said Rios.

E. What schools teach us about lack of parental involvement

The issue of lack of parental involvement came up in every school. Although this is not a new discovery, the specific examples cited by those interviewed are certainly educational and shed light on the depth of the problem.

Trangol

The key to the seeming contradiction between innovative educational projects and poor scores in the national SIMCE tests lies within the student body itself. Almost 100% of the children in Trangol are full-blooded Mapuche Indians who speak virtually no Spanish when they enter the school for the first time. Their parents enrol them more for the daily school breakfast and lunch than the food for thought they might get during class. This is understandable considering the minimal education of the parents themselves. On an average, the men have just four years of formal schooling, and half of the women are “illiterate from lack of use” of reading and writing skills. These parents seldom take interest in their children’s class activities and sometimes don’t even know what grade their offspring are in. At a recent parent-teacher meeting at the school only 10 of 68 parents bothered to come.

“I’ve never had a parent come to me and ask me how his child is doing in school never,” said Mary Torres, who has taught at Trangol for nine years and is currently in charge of first and second grades. “Parents think chores like feeding the pigs and gathering firewood are more important than schoolwork,” she added. “We get no reinforcement at home of what they are learning. One day the kids know it and the next day they forget.”

In spite of the lack of parental support, Trangol tries hard to give something back to the impoverished, agricultural community, that couldn’t even drum up the cash to hook into the municipal power lines. In the greenhouse students learn to use fertilizer and saltpetre in proper amounts for crops such as tomatoes and spinach. The children then take plants home and transfer the knowledge to their parents. “We’ve realized that the concerns and expectations of the parents are centered on problems of nutrition and improving their crops,” said Rodriguez Mercado. “They can’t even produce enough food for their own consumption and they can’t afford to let the fields recover by laying fallow, so with each passing day they produce less,” he added.

Popoén

With an average 3.5 years of schooling, parents take little or no interest in their children’s class activities. Only 30% of the parents showed up at a recent monthly meeting in spite of the fact that the school bus drove by all the homes to pick them up. Of those that came, several yawned through the meetings. “The children here have a tremendous scarcity of affection and that affects their ability to learn,” said their principal. The school bought a school bus to pick up the students every week who board weekdays at school and drive them back home every Friday and this has raised attendance considerably.

Taltal

The bulk of the students who attend the Escuela Hogar don’t receive sufficient support or reinforcement at home of what they are learning at school. Some of the older boys must alternate between jobs and classes, working one day and going to school the next. “There is a lot of social work involved,” said eighth grade teacher Rosa Ovalle Fernández, who has taught at the Escuela Hogar for 16 years.

Trifeña Tarita Chirino is a fourth grader who reads with fluency appropriate to her nine years, despite being one of 17 brothers and sisters who work collecting and selling sea algae. Her teacher says she is enthusiastic about learning, and sometimes will knock on the door after school hours to ask for a pencil or for help with a question. "I talk to Trifeña's mother and tell her to help her daughter, but it is as if I were speaking a different language," said teacher Patricia Jiménez Rojas. Trifeña's grades an average 4.4 out of 7 reflect the lack of parental concern. Yet in the same class, Cristián Astudillo Collao boasts grades averaging 6.2. Happy and confident the nine-year-old announces he will be a paleontologist when he grows up. His father works in a thermoelectric plant, his mother paints and Cristián appears to have his lessons reinforced at home.

So far, the school's relationship with parents has been spotty; only about 50% of parents attend regular meetings. Yet by sheer happenstance they play a critical role in the success or failure of their children by selecting their teachers. After years of fending off complaints by teachers over the composition of their classes, Principal Rojas changed the system of deciding the makeup of each class in the elementary school. When parents arrive to register their children for school, they are told to select the teacher that will accompany him or her from first grade to fourth. If a particularly good teacher's class fills up quickly, parents will have to settle for a different teacher. Those who arrive last to the registration process will most likely get the worst teachers and condemn their children to mediocrity for four straight years. So in the end it is the children with parents who do not fully understand the value of education who pay the cost for the school's reluctance to take responsibility for the makeup of classes.

