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The Bolivian Education Reform 1992-2002: Case Studies in Large-Scale Education Reform

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THE WORLD BANK

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Earlier versions benefited from extensive and insightful comments from Akanksha A. Marphatia of the World Bank. Miguel Urquiola of Columbia University was our first peer reviewer to the initial draft. Françoise Delannoy, formerly of the World Bank, now an independent consultant, was the peer reviewer of the second draft. Carmen Urioste and Nicole Nucinkis made far-reaching comments to the section on curriculum and teacher training and patiently answered all our questions along the way. Lucia D'Emilio commented on the section on bilingual and intercultural education. Amalia Anaya, Constance Corbett, Luis Enrique López, and Utta von Gleich read and reacted to the whole manuscript and were always willing to absolve our doubts. Finally, we thank Amanda Enayati for her great editing skills which have improved the final version of the study. We thank them all for their invaluable help and commitment to contributing to improve this study. We strived to respond to their suggestions within the space and time constraints we faced. The authors, however, are the only ones responsible for the current version and all its errors and limitations.

Manuel E. Contreras also acknowledges the opportunity provided by Barbara Bruns of the World Bank to write this monograph by including Bolivia in the series of case studies on education reform that she oversees. In order to accomplish the task, I benefited from the expertise and critical perspective of Maria Luisa Talavera as co-author. I thank her for her patience and for all she has taught me along the way. None of the above would have been possible, however, without the love, support, and encouragement of my family who provided me “leave” to undertake this task at the expense of their own time. Moreover, my son Juan M. Contreras and my wife Mónica Escalante read the drafts and contributed to their improvement. I thank them profusely. Knowing that reading the study made my 16-year-old son believe there was hope for Bolivia through education was not only touching, but very heartening.

Maria Luisa Talavera thanks Manuel E. Contreras for the privilege of accompanying him in this effort to put together a jigsaw puzzle. Placing into context disperse knowledge shows a picture of the Bolivian education reform that was so far unknown and we hope will be useful for those in charge of implementing it. This effort has been an opportunity to look at the process from a viewpoint that emphasizes the spaces and actors linked to its design and implementation. I had fragmented visions of them when I studied them from the schools, where the voices of the “others” that this reform could not fully take into account arise.

Manuel E. Contreras participated in the initial stages of the reform's design, closely followed its early implementation (as a member of various annual review missions working as a consultant for the governments of the Netherlands and Sweden), and wrote on some aspects of the reform. I have taken this as a welcome (and long overdue) occasion to synthesize the last decade of education reform. I do so to chronicle and analyze the Bolivian experience in order to disseminate it and provide a useful input for further reflection on the design, formulation, implementation, and impact of the reform. At the same time, I write this case study in recognition of all those who contributed to make the reform happen over the last decade with the hope that it does merit to the enormity and significance of the task for which they are responsible.

This study is one of a series of case studies of education reform in developing countries during the 1990s commissioned by the Education Reform and Management thematic group of the World Bank. The overall research and the publications were generously supported by a grant from the Netherlands Government through its World Bank Partnership Program. The research was commissioned and guided by Barbara Bruns, assisted by Akanksha A. Marphatia, Amanda Enayati, Julie Wagshal, and Chantal Rigaud.

Acronyms

ADN	Acción Democrática Nacionalista
APG	Asamblea del Pueblo Guaraní
CEPO	Consejo Educativo de Pueblo Originario
COB	Confederación Obrera de Bolivia
CONMERB	Confederación de Maestros Rurales de Bolivia
CTEUB	Confederación de Trabajadores de Educación Urbana de Bolivia
ERL	Education Reform Law of 1994
ETARE	Equipo Técnico de Apoyo a la Reforma Educativa
FUNDESCOLA	Fondo de Fortalecimiento de la Escuela
GDP	Gross Domestic Product
GNP	Gross National Product
GTZ	Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation Agency)
IADB	Inter-American Development Bank
IMF	International Monetary Fund
INS	Instituto Normal Superior
INS-EIB	Instituto Normal Superior de Educacion Intercultural Bilingüe
MEC	Ministry of Education and Culture
MIR	Movimiento de Izquierda Revolucionaria
MNR	Movimiento Nacionalista Revolucionario
NEP	New Economic Policy
PASE	Programa de Apoyo Solidario Escolar
PEI	Proyecto Educativo Indígena
PEIB	Proyecto de Educación Intercultural y Bilingüe
PEN	Proyecto Educativo de Núcleo
PER	Proyecto Educativo de Red
PINS-EIB	Proyecto de Institutos Normales Superiores de Educación Intercultural Bilingüe
PISA	Program for International Student Assessment
PROME	Programa Municipal de Educación
RAFUE	Reglamento de Administración y Funcionamiento de Unidades Educativas
REDUC	Red Latinoamericana de Información y Documentación Educativa
SDI	Social Development Institute
SEDUCA	Servicio Departamental de Educación
SIMECAL	Sistema de Medición y Evaluación de la Calidad de la Educación
TIMSS	Third International Mathematics and Science Study
UDAPSO	Unidad de Análisis de Políticas Sociales
UMSA	Universidad Mayor de San Andrés
UNAS	Unidad De Apoyo y Seguimiento a la Reforma Educativa
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund

Executive Summary

This case study of the Bolivian education reform synthesizes the first decade of the reform's design and implementation process, from 1992 to 2002. It summarizes many recent unpublished reports on the reform and weaves together various partial studies produced in Bolivia and abroad.

The study presents a general background of Bolivia and its socioeconomic and educational characteristics. It traces the reform's background, its formulation process, and the main proposals of the Education Reform Law of 1994 (ERL). It also includes an analysis of the reform implementation and highlights major changes in: teacher training, curriculum development, curriculum and pedagogical implementation, bilingual and intercultural education, institutional reform, teachers' unions, decentralization, achievement testing (SIMECAL), and financing.

Prior to the reform, behaviorism dominated teaching. Instruction was teacher-centered and based on rote learning. Moreover, the teaching culture was not open to experimentation and learning. The reform introduced a constructivist approach centered on students and based on active learning. The Ministry of Education and Culture (MEC) produced learning guides for students and didactic guidelines for teachers. Schools received student and teacher libraries. Simultaneously, the reform introduced bilingual and intercultural education throughout the education system. For the first time in Bolivia, Aymara, Quechua, and Guaraní children were taught in their mother tongues, using textbooks and MEC-produced teaching materials in all three languages. Teacher-training schools were transformed. The MEC invited public and private universities to administer teaching schools. For the first time, teachers were trained in bilingual and intercultural education.

The Popular Participation Law of 1994 initiated decentralization and citizen participation. Parental involvement was achieved through promotion and strengthening of parent-school councils throughout the system's 12,000 schools. Participatory education councils were set up at the municipal and departmental levels, as well as for indigenous peoples. The government decentralized the responsibility for education infrastructure and provision of school supplies to the municipal level.

The current Bolivian education reform was conceived by a taskforce outside the Ministry of Education. The Ministry of Planning established the Technical Support Team of the Education Reform (ETARE). However, since the reform was designed from above, it was not able to fully incorporate teachers' unions. Union response to the reform varies between a radical urban teachers' union that opposes all reform proposals and a moderate rural teachers' union that has been willing to collaborate. Teachers' salaries increased during the decade, and the MEC introduced teacher incentives in 2000.

Contrary to what critics in both Bolivia and abroad expected, the reform strengthened public education. The central government did not abandon education and leave it in the hands of helpless local governments. Education expenditures did not diminish to satisfy fiscal austerity requirements. Instead, educational expenditures increased. The modernization of the MEC, the development and distribution of books, school supplies, and the participation of parents fortified the public education system.

The role of multilateral banks and donors was very important. At the same time, there was constant Bolivian leadership, and by 2002, the degree of local ownership was sufficient to do away with any former perception that multilateral banks and donors imposed the reform.

As in other reforms in Latin America, there is still no conclusive evidence that the reform has improved student learning as measured by achievement tests, but the learning environment in schools under reform has changed significantly. According to one foreign scholar:

[T]eachers in reform schools are open to dialogue ... the learning climate in the classroom is better, relaxed ambience; group teaching and project learning improved the interaction between teachers and students, self generated literacy is growing among students, positive impact on families; gender relations are getting more democratic on the level of teachers and students; teachers respect more the parents and the educational wishes of the community the status of the indigenous languages has increased through their usage as instruction languages, despite some resistance which is normal under similar conditions; and better relations with the community.

The reform has improved the internal efficiency of public primary schools and decreased access differentials between rural and urban areas.

Lessons Learned

Continuity in policy and leadership is critical to achieve lasting results. This is important because changes in education occur over the long term and developing institutional capacity is key. In Bolivia four subsequent governments included education reform on their policy platform. Equally important, there was continuity in the team that designed the reform at ETARE and then implemented it in the MEC. A poignant example of this is the ascent of Amalia Anaya from head of ETARE to Minister of Education, after first having been a director of a unit and then a Vice Minister of Initial, Primary, and Secondary Education at the MEC. This is similar to the experience of Chile and Brazil. In all cases reform efforts were iterative and interactive processes and not blueprints.

There is a need for basic provision of materials in all schools in order for innovation to take hold. The Bolivian education reform provided books, a wide variety of school supplies, pedagogical advisors, school education councils, and to a lesser degree, infrastructural improvement. It also sought to change curricular and pedagogical issues. This was seen more clearly in Brazil (and Chile) where “minimal operational standards” were in place (adequate infrastructure, minimally trained teacher, basic set of material, parental commitment, and a support system).

There is also a need to ensure that basic institutional capacities are developed within the ministries of education. An information system, capabilities for curricular development, and mechanisms for planning and monitoring the education system provide a minimum platform from which to develop and implement the education reform. Bolivia was able to develop an information system and

capacity for curricular development, but is in the process of developing planning mechanisms and has yet to start developing a monitoring system. In the case of Brazil, the centralization and development of educational information was one of the first actions undertaken by Minister Renato Souza.

All levels of education systems have complementary roles to play in a reform. Vertical alignment and articulation between their goals and methods, along with the development of local capacities, are also important determinants of quality local capacity. For system-wide reform, as in the Bolivian case, profound transformation is needed in each classroom and eventually every school. This requires working at several levels:

1. **The macro level or system**, which sets directions, makes the investment, monitors quality, and ensures equity;
2. **The in-between:**
 - a. **The school**, because it is the locus of learning and where the micro and macro dimensions intersect and are integrated;
 - b. **The municipal/district level**, which usually provides support; and
3. **The micro level or classroom** (constructivist and other pedagogical approaches).

If governments and reformers only work at the classroom level (or bottom-up), education systems may have “a thousand points of light” but change will not go to scale. If reformers only work at the macro level (or top-down), they are unlikely to reach the classroom with the deep cultural transformation that is required for sustainability. As shown in the Bolivian case, there has been more systematic development at the macro level. There have also been interventions at the micro level and some in-between. What is still pending are the linkages between the levels.

Going to scale requires creating a learning organization featuring integrative processes, professional networks, and a new style of leadership. Practically all reforms suffer from fragmentation and overload at some point, and Bolivia was no exception. Teachers were overwhelmed. New and more demanding curricula and pedagogy turned their worlds upside down. Incorporating bilingual and intercultural education added further stress and challenged long-held assumptions and values. An exercise such as the school development plan—or the Bolivian variant of the cluster educational plan whereby the staff collectively reviews all the school’s processes, policies, programs, organization, etc. in light of their goals—can serve as an integrating process. Everything that does work or help is kept and reinforced; everything that does not meet the test is discarded. This simultaneously decreases staff isolation, and promotes ownership and priority setting. It increases the institutional capacity to collectively resolve concrete problems of application in a specific context and is a form of professional development. In Bolivia school plans were replaced by cluster plans, but the principles of information sharing remain the same.

Learning requires opportunities to reflect on practice. Given Bolivian teachers’ isolated manner of working, a key challenge is the development of meaningful learning circles with a clear purpose among the teachers. Teachers need to be heard. As pointed out earlier, it is in-practice training that makes initial training sustainable and the major challenge is for “teachers [to] become simulta-

neously and seamlessly inquire oriented, skilled, reflective, and a collaborative professional” (Fullan 1999:326).

In order to develop into a learning organization, the public education system must answer certain questions. How well are we doing? Where and how do we have to improve? These are key for monitoring educational quality and accountability. Therefore the central question is, does the education system have the tools to further improve the pupils’ cognitive outcomes, bearing in mind that it is easier to improve quantitative than qualitative indicators? If not, what should those tools be and how far could they “take” the system in terms of student learning? To what extent is the Bolivian model a Latin American alternative to the standards and assessment model?

The trade-off is not between pedagogy-based reforms versus standards and assessment-based reforms. Rather there is a need for both. The Bolivian case so far is a pedagogy-based reform and, in our opinion, will have to complement this with teaching and learning standards and the mechanisms for measuring them to provide adequate support and enough pressure (in that order) to the education system at all levels to improve student learning.

Introduction

This case study of the Bolivian education reform synthesizes the first decade of the reform's design and implementation process, from 1992 to 2002. It summarizes many recent unpublished reports on the reform and weaves together various partial studies produced in Bolivia and abroad.¹ To complement this endeavor, the authors interviewed reform actors and observers, and carried out focus groups with parents, teachers, and school principals in La Paz. Highlighting the reform's key characteristics, this study seeks to systematize the intricacies of a long and complex process, and compare it to other Latin American reform efforts.

The study is composed of six sections. The first section presents a general background of Bolivia and its socioeconomic and educational characteristics. Section 2 traces the reform's background, its formulation process, and the main proposals of the Education Reform Law of 1994 (ERL). It also discusses examples of successes and failures of other education reform efforts since the 1970s.

Section 3 includes an analysis of the reform implementation and highlights major changes in:

- teacher training,
- curriculum development,
- curriculum and pedagogical implementation,
- bilingual and intercultural education,
- institutional reform,
- teachers' unions and compensation,
- decentralization,
- achievement testing (SIMECAL), and
- financing.

Section 4 assesses the education reform and compares it to other countries in the region. It analyzes the reform's main influences and the reformers' critical reform strategies. Section 5 presents the study's main conclusions, and the final section distills lessons learned from the Bolivian experience that may be useful for other developing countries.

¹ The bibliographic search was restricted to sources in Spanish and English.

Context

Geography and People

Bolivia is a landlocked country which shares borders with Argentina, Chile, Peru, Brazil, and Paraguay. With over eight million people distributed over approximately one million square kilometers, Bolivia has a low population density, especially in rural areas where just over 40 percent of the population lives.² Bolivians are among the most ethnically diverse in Latin America and the Caribbean.³ While Spanish remains the predominant language in public and private transactions, since 1999 the government has also recognized Quechua, Aymara, Guaraní, and over 33 other indigenous languages as official languages. Until the current education reform, Spanish was the only language in which primary school children were taught. It is also the language in which far more written material (newspapers, magazines, and books) are available.

Economy

During the mid-1980s Bolivia suffered from severe hyperinflation. In response the Movimiento Nacionalista Revolucionario (MNR) government developed a drastic stabilization process. The so-called first-generation reforms—pursuing macro-economic equilibrium, liberalizing the economy, and moving toward a market economy—were inaugurated in what came to be known as the New Economic Policy (NEP). During the 1990s the NEP was consolidated, and there was a bold move toward second-generation reforms—redefining the size and role of the state, strengthening institutions, and implementing a more explicit and aggressive social policy. Since 1985 Bolivia has undergone structural reforms covering a wide variety of areas, from new mining codes and banking laws to judicial reform and customs reform, including health reform, decentralization, privatization,⁴ and education reform.⁵

Despite economic stability and low-but-steady growth rates during the 1990s, greater public investment in the social sector (from 10 to 50 percent), and an increase in social expenditure (from 12.3 percent of GDP in 1995 to 16.5 percent in 1999), Bolivia continues to have one of the highest poverty levels in Latin America. Measured by income, 63 percent of Bolivians are poor, significantly above the regional average of 36 percent (Republic of Bolivia 2001). There has been a steady decrease in poverty, measured by unsatisfied basic needs (access to certain goods and services), since the 1970s when poverty dropped

² The population growth rate is 2.74 percent.

³ The population breakdown is as follows: 35 percent are Quechuas; 30 percent *mestizos* (of mixed European and indigenous heritage); 25 percent Aymaras; 5-10 percent European (or descendants of Europeans); and 4 percent indigenous people from the Chaco and Amazon region.

⁴ Known as capitalization in Bolivia.

⁵ For a detailed list with both objectives and achievements, see Annex I of the *Poverty Reduction Strategy*.

from 86 percent in 1976 to 71 percent in 1992, and to 59 percent in 2001. The situation in rural areas, however, is much worse. Not only is the percentage of poor households much greater than in urban areas, but the rate of improvement in the last 25 years has been much slower. Indeed, poverty levels decreased from 98 percent in 1976 to 95 percent in 1992, and to 91 percent in 2001 (INE 2001).

Education

Disparities between urban and rural population are also present in the education system, as illustrated by the illiteracy rates in Table 1. There are also significant gender differentials. Thus while the 2001 illiteracy rate for urban males was 2.5 percent, it was four times greater for urban women (10.1 percent) and 15 times greater for rural women (37.9 percent).

Table 1 Illiteracy Rates in Population 15 Years of Age and Older According to Geographic Area and Gender (1992-2001) (in percentages)						
Geographic area and gender	1992⁽¹⁾	1996⁽²⁾	1997⁽²⁾	1999⁽²⁾	2000⁽²⁾	2001⁽³⁾
Total for Bolivia	20	16.6	15.2	14.8	13.8	13.3
Men	11.8	8.5	8.4	7.5	7.4	6.9
Women	27.7	23.9	21.6	21.7	19.6	19.4
Urban area	8.9	7.2	7	5.3	6.3	6.4
Men	3.8	2.5	2.5	1.7	2.5	2.5
Women	13.5	11.4	11	8.6	9.6	10.1
Rural area	36.5	32.2	29.7	33.8	29	25.8
Men	23.1	18.3	18.1	18.7	16.7	14.4
Women	49.9	45.3	41.5	48.3	41.2	37.9

Source: National Institute of Statistics.

⁽¹⁾ National Population and Housing Census, 1992.

⁽²⁾ Household Surveys: ENE 1, 1996; ENE 3, 1997; ECH MECOVI, 1999-2000.

⁽³⁾ National Population and Housing Census 2001.

Note: Data for 1992 and 2001 only takes into account the population that responded to questions on education in the Population and Housing Census.

Table 2 Comparison of Students Who Reached Satisfactory Levels in Urban and Rural Schools (in percentages)		
Grade	Urban	Rural
3	37.8	25.9
6	19	9.8
8	38.6	15.8

Source: World Bank (1999).

There are also disparities in the academic achievement results between rural and urban schools. According to 1998 national surveys of academic achievement in schools not under reform, academic achievement was consistently higher in urban schools than in rural schools as students progressed from third to eighth grades (see Table 2).

Private-school enrollments account for 8 percent of total primary-school enrollments (Reimers 2000). Based on their lower dropout and repetition rates, and national surveys of academic achievement, private schools provide higher quality education (Psacharopoulos, Arieira, and Mattison 1997). While 11 percent of children in third and sixth grade have an academic achievement defined as “at risk” in private schools, almost half of all public-school children fit this criterion. Sixty percent of private-school children attained a satisfactory level, compared to only 20 percent of public-school children (World Bank 1999). Because of these marked differences, pre-reform 1990 and 1992 household surveys reveal “a remarkable willingness of households in Bolivia to pay for private education for their children” (Psacharopoulos, Arieira, and Mattison 1997:395). Public education was considered an inferior good; as soon as parents had enough resources, they moved their children from public to private education.

As shown in Annex 1, Bolivia lagged behind other Latin American and Caribbean countries in illiteracy, and primary-school gross and net enrollment rates.

Government

Since 1982 Bolivia has been governed by democratic regimes, with peaceful government transitions resulting from fair elections. The last four administrations (since 1985) have been committed to the current education reform and have implemented it with varying degrees of enthusiasm and effectiveness. The significant continuity of those in authority positions is noteworthy and has helped promote the education-reform team’s effectiveness and permanence.

The Siles Suazo Administration (1982-1985), composed of a coalition of leftist (Communist Party) and center-left parties (among them, the Movimiento de Izquierda Revolucionaria or MIR), was the country’s first democratic government since 1969. There was a great deal of political unrest and severe hyperinflation during this period. Unable to establish governance, Siles Suazo called for elections before his four-year constitutional term was over.

Siles Suazo was succeeded by the Paz Estenssoro Administration (1985-1989) of the traditional Movimiento Nacionalista Revolucionario. Estenssoro, in his fourth term as President of Bolivia, succeeded in reducing inflation and developed a new economic policy that liberalized the economy. Toward the end of the Estenssoro Administration, Enrique Ipiña, the Minister of Education, developed the first government-led education reform proposal.

Jaime Paz Zamora from the MIR, in alliance with the rightist Acción Democrática Nacionalista (ADN), succeeded Estenssoro. The MIR had campaigned with a proposal for greater social policy (after structural adjustment). During the Paz Zamora Administration (1989-1993), the Equipo Técnico de Apoyo a la Reforma Educativa, also known as ETARE, began to design the current reform under the leadership of Amalia Anaya. The reform proposal was completed before the government ended.

Having campaigned with education reform as one of three main election issues, Gonzalo Sánchez de Lozada, from the MNR, succeeded Paz Zamora. The Sánchez de Lozada Administration (1993-1997) passed the 1994 Education Reform Law and began its implementation. Enrique Ipiña, the administration's first secretary of education,⁶ with the collaboration of Anaya for a short period, led the reform's implementation.

The next government was led by retired army general Hugo Banzer Suarez from ADN (1997-2000). Anaya, who had been recruited as education adviser by Vice President Jorge Quiroga, served as the administration's vice minister of initial, primary, and secondary education until 2000 when Banzer Suarez resigned due to severe illness. Vice President Quiroga succeeded Banzer Suarez as president in 2001, and Anaya was promoted to Minister of Education.

In August 2002 Sánchez de Lozada, in alliance with the MIR, returned to government. Once again, the government has affirmed its commitment to continue the education reform.

⁶ Sanchez de Lozada reformed the organization of the executive. He set up three main ministries (human development, economic development, and sustainable development), under which the traditional sectoral ministries were converted to secretariats. During the Sanchez de Lozada Administration, there were three secretaries of education.

Past Education Reform Efforts and Formulation of the Current Reform

The crisis and need for reform in Bolivian education are not new. Since the 1970s there have been numerous studies and partial (non system-wide) efforts—all with limited success—to overcome the sector's main problems. Through three decades, there was no single entity with either viable proposals or the political strength to carry out needed reforms. There was a lack of capacity to tackle the key structural issues of a very weak MEC, an outdated curriculum, very low levels of teacher competence and training, or to confront the strength of the teachers' unions.

The 1970s and early 1980s were marked by a hodge-podge of education interventions without central coordination or long-term plans (Berry 1970). Bolivians criticized the lack of practical opportunities and the system's monolithic and homogenizing character (Comisión Episcopal de Educación 1979). They felt that public education only served the dominant minority.

In 1973 the government undertook a major sector assessment in cooperation with UNESCO. Its main recommendations were to develop a series of long-term plans, which included administrative decentralization and the merging of rural and urban education. As it was not possible to increase the 3.16 percent share of GDP allocated to education, policymakers focused instead on how best to distribute available resources.

The World Bank (1983:39) summarized the tragic state of education in Bolivia as follows:

Despite sizeable budgetary allocations to education, no significant improvements in access and quality have occurred. Some of the reasons for the low productivity of expenditures have been the following:

- a. Until recently, two subsystems, one for rural and one for urban education existed side by side—both with heavily over centralized inefficient administrations in La Paz.
- b. Dropout and repeat rates are high because children are taught in Spanish and not their native language, because they are malnourished and often cannot walk the long distances to get to a school and because they are taught an irrelevant and overly academic curriculum which bears little relation to future employment.
- c. Most of the expenditures go to salaries of untrained teachers. Few funds are available for expansion of the system and quality improvements such as distribution of learning materials or teacher supervision.

In part to overcome this situation, the Bolivian government and the World Bank developed an education project in the late 1970s. The project had primary and community education and vocational-training components. The objectives of the former were to focus on the Aymara-speaking region by

searching for cost-effective ways to: (a) increase access to education through expansion and improvement of basic and intermediate schools; (b) develop appropriate curricula, learning materials, and teacher-training programs; and (c) design a community education project for the non school-age population. The project sought to make better use of primary facilities and teachers, and to reorganize primary-school administration and supervision (World Bank 1977).

Ten years later, having disbursed only \$10.6 million of the \$15 million loan amount, the World Bank concluded the project. The project had achieved its objective of expanding and strengthening basic education by implementing its infrastructure components. However, it took 9.5 years instead of the planned four, in large part because of “staff inexperience” and large administrative turnover.⁷ The project was hindered by the Bolivian political and economic crises of the mid-1980s, which decreased public-sector professional continuity and limited the government’s ability to comply with counterpart funding requirements. The project was less successful in meeting its objectives of developing curricula and training teachers; appraisers criticized project achievements as being “disappointingly limited” (World Bank 1988:26).

The education sector suffered from a weak institutional capacity to develop policies and implement projects. Due to high turnover, the MEC’s administration of the sector was highly centralized and run almost exclusively by teachers. The government in office appointed only the minister and undersecretaries. Appointment of other executive-level positions, such as the director general of education, required the consent of the teachers’ union leadership. Unions limited reform efforts at odds with their agenda. This severely restricted policy options.

In 1986 President Paz Estenssoro presented a new General Education Law to Congress. Teachers’ unions and popular organizations opposed the proposal, claiming it intended to privatize education through decentralization. The government capitulated by setting the proposal aside and refocusing its efforts on macro-economic stabilization.

At the end of the MNR government, there were two other major education reform proposals (the *Libro Blanco* and the *Libro Rosado*) advanced by Enrique Ipiña at the MEC. The proposals included unification of rural and urban education, decentralization of education, and introduction of curricular changes to develop a more reflexive and critical individual. Teachers’ unions and the labor movement generally saw these efforts as challenging the *conquistas* (hard-won benefits) of the 1955 Education Code and as an expedient way to adapt the education sector to the new economic policy of the government (Martinez 1988).

By the 1990s, the World Bank (1993:v) summarized the underlying problems of Bolivian education as follows:

The poor coverage and quality ... stem partly from relatively low levels of spending on education overall during several decades (averaging 2.7 percent of GDP between 1986

⁷ Thirteen ministers of education and 18 project-implementing unit directors served during the project.

and 1991).⁸ Several other factors are also important in explaining its failings: (a) alienation and exclusion of primary beneficiaries—children, their parents, and the society as a whole—from participating in the decision making process and from the right to scrutinize operations and results; (b) weak administration of the system; (c) inappropriate and inefficient management of sector financing, including insufficient allocation of resources to primary education; (d) various barriers to access and obstacles to educational attainment, including materials, inadequate teacher training, inattention to the needs of non Spanish-speaking populations, and deficient infrastructure, which particularly affect girls and rural populations.

It was under these conditions that the current education reform was designed and implemented.

Origins of the Education Reform Law of 1994

The current Bolivian education reform has several unique characteristics, one of which is that it was conceived by a taskforce outside the Ministry of Education.

In 1990 the Ministry of Education and Ministry of Planning approached the World Bank for a loan to develop an education project to provide resources for infrastructure and school supplies. The Bank's identification mission found that the MEC's proposed project was not viable, and that because of the sector's structural problems, an integrated approach was necessary.

The MEC agreed to set up a taskforce to develop an education-sector reform proposal. The World Bank allocated project funding and waited for such a team to be established. The ministries' ambivalence about convening a taskforce threatened the project. In 1991 the Ministry of Planning intervened by establishing a taskforce—ETARE—to be housed within the Ministry of Planning (Anaya 1996 and Constance Corbett Interview 2003).

ETARE was initially run by a well-known journalist with no education experience and little knowledge of education reforms. He worked under the assumption that ETARE's function was to produce diagnostic studies and certain broad proposals (Corbett Personal Communication 2003). The initial structural adjustment strategy was developed during this phase (see Box 1).

In 1992 with the involvement of Samuel Doria Medina, the new Minister of Planning, and his team in the Social Policy Analysis Unit (UDAPSO), ETARE developed an education reform proposal. Doria Medina recruited Amalia Anaya to head the education reform taskforce. Anaya had been the Undersecretary for Social Policy in the Ministry of Planning and had initially negotiated the World Bank's funding of ETARE. "ETARE really got off the ground when Amalia came. Two years later, the education reform law was passed. A miracle!" (Corbett Interview 2003).

⁸ This was in large part due to a structural adjustment that severely reduced government spending.

Box 1. A View from the World Bank Task Manager (1991-1996)

Development of the proposal: It was gradual, iterative, and incremental.

There were some initial ideas about how to get started, but the process was very slow. In 1991, there was little public debate about education reform. While many people recognized that public education in Bolivia was in crisis, many expressed a sense of helplessness and skepticism that **anything** would happen to really correct the problems. So at first, there was little resonance in society in general of the ideas that were put forward. In this context it seemed more realistic to set up a new policy framework that then would allow the system to begin regenerating itself and reforming itself. More than that seemed over ambitious at first. As the team began to grow and more people came in there was more—and richer, more varied—input, broader and more complete ideas ... The education reform could not be and ultimately wasn't, happily, something that came from somebody's desk. It had to emerge from the contribution of many participants with many different backgrounds, interests and areas of expertise ... Ideas came from various places and ended up being incorporated. Ultimately, the final proposal really was ... a meld of many contributions.

First strategy: Initially there was great skepticism in the World Bank about whether anything serious could be done in education in Bolivia, mirroring the skepticism in Bolivia itself. In the Bank, this skepticism stemmed from its experience with earlier unsuccessful attempts to support education reform in Bolivia through traditional projects, and there was doubt within the Bank about whether the Government was really committed to addressing fundamental problems underlying the crisis in education. A traditional "bricks-and-mortar" kind of project would not fly. In addition ... administrative capacity in Government was weak generally, and specially weak in education. To garner support within the Bank for the preparation phase, we had to propose a project that would seriously address underlying problems while not overtaxing the limited administrative and implementation capacity—a delicate balance to strike! In addition, the Ministry of Planning expressed strong interest in obtaining financing to support education reform in a form similar to that provided under Structural Adjustment Loans (disbursed in tranches against agreed action benchmarks). At the outset, the Ministry of Planning's commitment and direct involvement in the reform process was seen to be key, both as an indication of Government commitment in general and to offset the perceived weakness of the MEC in carrying out the needed actions. With all of these factors in mind the initial proposal for Bank support focused on the larger strategic, policy issues, and I called it the Structural Adjustment Loan for Education Reform.

Bilingual education: Was there skepticism? Yes. Some of it arose simply from doubt about what was meant by bilingual education. What were the specific proposed interventions? It sounded to a lot of people in the World Bank and other donors (IADB and bilateral donors) as if it was a romantic notion that the indigenous languages should be celebrated and preserved. A number of critics had experience with and views on bilingual education. I needed to know clearly what was being proposed how it was supposed to work, what results were expected, and whether there were concrete clear ideas how it was going to work and were there any results from anywhere. I would not say I was a hard sell. I needed to be able to sell every idea in the Program within the World Bank. **That was a hard sell!** If I had to really get people to give more and more arguments that was why, I needed to have ammunition.

Perception and support in the World Bank: My Division Chief was interested. So too was the Director and Regional Vice president for Latin America. But they were very skeptical. They bought in, but took a risk. Everything hinged on passing of the ERL. The loan could not go to Board presentation until the law was passed ... Support? Well, in the sense that they approved sending it forward. But I think they still remained quite skeptical. I think they had been given confidence by [Secretary of Human Development] Enrique Ipiña and President Sanchez de Lozada ... The fact that the Project, the whole thing had kind of jelled and that the Law was approved was a surprise, to say the least. They were very shocked. But it was still a big gamble because there was a lot that was promised and they had personally gambled with the Board and, yes, they were interested and yes, it was very high profile.

Source: Corbett Interview (2003).
Emphasis in the original.

The MEC lacked the human resources to carry out the reform and was simply not interested in assuming reform responsibilities because doing so meant clashing with the unions. In addition, the control teachers' unions had in naming MEC authorities hampered reform efforts involving teacher training and hiring. Given this conflict of interest, it was clear that the Bolivian education system required an overhaul not only in pedagogical terms, but also through modernization of the MEC. ETARE's politically pluralistic and multidisciplinary team, comprised predominantly of highly qualified Bolivian experts and assisted by external consultants, received World Bank financial support and technical assistance. Developing the reform proposal was a gradual process (see Box 1).