This unfair system allows the principal to avoid complaints and ideally provides a motivation for bad teachers to reform. "We do this precisely so that the teacher will improve his teaching because there shouldn't be any mediocre teachers," said Rojas. Unfortunately, he admits, there are teachers who do not care if they are chosen last, so in practice the incentive doesn't work. If, however, a child is lucky enough to have an excellent teacher from first to fourth grade, he or she is likely to continue being a good student in fifth grade and beyond under a normal, "one-teacher-per-subject" system.

Chañaral Alto

As a rule the students come from stable homes. On average parents have a sixth grade education while the younger ones with smaller children tend to be elementary school graduates, with some high school graduates.

Two years ago the school began night classes for adults, with teachers paid the extra hours by the municipality. Most of the night school's 50 students are parents and their enthusiasm was such that the applications exceeded the students they could accept.

Still, the teachers consider the participation of parents in the school lacking. Only a fourth of the parents attend meetings and commit to the education of their children. Most pay the annual fee of \$1,000 pesos and many participate in a Parents Center to support the school in fundraising activities for improvement projects.

La Florida, Santiago

Changes in disciplinary procedures at the school sparked clashes with parents, who tend to be aggressive and take little responsibility for the education of their children. "The parents have a very convenient vision of their child's education. They expect the school to teach everything from toilet training to academic content," said the principal. There is no center for parents at the school, after the existing one was closed.

Ramón, an eighth grade teacher, considers the absence of parental support one of the school's most serious problems. "There is no commitment on the part of the parents, the children only get what you teach them in school. At home their backpack gets thrown in a corner, they don't open it and in most cases they lack a place to study. If they do try to study it is at a table with a radio on, a television blaring and a bunch of kids yelling".

Jacqueline, a second grade and special education teacher believes the participation of parents in the school is indispensable. "Since the educational level of the parents isn't the highest, we must teach them as well so they can help us when we give the children homework." Jacqueline appreciates the new format for meetings with parents. They are no longer called with requests for money to fund one thing or another but rather for teachers to use the meetings as a kind of school for parents.

San Antonio-San José de Calasanz

Most of the parents do not participate in school activities. Many are drug addicts or alcoholics and it is not uncommon for them to send their children to work in the market, to watch over cars or beg in the streets instead of going to school. In spite of these pressures, the children continue studying thanks to "special commitments". Explained one teacher, "one of my students was absent a lot but one day I told him I missed him when he was absent and now he comes every day. I said it to him with all my heart and he believed me", said the teacher.

Many of the children arrive without school supplies and teachers have to give them some. One teacher recalled seven students whose mothers never came to pick up the schoolbooks sent by the Ministry of Education. "I gave them directly to the kids, we couldn't continue to wait for their parents", he said.

San Antonio: Movilizadores Portuarios elementary school

Elementary School 479 in San Antonio boasts such a good reputation and attracts so many parents that its only serious problem is finding enough room for all of its students. Located a five-minute walk from the struggling San José de Calasanz school, this school proves what can be achieved when administrators and parents work together.

Parents of children at the school generally have an education that falls short of high school completion although some have university studies. Family life is stable with three fourths of the students' homes composed of both parents and siblings. So far no serious cases of domestic violence, drug addiction or alcoholism have been detected. They are considered an exception.

The parents center also works actively with the school, and maintains an excellent relationship with the staff that appreciates its efforts. Their efforts have raised funds to improve the floors, buy books for the library, finance a new ball court, build bathrooms for the kindergarten, and cover the play area with concrete. Parents also bought a photocopier and currently pay assistants to clean the classrooms.

In exchange, parents hold the teachers to high standards as far as the education they give the children in the classrooms. They are very interested in the school results of the SIMCE test and many of them are willing to help the school not only with money, but time. Some work as workshop monitors, others volunteer for special projects. Last year in kindergarten they worked on three special projects focusing on family, the month of the sea, and national holidays. All subjects in the classroom echo the chosen theme and the parents pitch in with family anecdotes, working with children and school monitors to build models and displays.