Although ETARE worked in close coordination with the Minister of Planning, it often faced considerable opposition from key political actors. The Paz Zamora Administration was not fully supportive of ETARE and the Ministry of Planning's full-scale reform proposals. And while the Minister of Finance supported ETARE's proposal, the Minister of Labor did not, fearing resistance from teachers' unions and potential social unrest (Berríos Gosálvez 1995). Moreover, each of the three successive Ministers of Education resented that ETARE and the funds it managed were not under their authority. They often placed substantial obstacles in ETARE's path by undermining its position papers and restricting its access to key information. For example, in October 1992 while the ETARE leader was presenting his education reform proposals to a group of donors with the full support of the Ministers of Planning and Finance, the MEC set in motion a parallel reform design mechanism. The MEC called a Pedagogical Congress whose mandate was to design an education reform and establish an implementation strategy. In the 1970s and 80s, Pedagogical Congresses—meetings made up exclusively of teachers and education authorities—had proposed broad education strategies in Bolivia. In light of the 1990 Jomtien Education for All Conference, the 1992 Pedagogical Congress incorporated representatives from other organizations such as the Armed Forces, various unions, and the Catholic Church. Half of the 700 participants hailed from teachers' unions.

There were several disagreements between ETARE and the World Bank. The new ETARE leadership wanted to shift the reform focus away from administrative and institutional issues and toward curricular and pedagogical changes. There was also a divergence about the pertinence and manner of introducing bilingual education (Anaya 1996; see Box 1). By mid-1993 discrepancies with the World Bank were worked out, and ETARE's reform proposal was ready. Among the main analyses underlying the proposal was a census of teachers and schools conducted to ascertain the actual size and related administrative needs of the sector and to develop projections of both initial and recurrent cost implications of the proposed reforms. ETARE began negotiations with the Ministry of Finance to mobilize support for the significant domestic resource commitment necessary for the comprehensive reform proposal.

The reform mandate proposed to place education at the service of students. It considered the expansion and improvement of schooling as a means to further regional and national development. In the long term, the reform sought changes in four main areas:

- **Coverage** would be increased throughout Bolivia (as opposed to just in certain privileged areas).
- **Quality** was important, and it was expressed in terms of education's social, cultural, and linguistic relevance.

- **Equity** referred to a leveling of access opportunities to the same quality of education for both men and women, rural and urban areas, and Spanish- and vernacular-language speakers.
- **Efficiency** would be sought in the use of resources, whose assignment had to bear a direct relationship to national development priorities.

The new education policy also proposed to recover “the main function of the education system which is to foster teaching and learning,” to redefine the education system structure starting with the classroom, and to revalue “the social function of the teacher” (ETARE 1993:35).

Table 3 Comparison of the National Education Congress and Education Reform Law Proposals	
National Education Congress	Education Reform Law
<p>Roots of the Education Crisis Ethnocentric colonialist penetration Absence of a national policy</p>	<p>Motives Inefficiency of the system Almost absolute control of the teachers' unions Weak administration of the system Weak local capacity</p>
<p>Foundations Education is a fundamental right It is obligatory in the whole system It is an instrument to help the national liberation process</p>	<p>Foundations Education is universal, free in all public establishments, and obligatory in the primary level</p>
<p>Purpose Construct a democratic, pluralistic, socialist state born from the roots of our cultural and historical roots</p>	<p>Purpose Develop capacities and competencies</p>
<p>Objectives Strengthen the integral consciousness of class, culture, gender, and region for the defense of identity, national sovereignty, and the self-determination of the Bolivian people</p>	<p>Objectives Situate Bolivian education at the level necessary to meet the challenges of change in the country and the world</p>
<p>Organizational Proposal The National Education Congress to serve as the maximum deliberative and decisionmaking level of Bolivian education</p>	<p>Organizational Proposal The National Education Congress to be convened every five years, its recommendations and conclusions constituting recommendations for the development of education</p>

Source: Barral Zegarra (2002:159).
Emphasis in the original.

In August 1993 the Sanchez de Lozada Administration assumed power, following a campaign promise to carry out second-generation reforms, including privatization/capitalization of state enterprises, decentralization to allow greater community participation in government, and education reform. Cárdenas, the new vice president, was an educator, a former ETARE consultant, and the first Aymara ever to reach high public office.⁹ Both president and vice president were strongly committed to implementation of the ETARE reform proposal, much of which had been incorporated in the new government's political platform.

The president assigned first priority to the Popular Participation Law, passed in April 1994, which created new municipalities and transferred 20 percent of national taxes to them on a per-capita basis. The law transferred schools to the newly created municipalities, which then became responsible for school infrastructure, maintenance, and supplies. Parent-led school councils were established to oversee school development and teacher attendance and performance. Teacher hiring and pay, however, remained under the aegis of the central government.

In accordance with a 1992 Pedagogical Congress recommendation, in 1993 at the end of the Paz Zamora Administration the MEC created the National Education Council, with wide corporate participation of teachers, parents, the Catholic Church, and universities. The subsequent Sanchez de Lozada Administration requested the MEC to reach consensus with the National Education Council. However, the council's proposals significantly diverged from ETARE's (see Table 3). Upon receipt of the council's suggestions, the president exclaimed, "I am asked to present an education reform law that changes nothing." He decided to present to Congress a proposal incorporating only minor modifications to the original ETARE proposal. The ensuing congressional debates about the reform, including its introduction of bilingual education, were often heated. Nevertheless, with the government enjoying a majority in Congress, the law passed on July 7, 1994.

The comprehensive reform package, to be implemented over seven years, encompassed:

- **Grade structure:** Changing the education system from grades 1-5 (basic education), 6-8 (intermediate education), and 9-12 (middle education) to eight compulsory years of primary school and four years of secondary school. The law divided primary schools for children 6-13 years old into three cycles. The first cycle (three years) focused on basic learning; the second cycle (three years) on essential learning; and the third cycle (two years) on applied learning.
- **Teaching profession:** Expanding access to teaching positions from solely those who held a teacher-training school degree to all professionals with four-year university degrees. All prospective teachers would have to pass a competency test. This effectively eliminated the historic monopoly normal-school graduates held within the teaching community. The ERL also excluded teachers' unions from participating in the selection of education authorities such as ministry unit directors.
- **Teacher training:** Reforming the 26 teacher-training schools, many of which operated very inefficiently with few students and often-irrelevant curricula; and for in-service training, establishing new pedagogical advisors to introduce reforms into schools and train teachers on site.

⁹ The new secretary of education had also served as an ETARE consultant.

- **Pedagogy:** Adopting a constructivist, student-centered approach focused on interactive learning, in sharp contrast to the traditional emphasis on frontal teaching and rote learning (“talk and chalk”) in which students passively received knowledge from teachers.
- **Curriculum:** Revamping the whole curriculum and providing teacher guides and new student textbooks; designing, testing, publishing, and distributing both guides and textbooks.
- **Bilingual education:** As a national policy, building on previous pilot projects to first teach non Spanish-speaking children to read and write in their mother tongue (Aymara, Quechua or Guaraní) before transitioning them to Spanish; training teachers in this methodology and developing new teaching materials.¹⁰
- **Institutional development:** Streamlining and professionalizing the MEC, introducing civil service positions to attract and retain well-qualified social scientists and managers; developing an education management information system.
- **Testing:** Developing a testing center and the relevant tests to measure both student learning, and teacher training and professional development (i.e., exams for promotions and school principals).
- **Citizen participation and decentralization:** Achieving greater parent involvement through promoting and strengthening parent-school councils throughout the system’s 12,000 schools. Participatory education councils were set up at the municipal and departmental level, as well as for indigenous populations. The responsibility for education infrastructure and provision of school supplies was decentralized to the municipal level.

¹⁰ Though most rural teachers spoke local languages, they had not been trained to teach in them.

Reform Implementation

Table 4 presents a general overview of the reform's implementation in those areas that can be more readily quantified. The reform involved a wide variety of activities, each operating at its own pace. Human resources were scarce, and the MEC had little institutional experience in many critical areas such as, for example, designing textbooks or training teacher trainers in new classroom methodologies. Organizational demands on the ministry were severe, and they taxed the MEC, which was itself undergoing modifications.

Significant changes in initial teacher training began in 1995—the year after the law passed—through reform of teacher training schools. These reforms took more than five years to be completed. Similarly, there was no formal incentive scheme incorporated into teacher compensation packages until 2001. On the other hand, by 1998, four years after Congress passed the ERL, over half of the country's primary schools had at least one grade under reform.

Initial implementation was carried out under a hostile teachers' union environment and with less political support than in the period 1998-2002. As a result, it was in this second period that there is a marked improvement in disbursements, from an average of \$15 million per year for the period 1995-1998 to an average annual disbursement of \$48.7 million for the period 1999-2001.

The reform was a “complex enterprise that does not have precedents in the Bolivian public sector” (Secretaría Nacional de Educación 1996). Therefore its execution (covering both pedagogical and administrative aspects) required “extraordinary management skills and faculties” (Schulz-Hesiss 1996). In the last eight years the MEC has been able to set up a cadre of professional teams who have strengthened its institutional capacity to unprecedented levels.

The following sections examine nine key reform areas.

Table 4
Implementation of the Education Reform

	1995	1996	1997	1998	1999	2000	2001	2002
Pedagogical advisors								
Trained	500	314	-	474	-	296		
In service		491	716		1,022			1,578
Estimate of schools under reform (cumulative)		2,268	5,520				12,214	12,958
Distribution of books for school libraries		6 million books mostly int'l authors	2 million books Bolivian authors					
Teacher training schools (INS Higher Teaching Institute)		Institutional self evaluations	7 normal schools transformed into INS		1 pedagogical university & 16 INS ⁽¹⁾			
School boards (cumulative)		2,100	11,081				11,500	
Teacher transfers per year					54,000	7,000		
Transfer of schools' infrastructure to municipalities		February-August						
SIMECAL testing (number of tests administered)			First 3 for baseline	4	9	7	12	
Number of class days		139	141	150	200	200	200	
Disbursements (in \$ millions)	15	18	14	13	32	55	59	
Incentive schemes								
Poor rural areas (teachers)							22,000	23,286
Bilingual education (teachers)							4,617	
School management (schools)							1,100	
Completion of 200 days of class (teachers and administrators)							104,493	

Source: Ministerio de Desarrollo Humano (1997); Viceministerio de Educación Inicial Primaria y Secundaria (2001; 2001a).

⁽¹⁾ With a new common curriculum.

Teacher Training

Teacher-training institutions, also known as normal schools, had been in a profound crisis years before the 1994 Education Reform Law. The period between 1930 and 1947 was considered a golden period because there was a genuine effort to free education from all political and religious influence. There was a struggle to establish a single nondenominational public school system.¹¹ However, the influence of political parties and teachers' unions on education policy increased markedly after the 1950s. Post-1964 reforms in teacher-training schools were not initiated by the "heirs of the golden years of teachers." Rather, these reforms tended to focus on controlling teachers' and students' political and union participation.

The 1964 Teacher-Training Reform

The 1955 education reform had not tackled teacher-training issues, nor had it expanded pedagogical reforms (Chavez 1992). The 1964 reform was the first of its kind in normal schools since the schools' establishment at the beginning of the twentieth century. Reform advocates felt that normal schools were an anachronism, and the reform sought to make normal schools relevant in the context of national changes.

The MEC carried out the reform with teachers' participation, and it tackled issues aimed at "deepening the educational process and the pedagogical reform." The main issues addressed were: untrained teachers or *interinos*, academic education structures, and normal schools' study plans. The Higher Institute of Pedagogy, created by the reform, was assigned the task of compiling statistics relating to teachers with teaching degrees, normal-school graduates, secondary-school teachers, *interinos*, and the progression of graduates from teacher-training schools from 1960-1966.

The reform created the initial education section in normal schools in La Paz, Santa Cruz, and Beni. It set up a department for the professionalization of *interinos* and established a high school diploma requirement for normal schools. It also decreased the number of professional training years from four to three. The reform eliminated some humanities subjects and instead introduced pedagogical ones. The number of pedagogical classes increased as students advanced to higher years in order to prepare students for teaching practice.

Years of military governments deepened normal schools' crisis, and these schools have not found the transformation process begun in 1994 easy.

The 1968-69 and 1975 Reforms

The 1964 disruption of the democratic process by General René Barrientos impeded the implementation of the previous teacher-training reform plan. In 1969 President Barrientos passed a law introducing changes to the number of primary and secondary study years. These changes were later incorpo-

¹¹ Political parties' interference in the Ministry of Education and teachers' unions explains many of the education sector's problems. While this topic is beyond the scope of this study, it requires further research.

rated into President Banzer's 1975 education law, which set up a dual structure by separating normal-school administrative functions from technical ones. The law created two separate and uncoordinated turfs that distorted the schools' institutional life. The new structure opened employment positions for party members, making it common to find names linked to the political parties in power or union leadership on normal-school payrolls. At the same time, normal schools represented perhaps the sole opportunity for social advancement for young people from the provinces and rural areas where the majority of the normal schools are situated (Rojas 1998 and Luykx 1999).

This was the period when behaviorism entered Bolivian education (Pimentel 1993 and Yapu 2002). Teachers were trained to formulate learning objectives by separating education from its context (Rojas 1998). The 1976 plans and programs were the basis for teacher development in normal schools. This was also the period in which new normal schools were founded based on political criteria unrelated to educational needs.¹²

The Crisis of the 1980s

During the 1980s, normal schools suffered from intellectual stagnation. The inheritance of *normalismo*¹³ had been forgotten, and the teacher-development system distinguished between urban and rural teachers without integrating them into one system. Despite the fact that the number of normal schools had increased to 27, the number of *interinos* had not decreased. Proposals called for incorporation of teacher training into the higher education system (universities) (Via Reque 1993), but these proposals were strongly opposed by the union leadership who used the normal schools as a place to end their careers, before retiring as teachers. In 1990 the urban teachers' union (CTEUB) stated:

The curriculum at the normal schools as a whole has demonstrated that it does not form agents capable of planning and managing education in a developing society and that they cannot elaborate the new methods and techniques necessary to renovate didactic in Bolivian schools ... It is carried out with traditional objectives and a routine manner of operation where the dominant criteria is that the teachers' principal task is to transmit knowledge and dictate lessons. The methodology comes down to verbal exposition and dictation and it forces students to copying, to description, to reproducing, to memorization (CTEUB 1990, cited by Pimentel 1993:29).

The Transformation of Normal Schools

Although reform efforts focused on normal schools one month after the 1994 law passed, change was slow and difficult, precisely because of the schools' characteristics and autonomy. Normal schools had established practices far removed from the teaching and learning processes, which in turn were articulated with local and regional interests.

¹² From 1964 to 1976, six normal schools were founded, two of which bore the name of René Barrientos—one in Caracollo and another in Tarata (Rojas 1998).

¹³ This tradition dated back to the first teacher-training institute, founded in 1909 in Sucre. It was based on the ideal that teachers should not only be trained to transmit knowledge, but should also be bearers of great moral virtues: a cult towards truth, defense of liberty, love for danger and the environment. Thus, a teacher had to be a model of a cultivated person with an ample humanist education (Yapu 2002).

The ERL categorized initial teacher training with higher education issues (Chapter IV, Article 15), as it sought to convert normal schools into Higher Normal Institutes (INS). INS can associate themselves with universities so that their graduates may obtain an academic university degree equivalent to an associate's degree after three years in the INS. This increased the status of a teaching degree and opened the door for teachers to enter university and continue their studies to obtain a bachelor's degree.¹⁴

Normal schools' transformation into INS was a participatory process that lasted five years. The MEC requested normal schools to develop their own institutional analyses and propose how best to modernize. During this process, future teachers were formed under three different curricular plans: the old 1991 plan that was used until 1996; the first version of the new curriculum developed in 1997, following many workshops and proposals held in 1995 and 1996; and the curriculum developed in 1999 and used since March 2000. The 1999 curriculum restructures many aspects of the 1997 curriculum that were theoretically too complex.

The transformation took place in four stages (Rojas 1998 and Nucinkis 2000). In the first stage, there was an effort for normal schools to convert into INS via self-evaluations that could lead to the preparation of Institutional Academic Projects. Although the process was very participatory, the results were of no practical use. There were severe institutional weaknesses in the normal schools, and no transformation took place.

The MEC tried a new strategy in the second stage. An MEC commission suggested that 11 of the 23 normal schools analyzed transform into INS, in some cases fusing two normal schools from the same department into one. There was opposition, and the INS did not comply with their own institutional and curricular projects and instead kept and reinforced their own administrations and their separate institutional structures. In 1997 the ministry, in cooperation with GTZ, the German development agency, created the Program for Higher Normal Institutes for Intercultural and Bilingual Education (PINS-EIB) to help the formation of bilingual teachers in the Aymara and Quechua regions with an intercultural focus in INS.¹⁵

The third stage began in 1998. The PINS-EIB was expanded to seven INS. A diagnosis revealed that: (1) national policies and strategies for teacher training were still lacking; (2) there were no common norms, rules or statutes; and (3) there was no INS or normal-school diagnostic to determine teacher requirements in the national education system.

The fourth and final stage covered the period 1999 to 2002. At the start of 1999, the MEC selected 11 INS to become part of the National System of Teacher Training and converted the INS in Sucre, the first normal school founded in 1909, into a pedagogical university. In order to link INS to universities and so comply with the spirit of the ERL, but also because nothing else had really worked in trans-

¹⁴ However the INS were not formally associated with universities until 2000. Meanwhile, there were many courses offered by different universities so that teachers could obtain their bachelor's degrees.

¹⁵ The PINS-EIB project is in its second phase and concludes in December 2004 (Luis Enrique Lopez Personal Communication 2003).

forming initial teacher training, the MEC invited 16 universities to administer the INS. Eleven universities presented proposals and eight universities (four public and four private) were selected by the MEC to assume responsibility for administering 11 INS. The MEC took over the remaining six.¹⁶ This move ended the traditional autonomy of normal schools and INS, and incorporated universities into the teacher-training realm for the first time. It also meant that the ministry had to administer six INS, trading its formerly passive role for an active one in which it had no prior experience. The contracts sought to improve the quality of teacher training and its status by linking it to the university system. They also intended to improve administrative efficiency and rationalize enrollments in accordance with regional and national needs as well as each institution's capacity.

An external evaluation of this process in 2002 showed important positive changes in the INS. The teaching and learning processes had improved, both because there were better teachers and because the student intake was better. The number of INS applicants soared, and universities and the ministry raised admissions standards (Concha 2002). The new curriculum—established in 1999—was more pertinent to the plans and programs being implemented in the schools. Using this curriculum, the first teachers fully educated under the new reform guidelines graduated from the INS in 2002, eight years after the government passed the ERL and seven years after the reform had reached the classrooms. By 2002, for the first time in Bolivian history, the bilingual normal schools (PINS-EIB) had graduated over 4,000 teachers competent to teach under the new bilingual and intercultural modalities (Luis Enrique López Personal Communication 2003).

Curricular design was a key aspect of this process. Since 1996 the ministry had promoted the participatory elaboration of initial teacher-training curricula through workshops in which INS representatives participated. These workshops were led by high-level international consultants. The final result was the 1997 basic curricular design based on four major areas: national reality and education, pedagogy, curricular development, and educational management. Crosscutting areas included research, social interaction, professional practice, and diversity management.

Rojas (1998) points out that despite great economic efforts, the basic curriculum was not implemented mainly because of teachers' lack knowledge about the curricula and lack of ministry support for follow-up and training. Institutional components were also lacking. The same old normal-school teachers could not make the changes themselves. This is why in 1998 rules changes modified the INS admissions criteria for both professors and students.

Based on experience gained while implementing the 1997 curriculum and INS demands and proposals, the MEC set out to restructure the 1997 curriculum. The ministry developed a new curriculum for the formation of primary-school teachers in 1999 and for initial-education teachers in 2000. The main changes include more free time for the INS to determine their own contents and the introduction of practice teaching starting in the first year. The intercultural component was strengthened when it was introduced into each area and when the INS were directed to make precise adjustments. There were

¹⁶ The original 23 normal schools evolved into 17 INS. Some normal schools merged, others converted into technical-training institutes, and yet others continued as normal schools, such as the one in Riberalta. This bold move required much political determination by the then-Minister of Education, Tito Hoz de Vila.

similar teaching orientations for monolingual and bilingual modules. Overall, the reform proposals entail a more structured basic teacher-training curriculum for INS to build on (Nucinkis 2002).

Curriculum Development

Curriculum development is a politically and socially conditioned project. In practice, multiple actors mediate the curriculum's cultural option. Teachers are the ones who ultimately select what they consider pertinent among the options and possibilities that the curriculum design offers, according to the characteristics of their students, the institutional conditions in which they work, and their own training and worldview. A curricular change like the one proposed by the education reform is a difficult and complex process because what we are really proposing is cultural change. It implies a simultaneous process of building new knowledge and critically reviewing old knowledge (Rockwell and Mercado 1986; Mercado 1991, 1994, and 2002; Rockwell 1996; Talavera 1992, 1994, and 1999).

Bolivia's pre-1994 approach to curriculum, known as pedagogy by objectives, was strongly influenced by behaviorism (i.e., seeking changes in student behavior) (Gimeno 1995). This was the primary methodology used by teachers trained before the current reform. While the current reform is gradually displacing this pedagogy with constructivism, over thirty years of experience under a behaviorist model has forged school practices and traditions that are not easily changed.

The programs replaced by the current reform were virtual copies of the 1976 methods, with only minor modifications relating to education objectives used by authoritarian governments to inculcate their citizens.

Two periods are particularly pertinent: the 1968-69 reform and the 1973 passage of the Bolivian Education Law (Martinez 1988). It is in these periods of military rule that pedagogy by objectives entered the curricular conception and the programs that the current reform targets.

The old programs contained directions about education's objectives, as well as general guidance for their application. These programs made explicit the objectives of each subject and grade. They also offered very detailed model plans that, in turn, shaped teacher practice. Interviewed teachers stated that sequencing was one of their greatest assets. The teaching process was arranged so that one only had to apply and enrich some activities to adapt them to student characteristics. That order provided teachers with a sense of security in their class teaching.

The MEC reissued the 1976 programs in 1988 and 1992 with some modifications. The programs refer to the teacher's responsibility over student learning, indicating explicitly that learning results depend on the teacher's personality and professionalism. Because the programs were so detailed, teachers grew accustomed to making very few modifications. These old programs required very little initiative on the part of the teacher and clash with current curricular orientations that require teachers' enterprise (see Table 5).

The 1994 reform mandates responded to decades-long demands for change by both teachers' union leadership and the MEC (Martinez 1988). The 1970 and 1973 Pedagogical Congresses and MEC

diagnostic studies since the 1980s showed that education was not working well. Despite this, teachers' unions and the MEC were unable to agree on reform methods. Ultimately, the reform proposal came from a group of education specialists who, without teachers' participation, created a proposal outside the auspices of the MEC. This was contrary to established tradition.

Table 5 Comparison of Old and New Curriculum				
Curriculum	Contents	Pedagogical Approach	Cultural Approach	Resources
Old	Isolated subjects <ul style="list-style-type: none"> •Language •Mathematics •Natural sciences •Social sciences •Physical education •Music •Arts •Crafts •Religion 	<ul style="list-style-type: none"> •Based on behaviorism •Monolingual (Spanish) •Based on repetition and memorization •Transfer of contents •Frontal methodology •Teacher centered 	<ul style="list-style-type: none"> •Civilizational or monocultural •No regard for cultural identities or mother tongue •Assimilation of all into one culture 	<ul style="list-style-type: none"> •Primacy of textbooks that define classroom work •Few and often outdated classroom materials (e.g., maps, illustrative charts)
New	Subjects organized and integrated into areas <ul style="list-style-type: none"> •Mathematics •Languages and communication •Life sciences •Technology and practical knowledge •Expression and creativity •Religion, ethics, and morality •Physical ed. Transversal themes integrated into curricular areas <ul style="list-style-type: none"> •Environment •Democracy •Gender •Health and sexuality 	<ul style="list-style-type: none"> •Based on constructivism •Directed to the attainment of basic learning needs and attention to cultural, linguistic, and individual diversity •Both monolingual and bilingual modalities •Construction of knowledge and values •Student centered •Based on students' direct experiences with others and on active class participation 	<ul style="list-style-type: none"> •Intercultural •Respects and incorporates students' cultural identities and mother tongues 	<ul style="list-style-type: none"> •Didactic resources: up-to-date, varied, and pertinent to different cultures and ages in each curricular area and cross-cutting themes •Student and teacher libraries •Didactic teachers' guides •Student learning modules •Charts and maps •Sports equipment •Audio and video equipment

Source: Based on the sources used in this study and contributions from Carmen Urioste and Nicole Nucinkis (personal communication 2003).

ETARE developed the documents that formed the basis of the ERL and the curricular proposal that underpins it. It systematized proposals from previous social movements and made them more detailed and precise. It also sponsored studies to elicit particular aspects that required further research and systematized best practices in a variety of Bolivian schools (Nucinkis Interview 2003). ETARE circulated the documents it produced among education specialists and presented them to teachers once they were finished. These documents underwent a process of validation where preliminary versions were circulated, comments were received, and final versions incorporated the suggestions. The MEC followed a similar procedure when the curriculum was designed and the implementation process was begun in the first schools in 1996. There was no national consultation process to acquaint teachers as a group with the new proposals or provide them with opportunities to make suggestions.

Surprisingly, the religious studies' curriculum design deviated from this pattern. The Catholic Church proposed the subject area's technical personnel and contents (Anaya Interview 2003). There were no discussions in schools, either in the design or implementation stage. The reform arrived from above. This closed attitude toward teachers and other education actors and interested parties generated tensions that persist.

Yet the MEC made efforts to inform teachers. Once the government approved the regulatory decrees in February 1995, they were widely disseminated. In August the MEC circulated the new studies program. Moreover, the MEC established *El Maestro*, a teachers' magazine that circulated haphazardly from 1994 to 2002 in editions of 100,000 units. A more specific publication, *Jeroatas*, dealt with specific pedagogic topics and circulated from 1996 to 1999. Both publications explained the reform's new curricular approach and proposed institutional changes.

The curricular proposal and all other key documents also circulated in national newspapers. The *New Education Plans of the Education Reform* and the *Pedagogical Organization*—which contain the essence of the curricular proposal—were widely disseminated in 1995. Simultaneously the MEC's curricular unit published the teacher guides for: language and communication (1997), mathematics (1998), life sciences, and technology and life sciences (1999), and expression and creativity (1997). The teacher guides were for the first primary cycle (grades 1-3). The second-cycle guides (grades 4-6) were completed by 1999, and the third-cycle guides (grades 7-8) are still pending. The curricular unit simultaneously prepared the student-learning modules. Through the written press, teachers were informed of innovations proposed by the ministry's curriculum design and implementation personnel. The new curriculum design recognized Bolivian cultural and linguistic differences made explicit by the new August 1994 Constitution. Assuming an intercultural and participatory approach, the curriculum design sought to address the country's heterogeneous learning needs.

The curricular design consisted of a core that promoted the development of common competencies¹⁷ in all Bolivian children and of diversified fields that would incorporate the knowledge, abilities, and

¹⁷ "Competencies are the knowledge, capacities, and abilities that integrated allow social performance. The reform seeks to achieve: learning that permits being, doing, learning to live together and to continue learning. It takes the challenge of learning to live in a complex society" (Nuevos Programas de Estudio 1995:8).

skills pertinent to the regional and local contexts where they live (see Table 5). To define these competencies, ETARE and the MEC sponsored nine studies of basic learning needs in different cultural and linguistic regions. Bolivian research teams carried out these studies, published in 2002 and 2003.¹⁸

Teachers would develop competencies using learning modules which first began circulating in 1996. The diversified curriculum was left in the hands of teachers who would develop them in light of local and regional realities, and so develop the competencies necessary for students to value their ethnic, cultural, and linguistic realities (Secretaría Nacional de Educación 1995).

In 1998 the technical team that led the reform changed orientation in both its institutional and curricular policies. Between 1998 and 1999 the team followed a document entitled *Planification and Evaluation of the Primary Level*, but later decided to undertake one curricular design for the entire primary level and another for each of the three primary cycles, as teachers required more orientation. *Curricular Design*, a document so far unpublished but circulated among pedagogical advisors, teachers, and school principals provides overarching guidelines as well as specific direction corresponding to the primary-level areas of language and communication (for the first and second languages), mathematics, life sciences, technology and practical knowledge, expression and creativity, physical education, and Catholic education, ethics, and morals. The first and second cycles include competencies, evaluation indicators, and contents and contexts of social relevance to be worked into each cycle. As of April 2003 the MEC had not published the final versions of these documents, but had circulated them as preliminary working papers (Nogales 2002).

Curriculum and materials development required a constant learning process for the curriculum team, private-and public-school teachers, pedagogues, and other professionals who participated in the learning modules' design, field-testing, and elaboration. Initially the MEC produced the modules. Once a significant number of first-cycle modules were completed, the ministry decided to outsource their preparation. An international tender was opened, and both foreign and Bolivian firms participated. In late 2002 the production of the learning modules was outsourced to two Spanish editors whose staff were 80 percent Bolivian (Nucinkis Interview 2003). In contrast with many tenders for textbook acquisition in other countries, Bolivia produced completely new textbooks rather than adapt existing prototypes¹⁹ (Urioste and Nucinkis 2003, and López Personal Communication 2003). Despite these advances, producing teaching materials remains complex, and there are still key structural problems to overcome.²⁰

¹⁸ For a critical overview of this process in the Guaraní area, see Gustafson (2002).

¹⁹ Like Mexico and Peru.

²⁰ According to von Gleich Personal Communication (2003): "It cannot be expected that a limited number of local and international consultants within the Ministry of Education can cope with this task and conclude it in some years. The production, revision, and improvement of teaching materials are a permanent task and have to respond to the respective social and economic changes and challenges. What is missing in Bolivia is an independent, but financially well-equipped, interdisciplinary pedagogic research and editing taskforce institute for the production of bilingual intercultural teaching materials to continue the excellent pioneer work started within the Ministry of Education."

The new curricular design updated teaching approaches by adopting more modern learning theories. The assimilation of a constructivist perspective requires teachers to learn to observe children more and to concentrate on learning activities, rather than just completing teaching programs. A constructivist approach challenges teachers to consider children's experiences in order to assess their development levels and basic learning needs. It requires working with many groups simultaneously in a single classroom. It also demands proficiency with the novelties of the core curriculum and undertaking necessary curricular adjustments. It involves many simultaneous changes that teachers are coming to terms with little by little.

The MEC has produced vast amounts of new and novel materials in the reform process that just completed its first phase (1994-2000) and started its second phase (2001-2006). According to an official report, massive numbers of materials were produced for the curricular reform. Twenty-four didactic guides were printed in runs of 60,000 each. Approximately 8 million learning modules were produced with up-to-date and pertinent content in various languages and cultures (Spanish, Aymara, Quechua, and Guaraní) (Urioste 2003). In creating these materials, the MEC trained a significant group of professionals, many of whom now work on other education projects.

The curricular proposal was created in an iterative process of design, pilot testing, re-design, implementation, evaluation, and re-design. Thus, the design team's critical challenge was bringing the proposal to the classroom level. This was a very complex process. In retrospect the design team recognizes that in its first years, the reform was "counting on a teacher that we did not have, because we did not train him" (Nucinkis Interview 2003). This illustrates well the key importance of teacher training, which only began in 2000.²¹

The new curricular proposal turned "the world upside down" for teachers because it changed many of their established school practices and fundamental conceptions. Seeking to integrate the culture of the indigenous majority to the dominant *mestizo* culture that governs Bolivia, the new curricular orientations served as a shock to an educational establishment built over forty years. The bilingual, intercultural, and participatory aspects of the reform were shocks to actors accustomed only to salary debates. Moreover, teachers were unprepared for curricular decisions since their initial training and professional practice oriented them only toward copying and repetition. They had not fully developed their creative and innovative capacities.

Curriculum and Pedagogical Implementation

A major concern for all stakeholders was the reform's ability to reach and affect classrooms at the grassroots level. This is perhaps the least known and understood aspect of the current reform. This section addresses:

- Curriculum and pedagogical implementation;
- Changes in students in the classrooms; and
- Changes in teachers, students, and parents.

²¹ Some basic initial guidelines had been provided since 1997.

ETARE devised a two-pronged reform implementation strategy that was carried out by the MEC. Under the *improvement* program, which sought to address short-term problems in all schools, all 12,000 initial and primary-level schools were to receive new books, teacher guides, and equipment (e.g., reproduction, typing, and library equipment, tape recorders, etc.). The program's objective was to improve learning conditions in schools that were not yet operating under the reform's curricular and pedagogical proposals. On the other hand, through the *transformation* program, classrooms in a small number of schools were subject to the full curricular and pedagogical reform proposals.

The transformation program was implemented gradually. In 1996 in its first year, the MEC selected a small number of schools, initiating the reform in the first grade. In 1997 the reform advanced to the second grade in participating schools, and the MEC selected a new set of schools where the reform initiated in the first grade. This process continued year-by-year, advancing one grade each year in schools already under transformation, with new schools initiating reform in their respective first grades (see Table 3). Through this mechanism all schools were expected to be under reform by 2002.