Bibliography

- Angell, A. (1996), "Improving the quality and equity of education in Chile: The programme 900 escuelas and the MECE-básica, in Antonio Silva (Ed) *Implementing policy innovations in Latin America politics, economics and techniques*, Washington D.C., Inter-American Development Bank.
- Balra, M. (1996), *Análisis estadísticos de resultados 1990-1992-1994, SIMCE, Ministerio de Educación*, Santiago. SIMCE
- Birdsall, N., Londoño, J.L. and L. O'Connell (1998), "Education in Latin America: demand and distribution are factors that matter", *ECLAC Review* 66, (LC/G.2049-P) Santiago, December, United Nations publication, Sales No. ISSN 0251-2920/ISBN 92-1-121238-3.
- Bravo, D. and A. Marinovic (1997), "La educación en Chile: una mirada desde la economía. *Persona y sociedad*, 1997 Vol XI, No 2, Santiago, ILADES.
- Carlson, Beverley (ed) (1999), *Social dimensions of economic development and productivity: inequality and social performance*, Serie desarrollo productivo 56, Santiago, CEPAL/ECLAC, August.
- ___ (1999), "Educación en rojo", *trespuntos*, Número 87, Buenos Aires, March.
- Carnoy, M. and P. McEwan (1997), "Public investment on private schools: A reconstruction of educational improvements in Chile", Stanford, Stanford University.
- Chile, Ministerio de Educación (1998a), *Programa de las 900 escuelas: Proceso de ingreso 1998*, Santiago.
- ___ (1998b), "Nómina de unidades educativas que deben permanecer en 1998", Santiago._
- ___ (1998c), *Reforma educacional, tarea de todo: Resultados prueba SIMCE 1997*, Santiago.
- ___ (1998d), "Resultados 8 año básico SIMCE 1997", Santiago.

- Chile, Ministerio de Educación (1997a), “Línea programa de mejoramiento de la calidad de las escuelas básicas de sectores pobres (P900)”, Santiago.
- ___ (1997b), “Atención a escuelas en el 10% mas bajo del SIMCE 1996”, Santiago.
- ___ (1997c), “Nómina de unidades educativas vigentes año 1997 del programa de mejoramiento de la calidad en escuelas básicas de sectores pobres”, Santiago.
- ___ (1997d), “Nómina de unidades educativas 1997 con ingreso 90/91/92”, Santiago.
- ___ (1997e), Resultados 4 año básico SIMCE 1996, Santiago.
- ___ (1997f), La reforma en marcha: Resultados prueba SIMCE 1996, Santiago.
- ___ (1997g), “100 mejores resultados SIMCE básica 1996: Escuelas subvencionadas”, Santiago.
- ___ (1997h), “100 mejores resultados SIMCE básica 1996: Escuelas subvencionadas”, Santiago.
- ___ (1997i), “100 mejores resultados SIMCE básica 1996: Escuelas particulares pagados”, Santiago.
- ___ (1997j), Orientaciones para la Implementación de Talleres de Aprendizaje, Santiago, Programa de Mejoramiento de la Calidad de las Escuelas Básicas de Sectores Pobres, Enero.
- ___ (1996a), Compendio de información estadística, Santiago.
- ___ (1996b), Manual de orientaciones para la interpretación de resultados: Educación media SIMCE 1994, Santiago.