For the reform to reach schools, it was necessary to select, purchase, and distribute new books for school libraries. This was accomplished mostly in 1995 and 1996. For the first time ever the MEC reviewed over 5,000 foreign reference and literature books, and children's storybooks. Approximately 500 books were chosen by a panel, and 6 million books were distributed to 13,000 libraries. Approximately 1.5 million of the 6 million books were by Bolivian authors, selected through competitions. In a second competition in 1997, an independent jury selected books by both established and new authors as part of the 2 million books distributed in that year. This process stimulated Bolivian authors, especially children's book writers, who for the first time were receiving state sponsorship (Leonard 1998). These competitions also stimulated the production of creative books. The MEC selected an additional 200 books to be published in four languages in both bilingual and monolingual editions.

At the same time, pedagogical materials were prepared in the form of learning modules and teachers' guides. Pedagogical advisors were enlisted to spearhead the reform by providing in-service teacher training to help teachers incorporate the reform's curricular and pedagogical proposals in their daily practices. Pedagogical advisors were generally former teachers, selected under a competitive process and trained for four months. The MEC and an NGO carried out the first training course. Universities undertook subsequent training courses. As shown in Table 3, this was one of the reform's first activities, and it continued over the entire reform period. By 2002, 1,578 pedagogical advisors were trained. "The first groups were teachers in their fifties with a very established practice which they themselves could not change. By the third course, the maximum age changed to 45, but that still meant they had 25 years of classroom experience" (Villarreal Interview 2002). Training was provided in four areas: institutional management, curriculum and pedagogy, intercultural and bilingual education, and teacher training. Despite modifications in the training, there was general dissatisfaction with how it was undertaken. Many agreed that the training was too theoretical and could have benefited from more practical classroom experience (Mengoia Panclas et al. 2002).

Each pedagogical advisor divided his time between a *núcleo* of about six schools. However pedagogical advisors had problems integrating into the schools, partly due to their line of authority. Initially

advisors were to answer to the *núcleo* directors, but as these were not yet appointed, they reported to and became dependent on the MEC. The ministry became the advisors' point of reference, as it was the ministry that hired them and ultimately supervised them. As the pedagogical advisors arrived in the first-grade classrooms of schools under reform, they were often sabotaged by school principals who felt threatened by them.

According to the person responsible for the advisors' in-service training from 1999 to 2002:

Teachers expected to be taught by pedagogical advisors. But that was not the idea. They were intended to be facilitators of learning processes of teams of teachers. However, as the pedagogical advisor had the school principal against him, it was difficult for him to enter the school. Moreover, teachers had no time for training. In their assigned hours, there is no training time and once they finish their classes they are eager to leave, either to go to work elsewhere, go home, and walk for hours. In any case, they did not like it (Villarreal 2002).

From another critical perspective, it was the advisors' attitudes that was perceived as inadequate:

Pedagogical advisors are in a role similar to 'missionaries.' They did not go to learn the experiences of the communities; they went to teach the pedagogical recipes of the education reform. Their task was not to create a theoretical, methodological, educational construct starting from practice, but instead to take the educational doctrine to the schools. National and international consultants had already defined that ... There were many questions raised on the formation of pedagogical advisors, one of them was that they should learn before they teach (Barral Zegarra 2001:173).

For their part, pedagogical advisors were promoting change in a very traditional and risk-averse environment where the norm was traditional teacher-centered pedagogy with knowledge being transferred from the teacher to the student. The advisors found that teachers tended to work in isolation, and to show fear and mistrust (Menogoa Panclas et al. 2002). The reform involved student-centered activity-based learning where knowledge was constructed from the social, ethnic, and geographical contexts of the students. This required critical reflection on past practices, and group sharing and learning (i.e., curiosity and humility).²² In hindsight the advisors were asking the teachers for a major change without fully acknowledging the loss this represented.

This was made even more evident by the way the reform reached the classrooms. The reform usually assumed it was starting from zero—*tabula rasa*. There was no recognition of the experience and knowledge teachers already had. Although this issue had been highlighted by the 1996 annual review, it was apparently ignored. The concrete recommendation was for pedagogical advisors to be "more flexible to interpret the needs of teachers and help them transit more effectively from what they already know and

²² On the importance of teaching culture as opposed to the teacher's culture, see Stigler and Hiebert (1999:103) who state that "teaching is not a simple skill but rather a complex cultural activity that is highly determined by beliefs and habits that work partly outside the realm of consciousness."

practice (their 'tradition') to what was being proposed by the transformation program" (Ministerio de Desarrollo Humano 1996).

The above situation was compounded by the fact that the curriculum—which was very complex—was a “work in progress.” The full design was not ready when the first, second or even third cohort of pedagogical advisors were trained. Despite re-training, the advisors received it piecemeal.

One year they were taught how to use the rear view mirror, the next year they were told how to use the gear shift, and the following one trained how to use the steering wheel, the next year how to use the pedals. However, they were sent off to drive the car after their first training. [Not surprisingly,] pedagogical advisors have not been able to assemble all the parts of the curriculum (Villarreal 2002).

If pedagogical advisors were one of three elements used to introduce the reform in classrooms, learning modules and teachers' didactic guides were the others. Ideally all three should have worked in tandem and with close coordination for full impact (Armando Godinez Interview 2003). Reality proved more complex. There was great pressure for the reform to reach classrooms quickly, and in 1996 pedagogical advisors arrived in classrooms with no didactic materials (Aguilar Interview 2003). Learning modules were late,²³ and didactic guides took longer to be developed and were the last to reach teachers. By then distributing teaching modules to teachers was not enough. Learning modules are student activity books that complement the teacher's work and are intended to replace the traditional content-based textbooks. The first challenge was to help teachers understand this difference and learn to use the learning modules effectively.

The new reform components' introduction in the school system was gradual and depended on a variety of factors, including support from school principals, pedagogical advisors' individual competence and commitment, and teachers' willingness to change. Between 1999 and 2000 the MEC analyzed reform implementation in the classroom by hiring a team of supervisors whose main task was to evaluate reform in 85 municipalities. Table 6 summarizes their findings regarding four key reform components. In over half the municipalities, over 60 percent of district schools had made the required changes. Of the four strategies, working in groups by levels encountered the most resistance.

Table 7 provides a more in-depth look at the degree of pedagogical and curricular proposals. As reported by Talavera (1999) and more recently by Mengoa Panclas et al. (2002), teachers did not make a sudden and complete break with their past to fully embrace all reform proposals. Rather, they incorporated reform gradually and used them in conjunction with traditional textbooks and the teaching methods to which they were accustomed. Table 7 gauges the extent and manner of the modules' use. In one extreme, 2 percent of schools did not use the learning modules at all. In another the manner of use ran a wide gamut. Forty percent of schools had opted for using the learning modules alongside traditional textbooks. Less than one in five schools (only 14 percent) applied the learning modules as intended.

²³ One of the reform's main implementation problems was logistical shortcomings in materials distribution. This was highlighted in the 1996 annual review which concluded: “The distribution of modules and didactic guides is very inefficient and apparently a great majority of schools had not received these materials” (Ministerio de Desarrollo Humano 1996).

Later evaluations of reform implementation confirm gradual use. In a study of 24 schools under reform, Mengoa Panclas et al. (2002) report that just over half the teachers indicated that they used a constructivist approach. The remaining half were almost evenly split, with one-quarter using a mixed approach and the other quarter declining to specify. Only a small fraction of teachers had fully comprehended the learning modules' use. Most saw them as activity books to develop creative games with children—a potential waste of time.

Table 6 Survey of 85 Municipalities in Which Schools Incorporated Required Classroom Changes (1999-2000) (percentage of schools in district)				
	Less than 20%	20-40%	40-60%	60-100%
Reading corners	4	22	13	61
Classroom libraries	2	15	24	55
Students' work displayed in classrooms	7	16	18	57
Working in groups by levels	13	15	13	59

Source: Viceministerio de Educación Inicial, Primaria y Secundaria (2000).

Table 7 Frequency and Manner of Use of Learning Modules in Schools Surveyed in 85 Municipalities (1999-2000)	
Frequency of Learning Modules' Use	<ul style="list-style-type: none"> ·2% no use ·10% occasionally ·21% in combination with traditional texts ·67% permanently and continuously, though not exclusively
Manner of Learning Module Use in Schools Using Them	<ul style="list-style-type: none"> ·20% do not use them in a systematic way; only use them occasionally. Traditional textbooks prevail. ·22% use them to develop activities, but do not evaluate learning. ·40% use them in combination with other texts with a 50/50 time distribution. ·14% use them according to manner proposed by education reform.

Source: Viceministerio de Educación Inicial, Primaria y Secundaria (2000).

Not all the reform's implementation was dependent on the timely provision of well-trained and motivated pedagogical advisors. The story of Mercedes recounts one such case among many of principals leading their colleagues to understand and embrace the reform (see Box 2).

Box 2. Mercedes' Teachers

Mercedes has over 30 years of teaching experience, most of it in a public school in a working-class neighborhood in La Paz. She was one of the school's founders when she was a teacher. As the school's principal, she has focused on school improvement. She has worked with parents and fought abusive neighbors who wanted to invade school property and take over some of its land. Among the many improvements she made in the school's infrastructure is having obtained financing for the kindergarten by recruiting support from a group of Bolivian folklore musicians. Mercedes is an exemplary school principal whose work has already been documented by previous studies (Balderrama 1982; Avalos 1992; Talavera 1999).

Mercedes always points out that she had started reforming her school well before the education reform law was passed in 1994 by trying to guide the work of teachers in her school. However when the reform arrived, she had a very good excuse to continue promoting in-service teacher training. To stimulate teachers, she awarded prizes and organized meetings in her house to celebrate milestones. The prizes were generally books given to her by authors who were her friends. Teachers did not like to receive these books as prizes, and said, instead, that they were being "punished!"

Because the reform brought many novelties at once, they had to read more and they did so individually and in teams. Every teacher had to make a presentation on a topic. Sometimes they read about planning according to reform proposals and at other times about evaluating learning. In order to help teachers understand how to introduce crosscutting themes and other innovations that the reform proposes, Mercedes bought them books with a small school fund. Mercedes bought many books and photocopied them. These materials helped teachers' readings. After years of effort, her teachers now have a better category in the teacher pay structures (*escalafón*) because when the MEC offers exams they overcome them with ease and move up the ranks and receive better pay. Some are now part-time trainers of other teachers. Their services are even required by school principals from private schools.

Teachers from Mercedes' school no longer see reading as a punishment. They now appreciate the benefits reading has brought them, not only because it has allowed them to improve their income, but more importantly because it has had a major impact on the quality of their work.

Students at the school do crafts that are sent to Germany and receive money from this activity. With these resources, the school also maintains a daycare and school-feeding program that is open all day and is located on school grounds.

Changes in Students

The second annual review of more than 30 reform schools around the country found:

[T]he teaching imparted in the classroom is active, relevant, and visibly interesting for the students. The principals and teachers expressed without reserves that students behave more inquisitively, more openly and creatively ... this active methodology has an inductive effect in the rest of the courses—not yet included in this first stage of the reform—which are progressively assimilating it ... having spoken with teachers, principals, authorities, and parents, they all said that there are notorious changes in the children and

that their level of communication, their participation in class work, and their enthusiasm for school have all increased. In the same way, we observed enthusiasm of teachers in their work, and development of initiatives different to those offered by the reform and oriented toward active and participatory learning in the children (Ministerio de Desarrollo Humano 1996).

Gradual modifications have taken place in thousands of classrooms all over the country, confirmed by report after report from those visiting reform classrooms (Newman Interview 2003; Siebes Interview 2003). They are further borne out by reports from teachers themselves,²⁴ other researchers,²⁵ and the focus group study carried out for this report.

Changes in the Education System

Focus groups of school principals, teachers, and parents with children in public schools under reform in the city of La Paz undertaken for this study in March 2003 (ProActiva 2003) revealed that the education reform has had significant positive effects on the daily lives of all groups. The reform has enhanced the exercise of citizenship through the promotion of new values in the classrooms and schools.

School teachers and principals recognized that before the reform, learning was divorced from the daily reality of children. Teachers were the center of the education process and recalled borrowing teaching notes from colleagues for the different grades to which they were assigned and repeating these notes year after year. There was no need to modify content or process in light of changes in the student body or the external environment. Teachers and principals now recognize they are now preparing students "for life and not just for the ABC." Teachers feel they are "learning to learn and therefore to teach better." The *módulos* have provided a great variety of activities, and education is more diverse due to crosscutting themes such as gender, democracy, and the environment.

Changes in student evaluations, from the use of terminal quantitative grades only to a more comprehensive qualitative and process-orientated evaluation, have helped students improve their self-esteem. According to teachers, the previous system stigmatized children, and teachers were prone to reward success and punish failure only. Now they help students with learning difficulties to overcome them.

²⁴ See, for example, the Cochabamba daily, *Opinión*, 10 April 1999, where a Director of the Angel Salazar School reported that her school was working under the reform since 1997 and that "children who work under the reform have more initiative, are more creative, more open, and are not as shy as children who are not working under the reform."

²⁵ The German scholar and bilingual and intercultural education expert reports the following qualitative reform results: "Teachers in reform schools are open to dialogue; teachers feel safer and proud to be teachers; the learning climate in the classroom is better, relaxed ambience; group teaching and project learning improved the interaction between teachers and students, self-generated literacy is growing among students, positive impact on families; gender relations are getting more democratic on the level of teachers and students; teachers respect more the parents and the educational wishes of the community and the status of the indigenous languages has increased through their usage as instruction languages, despite some resistance which is normal under similar conditions; and better relations with the community."

Another major area of change is discipline. Previously “the stick symbolized discipline,” and corporal punishment and verbal abuse were rampant. The emphasis was on control. There are now other strategies that promote “self discipline,” and there is greater freedom in the classroom. Teachers note, “I now no longer use the ruler, and I am sensitive to student’s feelings,” and “Now children develop their own rules and sanctions.” Parents find that their children are no longer afraid of teachers and are more self-confident.

All the above changes, but perhaps especially the new system of evaluation which initially baffled parents, brought them closer to the school and caused them to participate more in their children’s school experience. The new method of teaching reading, which takes longer for students to learn but enables them to have an improved comprehension of what they read, also brought parents closer to the school. Parents further report that their children are going to public libraries more and using new materials (such as newspapers) more than before because homework has changed. They perceive a greater need for student research, which often requires family members to help students and so become even more involved. Schools have set up timetables for teacher-parent conferences.

What does all this mean for children? Parents in the focus group confirmed what other observers have stated since 1996: Children demonstrate greater self-confidence and are more expressive, articulate, and inquisitive. Other observations included: “They are now freer to speak about sexuality;” “They like to engage their minds in things that require concentration and mental agility such as crossword puzzles;” “They no longer fear certain subjects, such as math;” “Because of how they sit, in round tables and interact as groups, and are no longer in lines and rows, they share more with their friends;” and “They are more cooperative.”

The reform also brought about a clear gender and cultural shift. According to parents, the reform’s new materials seriously questioned the classic gender stereotyping of household roles. They reported, for example, that their sons enjoyed cooking classes and were baking at home. Parents saw this as a new employment possibility for boys! On the other hand, other parents were concerned that their sons were being required to learn how to sew. All parents recognized that boys were more sensitive to the gender roles and mothers reported their sons’ previously unheard of interest in helping out in household chores. Many pointed out that the children’s new behavior at home was teaching parents and that parents, who had been raised in a different environment, had a lot of catching up to do. Some parents requested orientation from schools to help meet these new challenges. Unfortunately public schools have no such services yet. Some parents even reported feeling frightened by their children’s new extroverted behavior.

These results are even more dramatic considering that the reform did not reach urban schools in La Paz until 2000 and only took place over a two-year period. More qualitative focus groups of teachers’ and parents’ perceptions of change brought on by the reform are needed. But there is no reason to believe that the La Paz experience is an exception. Rather, similar changes are expected in schools under reform for a longer period of time (such as in rural areas) and in different cities and cultural environments. These changes should be systematically documented in order to evaluate the reform’s significant qualitative changes.

Similarly the MEC needs to develop a methodical and comprehensive way of evaluating how much of the new curriculum and pedagogy is actually implemented in each school. The information we have reported suggests various inclinations, but is not sufficiently detailed to help determine the degree to which teachers throughout the country implement the new proposals in their classrooms. In order to gauge change, it is key to understand that innovation is multidimensional. Change must occur at least at three levels:

- The use of new *materials* (instructional resources such as curriculum materials),
- The use of new *teaching approaches* (teaching strategies or activities), and
- The alteration of *beliefs* (“pedagogical assumptions and theories underlying particular new policies or programs”) (Fullan 1991:37).

Clearly this study has presented observations only for the first two. All three dimensions are necessary for change to be sustainable and affect outcome.

Bilingual and Intercultural Education

The reform’s introduction of bilingual and intercultural education was a bold new step. The limitations of teaching in Spanish in rural areas had been noted since the 1960s (Comitas 1969; World Bank 1983 & 1988). In addition many, including the rural teachers’ union in 1984, the COB in 1989, and the Peasant’s Labor Organization in the early 1990s, had long demanded that the education system acknowledge the country’s linguistic and cultural diversity. In response, in 1990 UNICEF initiated the Proyecto de Educación Intercultural Bilingue (PEIB), which built on pilot experiences from donor-funded projects in the 1970s and 80s in Bolivia and Latin America.

Bilingual education was also perceived by ETARE and subsequent MEC authorities as a way to improve the internal efficiency of primary education and advance system equity. PEIB studies had shown that indigenous students taught in their mother tongue were more proficient than students from control schools in language and mathematics (after second grade) and, to a lesser extent, in life sciences. In addition students from PEIB schools exposed to intercultural and bilingual education possessed a significantly higher self-esteem, although the general socio-affective climate in the PEIB schools was lower than expected (Hyltenstam and Quick 1996). Bilingual and intercultural education advocates felt bilingual education had the potential of playing “a role of utmost importance in changing aspects such as internalized racism deeply rooted in this stratified society” (Biermayr-Jenzano 2001:141).

Based on PEIB’s experience, the reform introduced bilingual and intercultural education to populations who speak Aymara, Quechua, and Guaraní in their households. The core of the MEC’s new bilingual and intercultural professionals were made up of PEIB technical staff. This meant that technical personnel in the departments had to move to the central office in La Paz, leaving rural areas without specialized staff.²⁶ The reformers opted to implement the PEIB model as it existed at the

²⁶ In 1996 Swedish experts, who strongly recommended that the PEIB be kept as a project, criticized the use of this model on a wide scale in the reform before it was fully evaluated (Hyltenstam and Quick 1996).

time. They effectively went to scale, but given the slow implementation process, there was no massive application of the PEIB model as such.

The introduction of bilingual education presented significant challenges in developing appropriate educational materials and training teachers.²⁷ A shortage of trained teachers was the major stumbling block identified in 1996. The reform efforts needed teachers capable of incorporating an intercultural approach to their practice, competent in teaching in both languages, and knowledgeable in how to organize the interaction of both languages. Pedagogical advisors could not transfer these skills unless they were trained in a significantly different manner than that contemplated at the time (Hyltenstam and Quick 1996). This did not occur, and it turned out to be one of the reform's major downfalls.

To overcome, in part, the limitation of bilingual teachers, decrease the number of *interinos* in rural areas, and promote female teachers in rural areas, the reform built upon educational experiences such as the *bachillerato pedagógico* (see Box 3) developed in Cochabamba and expanded this model to other regions. There were also efforts in 2001 and 2002 to train over 10,000 educators (including teachers, pedagogical advisors, and teachers from the INS) in reading and text production in indigenous languages (López Personal Communication 2003). Should these efforts, together with the 4,000 teachers trained in the PINS-EIB project mentioned earlier, prove successful, the tide should start to turn.

At the pedagogical level there were problems in implementing bilingual programs because, when reinforcing the indigenous group's mother tongue (as a first language or L1), the process of teaching Spanish (as a second language or L2) has not received equal treatment. Teachers acknowledge that they have had trouble with methodological aspects, which become more complex when trying to master both methodologies (Biermayr-Jenzano 2001:154).²⁸ According to Albó (2002), teaching Spanish as a second language has only been given serious attention since 2000.

Additionally it has proven difficult to implement this aspect of the reform in certain regions due to parental opposition. Bilingual education started in many schools with only textbooks in Aymara, Quechua or Guaraní. Books for teaching Spanish as a second language were not ready for almost four years and so, effectively, students were just being taught in one language (Archondo 1999). This confirmed parents' preexisting suspicion that their children were not going to be taught Spanish and therefore would be excluded from the development process.

The MEC also failed in a timely fashion to inform parents about the bilingual education process. Not surprisingly they reacted negatively.²⁹ This was more common in the Aymara and Quechua areas. In

²⁷ For a more detailed discussion of the reform's bilingual proposal, see Anaya and López (1993) and Comboni and Juárez (2000). On the origins of the proposal, see López (1994) and for the wider comparative perspective, see López and Kuper (2000) and Hornberger (2000).

²⁸ In 1996 this issue was noted as being one of PEIB's weaknesses (Hyltenstam and Quick 1996).

²⁹ This issue was foreseen in the reform's design, and there was an explicit strategy to address it: "The cornerstone of successful bilingual education programs is parental support ... Under the education reform, the bilingual program will be discussed in school councils prior to its introduction" (World Bank 1994:50-51).

the lowlands there was greater coordination and acceptance of Guaraní in part due to the revival and advocacy of Guaraní culture by the Assembly of the Guaraní People (APG) who had been working with NGOs and UNICEF in intercultural and bilingual education since the late 1980s. The APG was quick to coordinate with ETARE and MEC officials (Gustafson 2002).

Box 3. Bachillerato Pedagógico (Pedagogical High School)

This modality for training Quechua women to become teachers or, more specifically, *maestras de pollera* (female teachers with indigenous dress), dates to 1994 and was originally developed in Mizque, Cochabamba, by CEDEAGRO, an NGO. Under the initial scheme single women (ages 15 to 22) who had dropped out of school were chosen by their community to attend a boarding school where they were trained. After four years of schooling they left with a pedagogical high school diploma that certified them to teach children ages 3 to 9 in Quechua and Spanish rural communities. The Ministry of Education formally legitimized the degree in 1999. The experience was selected by an international jury as one of the most successful Bolivian experiences to reduce poverty in 1998 under a World Bank and UNDP joint effort to identify alliances for poverty reduction.

The first 22 *Bachilleres pedagógicas* graduated in 1996 and started to work in their communities. Enrollment in 2000 reached 111 students from 56 different communities in the departments of Cochabamba, Oruro, Potosí, La Paz, and Santa Cruz. The effort is funded by in-kind support from the Municipality of Mizque, the Ministry of Education who covers teachers' salaries, Church funds from Italy, and a donation from the international community (Spain).

The offered curriculum follows the guiding principle of the education reform through the bilingual approach and integrates three areas:

1. A leveling process to the high school level (math, language, and science);
2. Teacher training (politics, education, pedagogy, pedagogical practices, and subjects to strengthen collective memory and traditions); and
3. Practical training (arts and crafts, sewing, baking, etc.) The two transversal axes of the curriculum are intercultural education and gender.

Based on the Mizque experience, three other *bachilleratos pedagógicos* were established in 1997 to attend people of diverse ethnicities. The centers are in the Chaco and Amazonia:

1. Tumichicua in Beni
2. San Ignacio de Moxos, also in Beni department
3. San Antonio de Lomerio in Santa Cruz department.

By 1999 these centers had graduated more than 100 students. Graduates must work for two years in the rural area and later on may continue their training in the INS.

Source: Biermayr-Jenzano (2001) and Montaña and Valenzuela (1998).

Urban elites do not fully understand the use of bilingual education as a vehicle for obtaining more and better learning from indigenous students.³⁰ This is a reflection of dominant thinking in many key political (Congress) and authoritative (prefectures and municipalities) bodies that are vital to providing resources for the advancement of bilingual education. This makes the development and implementation of bilingual and intercultural education much harder.

³⁰ See, for example, the discussion in *La Razón* in June 2000 regarding the usefulness of teaching in Aimara, Quechua, and Guaraní in a globalized economy (Brockmann 2000; Echalar 2000 & Cárdenas 2000).

In 2000, 2,037 schools or 18.8 percent of rural schools were bilingual—up from the 114 schools that offered bilingual education a decade before (López 1994). In the urban areas, only 10 out of 3,140 schools were bilingual. The approach has been more one of bilingual education than of intercultural education. Indeed according to Biermayr-Jenzano (2001:207), “under the educational reform program, people are encouraged to hold on to their identity through a systematic effort to provide bilingual education but other than that, the intercultural element is much diluted and not in place.”

Intercultural education implies awareness of others’ worldview and culture. It seeks to diminish the hegemonic stance of the predominant culture (Spanish, in the case of Bolivia) in relation to other cultures (e.g., Aymara, Quechua, and Guaraní, among others). This complex task exceeds the realm of schools alone—or even the education sector alone. Without a strong commitment countrywide to develop and implement intercultural policies, schools alone can accomplish little. Social structures outside the school must also be modified to fully accommodate an intercultural approach. Moreover, culture is not only embodied in language, but in other forms of expression as well. Dress, music, and textiles, other manifestations of culture, have been unaffected by the reform (Biermayr-Jenzano Interview 2003).

From a different, though complementary perspective, Albó (2002) distinguishes between the cognitive skills developed in bilingual education in different languages and the attitude changes from one culture to another that are the real challenges of intercultural education. There have been advances at the cognitive level, with shortcomings persisting in the attitudinal realm.

Despite intercultural and bilingual education’s shortcomings: “The current education reform is undoubtedly the most comprehensive effort to date to break with the civilizatory project that defined the destruction of indigenous identity as one of the school’s central objectives (Luykx 1999:41).” In the opinion of a German specialist, the Bolivian curricular reform in bilingual and intercultural education is “considerably the most advanced in all the Andean countries” (Kuper 1999:80-81, cited in Albó 2002:18). One novel development was the creation of the educational councils of indigenous peoples (CEPOs), which have played a key role in helping indigenous peoples to participate in the reform process. Despite all efforts, by 2001 only 12 percent of primary-school children were under this modality while about 60 percent of the Bolivian population were non Spanish-speaking (Lopez Personal Communication 2003).

Institutional Reform: Strengthening the Ministry of Education

The education reform significantly changed the MEC. In the early 1990s the ministry had severe limitations as follows (Gutierrez 2003):

- It did not provide adequate administrative support to schools. Its main activity was to resolve salary and union issues.
- There were insufficient qualified personnel and specialized technical and administrative staff. The MEC employed predominantly teachers, regardless of whether the task-at-hand required educa-

tors, administrators, or financial, accounting or even computer experts. The hierarchical positions required the approval of the teachers' unions. The Minister of Education presented shortlists of candidates from which the unions chose.

- All system operations and decisions were concentrated almost exclusively at the central level in La Paz. The MEC central office was therefore overburdened and charged with making decisions about unfamiliar local realities.
- There was a wide dispersion and overlap of tasks between the various ministry sections, with a lack of communication among them. This led to inadequate management of both material and financial resources. The extent of the MEC's organizational shortcomings is illustrated by the fact that there were separate undersecretariats for primary and secondary education: one for rural districts and another for urban ones. Each undersecretariat had its own hierarchy of departments. Curiously, specialized departments were distributed between the two secretariats. For example, the Directorate of Pedagogical Affairs reported to the Undersecretary for Urban Primary and Secondary Education, while the Directorate of Human Resource Training reported to the Undersecretary for Rural Primary and Secondary Education.
- Despite a complex administrative structure, schools answered directly to the central MEC, as did the 27 normal schools, the National Technical Education Service, the Bolivian Institute of Culture, the National Literacy and Popular Education Service, the Educational Press, and the National Academy of Sciences. The ministry was overwhelmed with operational and administrative issues, with no time for policy and regulatory development.
- The MEC lacked an information system that could provide timely and trustworthy data and statistical information in a timely manner. This shortcoming hampered planning and development of administrative and financial strategies for managing the educational system.

The MEC not only had significant organizational shortcomings that affected its performance within the education sector, but its overall institutional weakness diminished its capacity to negotiate even within the government. For example, when elaborating the budget, Treasury personnel did not bother to call the MEC to the negotiating table. Instead they used the discretionary part of the MEC's budget (i.e., non-payroll expenses) as an adjustment variable to help balance their budget. Under these circumstances there was no way the education budget could be improved to meet the new education needs identified by the MEC, and it was impossible to develop a comprehensive education reform and obtain the necessary political, social, and financial support to implement it.

Incorporating the ETARE team into the MEC was a key challenge undertaken in two stages. In 1995 the ETARE team was divided into four units: two temporary, transitional ones (communications oversight and reform monitoring) and two permanent units that were to become part of the new ministry (resource management and technical and pedagogical services). All these units served directly under the MEC. A 1995 World Bank-IADB annual review mission expressed concern that these new units' responsibilities overlapped with others in the existing MEC structure and that key reform areas such as teacher training and accreditation were not moving forward. The mission suggested that the units

related to the education reform answer directly to the Undersecretary for Initial, Primary, and Secondary Education and that the other departments of the MEC be modified accordingly (Ministerio de Desarrollo Humano 1995).

By 1996 these recommendations were implemented, and the next review mission applauded the improved strategic vision for guiding reform implementation and noted that the overlap of functions had been overcome. A planning and institutional development unit and a management unit were able to articulate all the technical, operational, and administrative processes on the basis of an annual operation plan, developed in a participatory manner. The plan set up objectives, goals, and assigned budgets by activities (Ministerio de Desarrollo Humano 1996). The second phase had begun, and there was already a new way of doing things at the MEC, at least in the Undersecretariat for Initial, Primary, and Secondary Education.

By 2002 there was a critical mass of professionals in both the public and private sectors who had developed professionally with the education reform. “Within the MEC there is a cadre of professionals with a vision and a position regarding what has to be done in order to advance the education reform. There now is a more ordered ministry. Unfortunately, this group does not translate into a team that has a certain degree of shared leadership” (Cuadra Personal Communication 2003).

The New Education Information System

Another reform accomplishment has been the development of a wide-ranging and sophisticated information system that is helping education planning and will no doubt continue to better inform central and regional education-sector decision makers. In the early 1990s a key issue had been the number and location of teachers. There was great uncertainty as to whether issued paychecks corresponded to real teachers or to nonexistent ghost teachers—usually political appointees.

Initially in 1994 the first conceptual description of the information system was composed of five subsystems: human resources, infrastructure, education statistics, material resources, and financial resources.³¹ By 1998 the general design of the education information system was composed of eight subsystems:

- Education information,
- Information for infrastructure planning,
- Information on human resources,
- Evaluation and monitoring of pay scales and payrolls,
- Administrative information,
- Teacher training, and
- Georeferencing information.

³¹ Unidad de Informática. Modelo Conceptual para el Sistema de Información del Sector Educativo. Febrero de 1994, cited in Sarmiento (2002).

The current challenge is to integrate these eight subsystems with the SIMECAL and the subsystems of: material production, distribution, and warehouse administration; single education registry; popular participation; and cost. The information system has been installed in all nine department and 157 of the 275 school districts. The MEC has distributed and installed 219 computers, 179 printers, and 9 servers (Sarmiento 2002).

According to a 2002 information system evaluation, there was no doubt that there had been a “notable and positive advance in data capture and management relative to the initial situation before the reform began.” There had also “been a significant advance in the development of the subsystems that make up the Education Information System, especially in the capture and systematization of the data and in the security mechanisms regulating access to it” (Sarmiento 2002).

The main challenge of the ministry and the education sector as a whole is to use that data in decision making. According to Herrán Personal Communication (2003), “it has only just started to work in turning data and information systems into decision making tools to improve accountability of educational results at the district and school levels.” Similarly the education sector has still to build up the capacity to develop “evaluation-based policy” and develop a culture for “evidence-based learning” (Newman Interview 2003).

Teachers’ Unions and Compensation

Leaders of both the urban (CTEUB) and rural (CONMERB) teachers’ unions believe that the education reform was developed with a false hypothesis: that teachers are the main cause of the poor state of Bolivian education. This perceived prejudice against teachers is the basis of the distrust between the education authorities and union leadership. In addition the government and teachers’ unions have different views of the purpose of education and reform objectives, as synthesized in Table 8. Despite these differences, the teachers’ unions’ initial rejection of the education reform law—considered the third of the “damned laws”³²—has waned. Indeed as rank-and-file union members became more engaged with the reform, the initial perceived threat transformed into perceptions of opportunity, as discussed below. Even as the education reform was gaining greater social acceptance, the unions changed their positions. Similarly:

While many [teachers] are skeptical or opposed to certain points, many others strongly support the plan, especially its pedagogical aspects. The impression of near-unanimous opposition derives more from the heavy-handed discipline that the union leadership imposes on its members (such as obligatory participation in marches and strikes) than from any real consensus on the issue (Luykx 1999:340).

³² Capitalization and popular participation being the other two.