- ___ (1996c), Resultados 8 año básico SIMCE 1995, Santiago.
- ___ (1996d), Directorio de proyectos de mejoramiento educativo, tomo iv-1995, Santiago de Chile.
- ___ (1995a), “Programa de las 900 escuelas: Resultados e impacto”, Santiago.
- ___ (1995b), Resultados 4 año básico SIMCE 1994, Santiago.
- ___ (1995c), Resultados 2 año medio SIMCE 1994, Santiago.
- ___ (1994), Proyectos de mejoramiento educativo en el desarrollo de la educación básica chilena: Programa MECE, Santiago.
- ___ (1993), “Resultados 4 año básico SIMCE 1992”, Santiago.
- Espínola, V. (1996), Revisión de quince años de política educativa en Chile: Ajustes en función de la equidad, Santiago, Comisión Económica para América Latina y el Caribe, (ECLAC).
- Eyzaguirre, Bárbara A. y Loreto Fontaine C. (1999), “Qué nos dice el SIMCE de 8 Básico? Análisis y perspectivas” Serie Documentos de Trabajo N 294, Centro de Estudios Públicos, Santiago, Mayo.
- Eyzaguirre, Bárbara y Loreto Fontaine (Eds) (1997), El Futuro en Riesgo: Nuestros Textos Escolares, 1997, Santiago de Chile, Centro de Estudios Públicos.
- Filp, J. (1994), “Todos los niños aprenden: Evaluaciones del P.900 en M Gajardo (Ed), Co-operación internacional y desarrollo de la educación, Santiago, AGCI/ASDI/CIDE.
- Fontaine, Loreto (1998), “La asignatura de lenguaje vista en programas escolares extranjeros, estatales y privados”, Serie Documentos de Trabajo N 285, Santiago de Chile, Centro de Estudios Públicos, Septiembre.
- García-Huidobro J. and C. Jara (1994), “El programa de las 900 escuelas” en M. Garjardo (Ed), Co-operación internacional y desarrollo de la educación, Santiago, AGCI/ASDI/CIDE.
- JUNAEB (1998), “JUNAEB, Red nacional de apoyo al estudiante, programas 98.99”, Santiago, Junta Nacional de Auxilio Escolar y Becas.
- Martínez, R. (1996), Análisis del sistema de medición de la calidad de la educación (SIMCE) en Chile, Santiago, ECLAC.
- McEwan P. and M. Carnoy (1998), “Los colegios privados. La eficiencia y la competencia en Chile”, Stanford, Stanford University.
- Mizala, A. and P. Romaguera (1998), “Desempeño escolar y elección de colegios: la experiencia Chilena”, Seria Económica, N° 36, Santiago, Centro de Economía Aplicada, Universidad de Chile.
- Olivares, J. (1996), “Sistema de medición de la calidad de la educación”, Revista Iberoamerica de Educación, 1996, number 10, Madrid, OEI.
- PREALC (1998), “El Futuro está en riesgo”, Programa de Promoción de la Reforma Educativa en América Latina y el Caribe, Inter-American Dialogue, Abril.
- ___ (1996), Formas y Reformas de la Educación, Programa de promoción de la reforma educativa en América Latina, N 2 Trimestre 4, 1996, Washington, D.C.,
- ___ (1995), “Putting education first” A conference report of the Inter-American Dialogue, Washington D.C., April.

- Rojas, Carlos and J.M. Esquivel (1998), "Los sistemas de medición del logro académico en Latinoamérica, LCSHD Paper series 25, Washington, D.C., October, The World Bank Latin American and Caribbean Regional Office.
- Sanhueza, Claudia (1998), "Acerca de la desigualdad educacional", Tesis para optar al grado de Ingeniero Comercial, Santiago, Universidad de Chile.
- Schieffelbein, E. and P. Schieffelbein (1998), "Evolución de la repetición, deserción y calidad de la educación en Chile: 1990-97", Santiago.
- The Economist (1998a), "School-cloned zones", June 27th 1998, London.
- ___ (1998b), "Plowden's progress", June 20th 1998, London.
- Undurraga, Consuelo, (1998), "Reforma educacional en Chile: Perspectiva de cinco ministros", Documento preliminar, Washington, D.C. Banco Interamericano de Desarrollo.
- World Bank (1998), Charting the Course of Educational Change in Latin America and the Caribbean: A World Bank Strategy Paper, Latin America and the Caribbean Social and Human Development, Washington, D.C., World Bank.
- ___ (1995), "Priorities and strategies for education", Washington, D.C., World Bank.



NACIONES UNIDAS



Serie

desarrollo productivo

Issues published

- 16 Reestructuración y competitividad: bibliografía comentada (LC/G.1840). Restructuring and competitiveness, November, 1994
- 17 Síntesis del planteamiento de la CEPAL sobre la equidad y transformación productiva (LC/G.1841). Restructuring and competitiveness, December, 1994
- 18 Two studies on transnational corporations in the Brazilian manufacturing sector: the 1980s and early 1990s (LC/G.1842). Transnational corporations and foreign investment, December, 1994
- 19 Tendencias recientes de la inversión extranjera directa en América Latina y el Caribe: elementos de políticas y resultados (LC/G.1851). Transnational corporations and foreign investment, December, 1994
- 20 Empresas transnacionales manufactureras en cuatro estilos de reestructuración en América Latina. Los casos de Argentina, Brasil, Chile y México después de la sustitución de importaciones (LC/G.1857). Transnational corporations and foreign investment, May, 1995
- 21 Mexico's incorporation into the new industrial order: foreign investment as a source of international competitiveness (LC/G.1864). Transnational corporations and foreign investment, May, 1995
- 22 Informe sobre la competitividad internacional de las zonas francas en la República Dominicana (LC/G.1866). Transnational corporations and foreign investment, August, 1995
- 23 América Latina frente a la globalización (LC/G.1867). Transnational corporations and foreign investment, August, 1995
- 24 Los flujos de capital extranjero en la economía chilena: renovado acceso y nuevos usos (LC/G.1868). Transnational corporations and foreign investment, September, 1995
- 25 Paths towards international competitiveness: a CANalysis (LC/G.1869). Transnational corporations and foreign investment, June, 1995
- 26 Transforming sitting ducks into flying geese: the Mexican automobile industry (LC/G.1865). Transnational corporations and foreign investment, October, 1995
- 27 Indicadores de competitividad y productividad. Revisión analítica y propuesta de utilización (LC/G.1870). Restructuring and competitiveness, September, 1995
- 28 The Taiwanese experience with small and medium-sized enterprises (SMEs). Possible lessons for Latin America and the Caribbean (LC/G.1872). Restructuring and competitiveness, August, 1995
- 29 Fortalecimiento de los gremios empresariales en América Latina (LC/G.1885). Restructuring and competitiveness, October, 1995
- 30 Historia evolutiva de una planta metalmeccánica chilena: relaciones micro-macro y desarrollo tecnológico (LC/G.1887). Restructuring and competitiveness, August, 1997
- 31 Nuevos problemas y oportunidades en el desarrollo industrial de América Latina (LC/G.1910). Restructuring and competitiveness, July, 1997 [www](#)
- 32 Integración económica e inversión extranjera: la experiencia reciente de Argentina y Brasil (LC/G.1911). Transnational corporations and foreign investment, July, 1997
- 33 Sistemas de innovación y especialización tecnológica en América Latina y el Caribe (LC/G.1913). Restructuring and competitiveness, March, 1996
- 34 Política industrial y competitividad en economías abiertas (LC/G.1928). Restructuring and competitiveness, October, 1996
- 35 Reestructuración y competitividad: segunda bibliografía comentada . Publicaciones de carácter general y de la región de América Latina y el Caribe, Volumen I (LC/G.1933) and América Latina y el Caribe: publications by countries, Volumen II (LC/G.1933/Add.1). Restructuring and competitiveness, October, 1996
- 36 Encadenamientos, articulaciones y procesos de desarrollo industrial (LC/G.1934). Restructuring and competitiveness, November, 1996
- 37 Las economías asiáticas emergentes: treinta años de dinamismo exportador (LC/G.1935). Restructuring and competitiveness, February, 1997
- 38 Escenarios de la agricultura y el comercio mundiales hacia el año 2020 (LC/G.1940). Agricultural development, November, 1996
- 39 La posición de países pequeños en el mercado de las importaciones de los Estados Unidos: efectos del TLC y la devaluación mexicana (LC/G.1948). Restructuring and competitiveness, December, 1997
- 40 Empresas transnacionales y competitividad internacional: un CANálisis de las experiencias de Asia en desarrollo y América Latina (LC/G.1957). Restructuring and competitiveness, July, 1997