Table 8 Main Areas of Conflict Between the Teachers' Unions and the MEC		
	Ministry of Education	Teachers' Unions
Reform and education objectives	<ul style="list-style-type: none"> •Increase enrollment •Improve quality •Equity: reduce education disparities •Efficiency in resource use and allocation •Improve productivity for the country's development and modernization 	<ul style="list-style-type: none"> •"Strengthen class conscience for the defense of the nation's sovereignty, self determination of the Bolivian people and the interests of the exploited classes"
Organization of the education sector	<ul style="list-style-type: none"> •Unify the education sector •Decentralize education 	<ul style="list-style-type: none"> •Continue the urban and rural division •Maintain centralized education
Teaching career	<ul style="list-style-type: none"> •Open access, that is, all who qualified can be teachers •Certification tests for access and promotion •Salaries tied to results and provision of incentives •Free unionization without the government automatically deducting union fees from payrolls 	<ul style="list-style-type: none"> •Maintain guaranteed employment for teachers •Limit access to graduates of teacher training schools •Improve salaries, without links to productivity and without differentiation •Mandatory unionization with automatic payroll deductions
Parents' participation	<ul style="list-style-type: none"> •Active, through the "school boards" and "school projects" •In school management as actors in the education process 	<ul style="list-style-type: none"> •Limited •According to teachers' needs •Continuation of the monopoly of the ministry and teachers' association
Pedagogical proposal	<ul style="list-style-type: none"> •Constructivist •Centered on learning and the student •Changes in the classroom 	<ul style="list-style-type: none"> •General philosophical principles about the "new Bolivian" •Diffused and not structured
Formulation process and immediate reform objectives	<ul style="list-style-type: none"> •Gradual and as process initiated from the Ministry of Planning in 1990 •Restructure the education sector, make it efficient, and align it to the development model 	<ul style="list-style-type: none"> •From the top to bottom without consultation* •Imposed by the World Bank and IMF* •It pursues "the destruction of a free public education, its delivery to imperialism and to the private sector, as an instrument of greater alienation"*

Source: Based on Contreras (1999).

*Criticism of MEC reform, rather than proposals from teachers' unions.

Teachers' unions have learned to come to terms with the reform law, even as the government has moved away from its more radical positions. Thus while legislation regarding the transformation of teacher training has been fully implemented, issues that affect the development of the teaching profession—including modification of the basic pay structures (*escalafón*), the requirement for competency exams before teachers can enter the government payroll or criteria for remaining in the teaching profession—have been abandoned. Other areas, such as the role of municipal governments in education, have had partial compliance (see Annex 2).

There has been a push and pull between the ministry and unions at the administrative level, with advances in at least two areas: development of norms to administer educational units and salary

negotiations that moved away from flat increases across the board toward the development of incentives.

In an effort to bring order to a system where, for example, there were over 54,000 teacher transfers within different schools in any given year due to unplanned retirements, the MEC approved the Code for the Administration and Operation of the Educational Units (RAFUE) in January 2000. Both teachers' unions opposed the statute because it modified the Regulatory Disciplinary System of 1957 without setting up a mixed commission of teachers' union authorities and MEC staff. In accordance with union requests, a commission composed of two union leaders, two MEC officials, and two parent representatives was set up. The Vice Minister for Initial, Primary, and Secondary Education headed the commission. In April 2001 over a year later than planned, the new RAFUE was promulgated with extensive participation from the education community. It became the first legal instrument to be disseminated with consensus between the ministry, teachers' unions, CEPOs, and parents. Despite this the new CTEUB leadership questioned the RAFUE and sought revisions. These demands were resisted by the ministry until September 2002, when the ministry under union pressure agreed to set up a new commission with the same composition as before, but adding two delegates from administrative personnel to review the RAFUE.

During 1992-2002, teachers' union and MEC negotiations were dominated by salary issues. Throughout this period³³ teachers obtained salary raises above the average public-sector increase and end-of-year inflation. Starting in 1999 there were differentiated salary increases with a greater increase awarded to those with lower salaries (see Table 9). Moreover, since 2000 the ministry has introduced incentive payments as an innovation. Therefore salary discussions were no longer business-as-usual or general raises for all.

Year	Percentage increase in teachers' salaries	End-of-Year Inflation (percentage)
1992	20	10.5
1993	20	9.3
1994	12	8.5
1995	12	12.6
1996	13	8
1997	16	6.7
1998	7.5	4.4
1999	9 - 5.5	3.1
2000	7.5 - 5.5	3.4
2001	12.7 - 6	0.9
2002	7.5 - 3.5	

Source: Gutiérrez (2003); UDAPE (2002).

³³ Except in 1995.

Contrary to popular belief, teachers' salaries in Bolivia have been increasing in real terms during the 1990s (Contreras 1999a and Urquiola et al. 2000). Greater salaries do not correlate to better education quality. Similarly if one compares teachers' salaries with other groups with the same level of education and in terms of income per hour worked, teachers do relatively well (Urquiola et al. 2000). Despite this the general perception is that teachers are not well paid. Indeed 20.8 percent of those interviewed in a 2002 survey believed low teacher pay was the education sector's main problem, making it the second most important problem issue after lack of qualified teachers (24.7 percent) (Encuestas y Estudios 2002).

Since 2001 the MEC has experimented with four incentives schemes:

- Incentives for teacher training,
- Incentives to work and remain in poor rural areas,
- Incentives for work in bilingual instruction, and
- Institutional incentives.

The teacher-training incentive sought to stimulate in-service training. Under this scheme the MEC distributed approximately \$350 in six installments over 24 months to teachers who successfully passed a level-specific test. The budgetary implications of this incentive (Urquiola and Vegas 2002) and the little support it had among MEC technicians and lenders (in this case, the IADB) led to its cancellation (Gutierrez Personal Communication 2003).

In 2002 over 23,000 teachers received a bonus of \$100 each for working and remaining in poor rural areas. In addition 4,617 teachers working in bilingual instruction programs received \$200 in addition to their salaries in 2001. Finally, the MEC awarded an institutional incentive to reward schools with good management practices on a competitive basis. In 2001 over 9,000 schools or 87 percent of those with primary education (grades 1-8) participated, and 1,100 schools were awarded incentives by the ministry (Ministerio de Educación, Cultura y Deportes 2002a). Participation required that the school principal, teachers, and the education board fill out a detailed questionnaire. MEC staff reviewed the questionnaire and carried out site visits to corroborate the information on the forms on a random basis. The monetary incentives benefited the school principal, teachers, and all support and administrative staff. Thus the level of mobilization and participation in the institutional incentive competition is a good indication of the significant way parents and teachers are actively involved in the reform implementation. Although there has been no evaluation of the incentive scheme results, initial studies suggest that the incentives for teachers in poor rural areas have had a positive effect on the numbers of qualified teachers attracted there (Urquiola and Vegas 2002).

It is important to distinguish between the urban (CTEUB) and rural (CONMERB) teachers' unions. While CTEUB is more belligerent toward the education reform law and claims that it has failed, CONMERB has managed to work more closely with the ministry technicians, has made valuable suggestions (such as in the design of incentives), and has left the political discussions to the union leadership and the Vice Minister or Minister of Education. Now CONMERB leadership and rank-and-file members respect the agreements between the union's technical negotiating teams and ministry

personnel. Similarly once CONMERB leadership reaches an agreement, its members show a common stand.

CTEUB's behavior is radically different. There are no technical negotiations, only political ones subject to consultations during public assemblies. During these assemblies the La Paz Federation, controlled by radical Trotskyites, has a major impact. CTEUB has opposed all proposals and is unwilling to participate in any education reform processes, believing that its participation implies support.

CONMERB, on the other hand, has participated in technical negotiations, and its rank-and-file has responded to calls for local education directors and pedagogical advisors. Thus CONMERB members are moving up in the education sector's administrative structure. This has been noted with concern by CTEUB, which now sees CONMERB members in urban administrative positions formerly only occupied by its own members (Aliaga Interview 2003). CONMERB has also widened its range of demands (and proposals) in its yearly negotiations with the MEC to include topics such as teacher training in the rural areas, reduction of *interinos*, and social concerns such as retirement and housing for rural teachers. Rural teachers have also benefited more from the reform in terms of specific incentive bonuses based on geographic location for rural teachers and for those involved in bilingual education. However these incentives do not account for their more cooperative stance. CONMERB's active participation in developing education policy goes back to the PEIB (López Personal Communication 2003). Regardless, CONMERB's strategy regarding the education reform and the MEC has been criticized by the CTEUB, who has accused the former of being pro-government. The relationship between both unions is distant and in many cases competitive.

There has been no discussion of pedagogical issues between the MEC and teachers' unions. The only administrative area where agreement was reached was in an important measure to improve school management (RAFUE) and, partially, in the automatic teachers' payroll deduction for unions. Teachers' unions did not have proposals for key areas, including curriculum, pedagogy, the need for the existence of two unions, professional accreditation or others. Despite efforts to set up bilateral commissions to tackle issues such as the pay structure, there was no progress in that area. There have been advances in areas such as training teachers and setting up education boards with teacher participation. It would appear that the chasm between teachers' unions and reform proposals has been reduced, due to compromises by both the MEC and unions (see Annex 2).

Decentralization

As mentioned above, since the Sanchez de Lozada Administration gave priority to the Popular Participation Law, this law was passed before the ERL. Thus education reform had to accommodate decentralization proposals contained in the former legislation.

The 1994 Popular Participation Law:

- Increased the total number of municipalities to 314,
- Raised the distribution of national tax revenues to municipalities from 10 to 20 percent,
- Distributed resources on a per-capita basis,

- Transferred the education infrastructure and responsibility for providing maintenance and school supplies to municipalities,
- Set up a series of participatory bodies by recognizing traditional community and indigenous organizations,
- Established school boards and a series of boards for each government level,
- Allowed the creation of indigenous municipalities, and
- Set up the CEPOs (see Box 4).

Box 4. CEPOs

The Consejos de Pueblo Originario (CEPOs) were in ETARE's original participation proposal and were established by the 1994 Education Reform Law. CEPOs were set up for each of the main ethnic groups (Aymara, Quechua, and Guarani) and the peoples of the Amazon in order to incorporate them in the formulation of educational policy at the national level. CEPOs established their boards in December 1997 at the urging of the Viceminister of Initial, Primary, and Secondary Education who met with the APG, CSTUCB, and CIDOB. In May 1998 CEPOs were instituted by a Ministry of Education Resolution. In order to finance the CEPOs' operation (offices, computers, etc.) and to maintain their independence from the Ministry of Education, the Education Minister solicited resources for them from Sweden, the Netherlands, and Finland.

CEPOs are conceived as the most developed instrument of Popular Participation and have played a key role in encouraging the creation of school boards and explaining the benefits of bilingual education. In doing so, they have helped reduce parental resistance. The Quechua and Aymara CEPOs have played a key role in the transformation of the bilingual INS in their areas of influence. Since 2000 CEPOs have elaborated their own strategic plans and have had a greater capability to voice the educational proposals of indigenous groups. They are viewed as a positive (if still insufficient) step to represent indigenous groups' interests. Yet, in 2002 they were capable of having their point of view heard and appealed all the way to the President of the Republic to stop Viceminister Balboa's initiative to set up a Department of Indigenous Affairs in the Ministry of Education. CEPOs perceived this as a step backward; a move away from mainstreaming and a return to specialized offices. Their study trips abroad helped advise their opinion on this issue. Two years ago they would have not been able to achieve such an objective.

Source: Albó (2002), Anaya Communication (2003), and Siebes Interview (2003).

Thus the government not only transferred resources and responsibilities to municipalities, it also deepened participatory democracy. There is no doubt that strengthening local government through municipalities was an ambitious change in the administration of education.

Popular Participation was complemented by the July 1995 Administrative Decentralization Law, which recovers and introduces the second level of government, departmental prefectures, into the decentralization effort of government administration and therefore education management.

Currently there is a conflict between the ERL and Administrative Decentralization Law decentralization proposals. The MEC's decentralization strategy was to transfer education management responsibilities to decentralized levels such as the departmental (second level) and district (local level) education offices, assigning a key role to municipalities in the provision of educational supplies. On the other hand, the Administrative Decentralization proposal transferred education management re-

sponsibilities to the departmental prefectures. This new proposal shifts the relationship between the departmental education offices from one of dependence to one of coordination with the MEC. It is the tension between these two models that underlies many of the pending issues in decentralization (Guitérrez 2003).

The main problems have been:

- **Opposing political interests.** The President names prefects, who come from the governing coalition. Mayors, on the other hand, are democratically elected and may hail from opposing parties. This has hindered coordination between the departmental and municipal levels. It was common, for example, for a new infrastructure (a municipal responsibility) to end up with no new teacher assignments (a prefect responsibility). Another contentious issue is keeping a competent and qualified core of departmental education office employees hired through competitive processes by the MEC (through personnel firms and with rural teachers' union participation) in the prefectures. There is significant turnover with the start of every new administration, with political appointees returning as directors of education at the departmental level.
- **Lack of technical capacity at the decentralized level.** There have been cases of qualified departmental and district directors who, because they had no technical teams, were unable to carry out their plans. The lack of technical personnel at the departmental level encouraged the MEC to manage them centrally. The absence of technical capacity and the political interference alluded to above hampered the transfer of payroll and other responsibilities (see Annex 3).
- **Implementers' centralist mentality.** Because of years of prior experience, the education system has a strong centralist culture. Thus while at the MEC level, this culture stifled the transfer of power or caused the ministry to develop an overzealous oversight capacity, at the decentralized level it led to fear and uncertainty in assuming new responsibilities. A case in point was the reluctance to change the school calendar, despite long-known problems caused in agricultural areas by a rigid, centrally determined school schedule. As shown in Annex 3, departmental and district-level offices had the prerogative to change them, but failed to do so out of fear.
- **Time lag in the development and implementation of planning instruments.** Until 1997 there was no instrument to enable a comprehensive transfer of school-management responsibilities capable of articulating different roles at the departmental, municipal, and school levels.

In order to stimulate parent, teacher, and community participation in schools, in December 1996 the MEC developed a program for the improvement of school quality that sought to decentralize education resources and decisions to schools. Only one component of this program (PASE) was implemented. Under this program the Social Investment Fund provided school principals with funds so that in coordination with school boards, they could meet school infrastructure and teaching-material needs. By August 1997, over 8,500 schools in 240 municipalities had committed \$18 million under this program (Secretaría Nacional de Educación 1997). The PASE stimulated the creation of school boards, as their existence was a prerequisite.

The new Banzer administration considered this approach too focused on school inputs and without sufficient pedagogical emphasis. It set out to develop a series of school project initiatives in 1998 whose main objectives were to:

- develop comprehensive interventions in schools that develop both infrastructure and pedagogical processes;
- stimulate the participation of parents, teachers, and municipal education authorities in school management; and
- strengthen the municipalities' capacities to plan and assign education resources (Pareja 2003).

To achieve the above, the MEC developed two planning instruments: the Municipal Education Program (PROME) and the Education Project (PE) (Pareja 2003). The PROME is a strategic framework for education-sector planning and serves as an input to policy and program design at the departmental and national levels. It programs municipal investments for a five-year period.

The PE, on the other hand, is a management and planning instrument for education actors. It seeks to help them find solutions to pedagogical problems, and infrastructure and teaching-material limitations. It promotes teamwork and seeks to coordinate activities in order to distribute them equally. The PE is developed by local school actors and adjusts itself to sociocultural characteristics. The PE is intended to be used in three different types of education projects:

1. **Núcleo Education Projects** (PEN), in education districts of mainly rural municipalities with disperse population;
2. **Network Education Projects** (PER), in education districts of municipalities of secondary or main cities (departmental capitals); and
3. **Indigenous Education Projects** (PEI), as a specific form of intervention for indigenous peoples of disperse populations not fully integrated to local development and whose needs were therefore marginalized.

The PE addresses issues such as curriculum development, the usefulness and pedagogical utilization of reform resources, and other crosscutting themes. A PE is developed and implemented by a management team composed of representatives from principals, teachers, district education boards, with the pedagogical advisor as team coordinator.

From February 1999 to December 2002, Bolivia's 314 municipalities developed over 250 PROMEs. On the other hand, over 1,000 PEs were developed with over \$80 million assigned. Table 10 illustrates the breakdown by the type of PEs developed, as well as the significant resources assigned through them.

According to Herrán Personal Communication (2003), despite shortcomings in education decentralization:

The reform has made successful inroads in working collaboratively with municipalities through the financing of school-based projects integrated under PROMEs, which have proven to be powerful frameworks for educational planning and good instruments for strengthening the institutional capacity in education at the local level, and it made important improvements in regulating the functioning of the system.

Thus education reform was able to organize municipalities, and education investments increased (Newman Interview 2003).

Table 10 Number and Type of Education Projects Developed and Assigned from February 1999-February 2003			
Education Project	Number of Projects Approved	Resources Committed	Amount Disbursed by February 1993
PEN	989	56,509,620	53,186,240
PER	194	18,822,974	8,987,290
PEI	31	4,730,406	1,210,766
TOTAL	1,214	80,063,000	63,384,296

Source: Pareja (2003).