- 41 Quality management and competitiveness: the diffusion of the ISO 9000 standards in Latin America and recommendations for government strategies (LC/G.1959). Restructuring and competitiveness, December, 1997, [www](#)
- 42 Quality management ISO 9000 and government programmes (LC/G.42). Restructuring and competitiveness, December, 1997
- 43 El empleo agrícola en América Latina y el Caribe: pasado reciente y perspectivas (LC/G.1961). Agricultural development, August, 1997
- 44 Restructuring in manufacturing: case studies in Chile, Mexico and Venezuela (LC/G.1971). Restructuring and competitiveness, August, 1998
- 45 La competitividad internacional de la industria de prendas de vestir de la República Dominicana (LC/G.1973). Transnational corporations and foreign investment, February, 1998
- 46 La competitividad internacional de la industria de prendas de vestir de Costa Rica (LC/G.1979). Investment and corporate strategies, August, 1998
- 47 Comercialización de los derechos de agua (LC/G.1889). Agricultural development, November, 1998.
- 48 Patrones tecnológicos en la hortofruticultura chilena (LC/G.1990). Agricultural development, December, 1997
- 49 Policy competition for foreign direct investment in the Caribbean basin: Costa Rica, Jamaica and the Dominican Republic (LC/G.1991). Restructuring and competitiveness, May, 1998 [www](#)
- 50 El impacto de las transnacionales en la reestructuración industrial en México. Examen de las industrias de autopartes y del televisor (LC/G.1994). Transnational corporations and foreign investment, September, 1998 [www](#)
- 51 Perú: un CANálisis de su competitividad internacional (LC/G.2028). Investment and corporate strategies, August, 1998
- 52 National agricultural research systems in Latin America and the Caribbean: changes and challenges (LC/G.2035). Agricultural development, August, 1998
- 53 La introducción de mecanismos de mercado en la investigación agropecuaria y su financiamiento: cambios y transformaciones recientes (LC/L.1181 y Corr.1). Agricultural development, April, 1999
- 54 Procesos de subcontratación y cambios en la calificación de los trabajadores (LC/L.1182-P). Restructuring and competitiveness, sales N°: S.99.II.G.23, (US\$10.00), 1999
- 55 La subcontratación como proceso de aprendizaje: el caso de la electrónica en Jalisco (México) en la década de los noventa (LC/L.1183-P). Restructuring and competitiveness, sales N°: S.99.II-G.16 (US\$ 10.00), 1999
- 56 Social dimensions of economic development and productivity: inequality and social performance (LC/L.1184-P). Restructuring and competitiveness, sales N°: E.99.II.G.18, (US\$10.00), 1999 [www](#)
- 57 Impactos diferenciados de las reformas sobre el agro mexicano: productos, regiones y agentes (LC/L.1193-P), Agricultural development, sales N°: S.99.II.G.19 (US\$10.00), 1999 [www](#)
- 58 Colombia: Un CANálisis de su competitividad internacional (LC/L.1229-P), Investment and corporate strategies, sales N° S.99.II.G.26 (US\$10.00), 1999
- 59 Grupos financieros españoles en América Latina: Una estrategia audaz en un difícil y cambiante entorno europeo (LC/L.1244-P), Investment and corporate strategies, sales N°: S.99.II.G.27 (US\$10.00), 1999
- 60 Derechos de propiedad y pueblos indígenas en Chile (LC/L.1257-P), Agricultural development, sales N°: S.99.II.G.31 (US\$10.00), 1999 [www](#)
- 61 Los mercados de tierras rurales en Bolivia (LC/L.1258-P), Agricultural development, sales N°: S.99.II.G.32 (US\$10.00), 1999 [www](#)
- 62 México: Un Canálisis de su competitividad internacional (LC/L.1268-P), Investment and corporate strategies (in press).
- 63 El mercado de tierras rurales en el Perú. Volumen I: Análisis institucional (LC/L.1278-P), sales N°: S.99.II.G.51 (US\$10.00) and volumen II: Análisis económico (LC/L.1278/Add.1-P), sales N°: S.99.II.G.51 (US\$10.00) Agricultural development, 1999 [www](#)
- 64 Achieving educational quality: What schools teach us. (LC/L.1279-P), Restructuring and competitiveness, sales N°: E.99.II.G.60 (US\$10.00), 2000 [www](#)

- Readers wishing to obtain the above publications can do so by writing to the following address: ECLAC, Division of Production, Productivity and Management, Casilla 179-D, Santiago de Chile. Some issues may not be available.
- Publications available for sale should be ordered from the Distribution Unit, ECLAC, Casilla 179-D, Santiago, Chile, Fax (562) 210 2069, publications@eclac.cl.
- [www](#) These publications are also available on the Internet: <http://www.eclac.cl>

Name:
Activity:.....
Address:.....
Postal code, city, country:
Tel.: Fax: E.mail address:.....