National Achievement Testing (SIMECAL)

The ERL mandated testing of educational achievement. Testing was originally intended to be under the auspices of a national education quality board that was to have oversight of the whole education sector, including universities. However because of the universities' opposition to the ERL in general and more specifically the creation of a quality board which challenged the universities' autonomy, SIMECAL was established within the MEC.

Educational testing at a national level was a first in Bolivia. So far the only systematic educational testing had taken place in schools under the administration of the state mining company, COMIBOL. Yet by 1996 when SIMECAL was instituted, Bolivia—together with Uruguay—were the last countries in Latin America to have such systems installed (Gajardo 1999).

Six years later the methodology and quality of its work place SIMECAL among the most sophisticated education measuring units in Latin America. This is even more praiseworthy given that, in comparison to Latin America and elsewhere, the number of SIMECAL personnel is small in relation to its tasks and responsibilities. The quality of SIMECAL's human resources was found to be very good, and the structure and distribution of work functions within the unit were adequate. Unit operating costs, on the other hand, were estimated to be below comparable institutions (Perez Iriarte 2002).

As seen in Table 4, the number of SIMECAL operations increased from three in 1997 to 12 in 2001. Of the 12:

- two were for the INS admissions process,
- three for the exams to qualify for a salary increase based on actualization,
- one for an exam to access a higher level in the *escalafón*,
- two for candidates' exams for district-level director positions,
- one for high school students' academic aptitude test,
- one for the *interinos*' professionalization process, and
- one for the MEC's teacher-training system.

Only one operation assessed tests taken by children of schools under the transformation program implementing bilingual intercultural education.

Thus while busy, SIMECAL is not focused on the tasks it was created to undertake (i.e., evaluating education quality). SIMECAL can enhance its monitoring of education quality by:

- inquiring how students are learning or not learning,
- surveying how the reform is working in the schools to help elucidate the teaching and learning processes,
- polling teachers' opinions and the educational climates in schools,
- studying student learning in various areas, and
- undertaking activities that directly contribute to reform objectives.

One possible reason for SIMECAL's current disconnect may be that the unit is not well integrated into the MEC and is not working in close coordination with key ministry units³⁴ (Perez Iriarte 2002). Whether the ministry is aware of this disconnect is unclear, but this is an area that needs improvement.

MEC authorities were skeptical of the pertinence of quantitative learning measurements (Anaya Personal Communication 2003). Also skeptical were curriculum department staff, who questioned whether competencies could or should be evaluated by standardized tests (Urioste Personal Communication 2003). Until this skepticism is overcome, it will not be possible to develop a system that answers key questions or to develop a framework for educational accountability that can provide the education system with both the necessary pressure to change and the required support to inform on innovation results (see Box 5).

Box 5. Key Questions for a National Framework for Educational Accountability

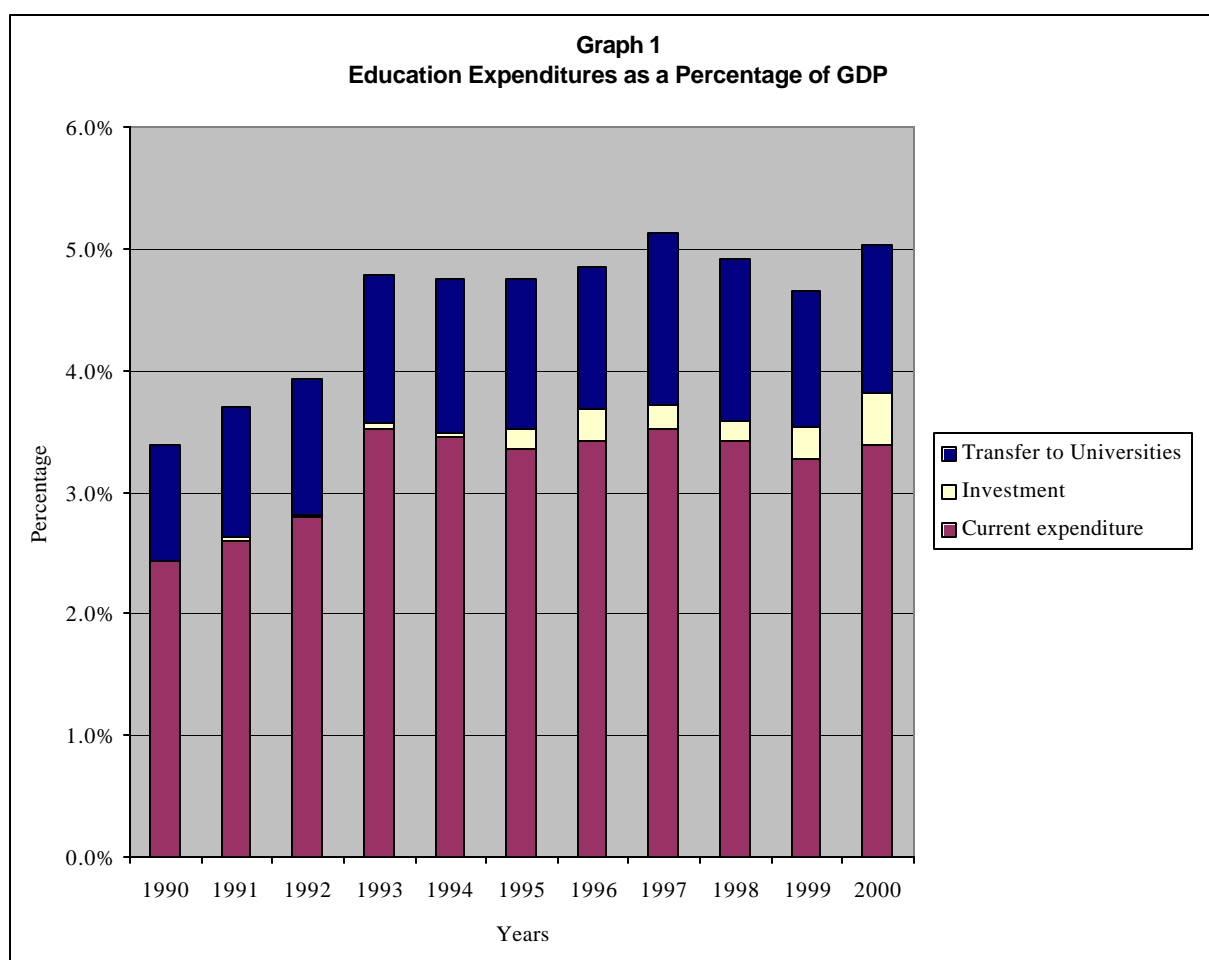
1. What do our students need to know and what kinds of skills and attitudes should they have for the transition to work for higher education?
2. Where are we meeting our goals and where do we need to improve?
3. What are the challenging social, cultural, and economic factors impinging on our student body and the wider community that we should take into account and respond to by adjusting programs and services?
4. How effective are the adjustments we make?
5. To what extent do we need to bring greater support to the front-line of the organization?
6. What investments do we need to be making to ensure achievement of future requirements for our constituents?

Source: Lacey (1999).

³⁴ Such as, for example, the curriculum development department.

Financing

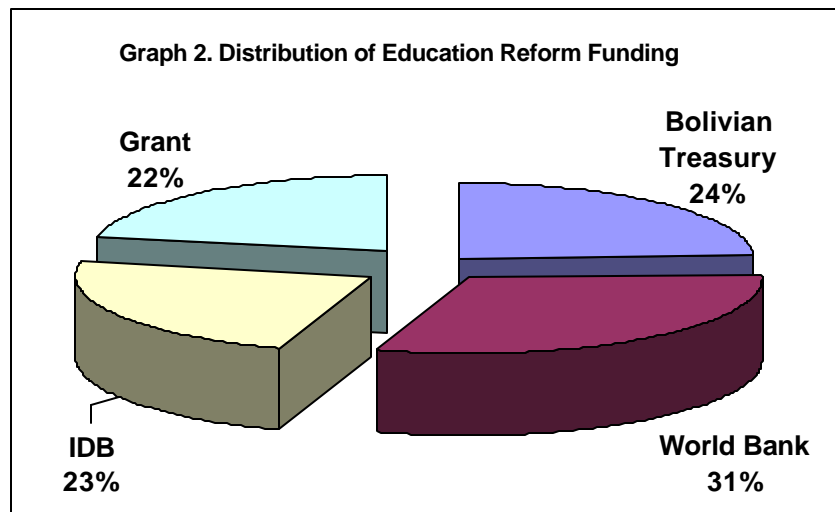
From 1986 to 1991, while Bolivia spent 2.7 percent of its GNP on education, its Latin American counterparts spent an average of 4 percent (Psacharopoulos, Arieira, and Mattison 1997). This changed in the 1990s. Graph 1 shows that the education budget as a percentage of GDP increased in the first third of the 1990s. Since 1994 it has hovered around 4.5-5 percent of GDP, well above the Latin American average of 3.9 percent. Although this has been an improvement over previous decades, government officials have pointed out that this is insufficient to maintain current reform efforts and improve teachers' salaries. There is no doubt that the quality of education-sector expenditures have improved in the 1990s, as greater resources were assigned to primary and secondary education. In addition there has been an increase in resources devoted to sector investments. Indeed for the first time ever, schools have received classroom libraries, teaching materials, sports equipment, and other pedagogical aids. In 2000 alone schools received \$1.4 million in teaching materials (Ministerio de Educación, Cultura y Deportes 2002).



Source: Ministerio y Educación, Cultura y Deportes (2001a).

In August 2002 the MEC's estimate of education reform costs approximated \$338 million. World Bank and Inter-American Development Bank loans account for \$192 million, grants from the Netherlands, Sweden, and Germany for \$78 million, and the national treasury has disbursed \$92 million. Given the need to expand initial education, reform secondary education, and improve teachers' salaries, Bolivia will have to invest a similar amount to tackle these areas. According to the MEC, total recurrent costs in basic education rose from around \$10 million in 1992 to just under \$25 million in 2001 (Asociación de Colegios y Universidades de Canadá 2003). Recurrent investment costs will require that the government allocate significantly more resources to education.

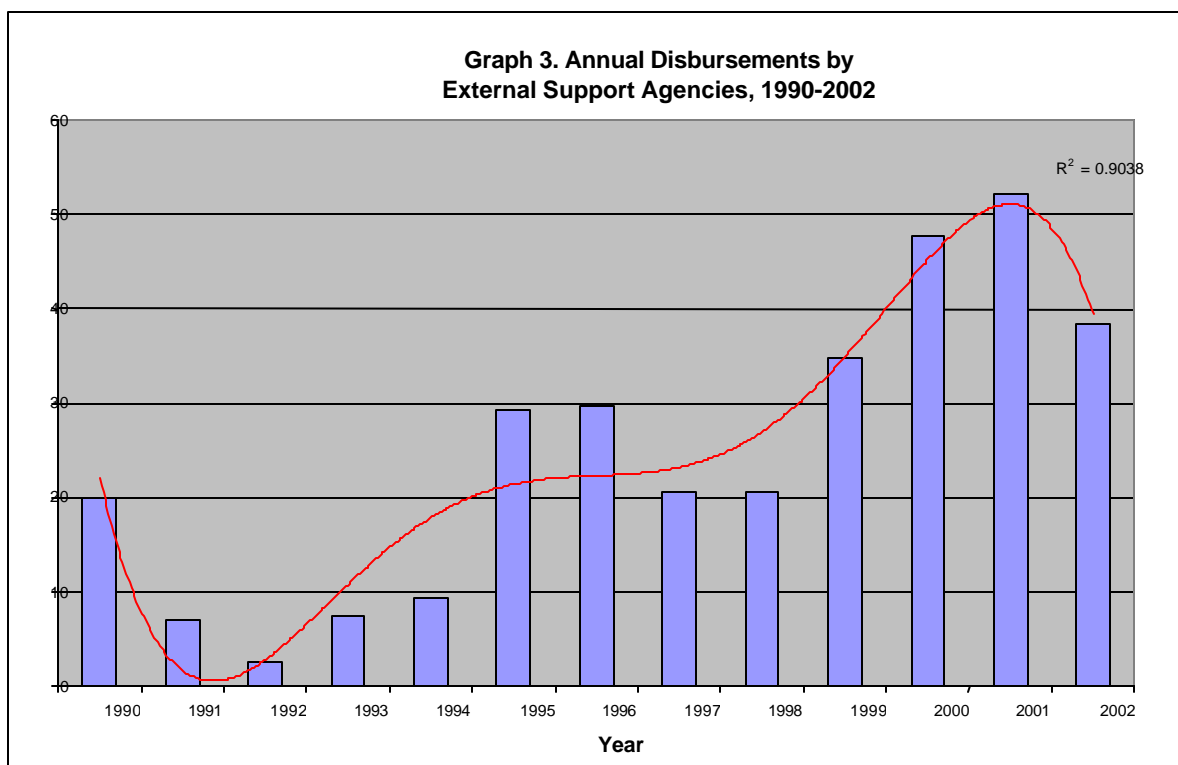
Navarro (2003) reported that total funding committed for the education reform amounted to \$356.2 million dollars by 2002. Fifty-four percent is composed of loans from multilateral organizations (the World Bank and the IADB); and 22 percent by grants from Sweden, the Netherlands, Germany, and Denmark. Bolivian counterpart funds account for 24 percent of total resources invested (see Graph 2).



Source: Navarro (2003).

The constant increase in the 1990s in external resources disbursed for primary education resulted from the education reform process. Discerning a coherent policy framework, multilateral organizations and foreign donors were more willing to finance primary education. Together with this increase in external support, there was a dramatic increase in total recurrent costs (see Graph 3).³⁵

³⁵ Disbursements increased from a low point of \$2.7 million dollars in 1992 to \$52.2 million in 2001.



Source: Compiled by the authors from data in Asociación de Colegios y Universidades del Canadá (2003).

Reform Assessment

What are the quantitative results of the education reform by 2002 and its impact on learning? How is the Bolivian reform different from other efforts in Latin America? What can hindsight tell us about the reform's design implementation strategy? What role did political support play? What is the public perception of the reform? These questions are addressed in this section.

Quantitative Results

The reform was able to increase the public education system's coverage. Both gross and net enrollment rates in primary education increased between the early 1990s and 2001. Bolivia's net enrollment rates (97 percent) are higher than the average for both Latin America and the Caribbean (93.9 percent) and lower middle-income countries (89.8 percent) (see Annex 1).

The reform improved the primary-education system's internal efficiency. Dropout rates decreased from 6.2 percent to 5.9 percent, and sixth-grade promotion rates increased from 52.8 percent to 84.7 percent between the early 1990s and 2001. Repeaters as a percentage of total students enrolled in the primary level decreased from 7.1 percent to 3.8 percent between mid-1990s and 2001. Pupil to teacher ratios in primary increased from 15:1 in the early 1990s to 25:1 in 2001 and are now more in line with Latin America and the Caribbean and lower middle-income countries (Annex 1).

Because of the reform's emphasis on rural areas, there have been important equity gains expressed in reductions in rural/urban gaps. There has been a dramatic increase in sixth-grade completion rates (from 41 percent vs. 82 percent in 1992 to 74 percent vs. 85 percent in 2001) and a more modest one in average years of schooling (from 3.7 vs. 9.1 in 1992 to 4.5 vs. 9.6 in 2001). Correspondingly, there has been an increase in the adult population's average years of schooling from an average of 4.4 years of education in 1992 to 7.9 years in 2001 (Herrán Personal Communication 2003).

Attribution of these gains to the reform may be questioned. Because of economic stability and slow economic growth, the coverage rates would have increased anyway. However the gains in internal efficiency and the reduction of rural-urban gaps can be more readily attributed to the reform.

Moreover, the MEC distributed millions of books and teaching materials (see Table 3). The number of school buildings increased, and there was a slight improvement in infrastructure conditions with a greater number of schools gaining access to electricity and water hook-ups in 2001 than a decade before (Annex 1).

Ultimately, however, an education reform has to improve children's learning. How has the reform been doing in this respect? The latest SIMECAL evaluations of language and mathematics achievement for

third-grade students in 2000 are shown in Tables 11 and 12. As shown in Table 11, in schools undergoing educational reform, there are better results in language than in mathematics. It is worrisome that over 25 percent of students fail to reach minimum levels for third-grade mathematics. As expected, urban schools perform better than rural ones in language. This is not the case in mathematics, where a greater percentage of students in rural schools (17.7 percent) reach the highest level of achievement (level C) than do urban school children (11.5 percent). This is an important achievement in accomplishing the reform's objective of reducing educational inequality. Achievement levels are very similar between children in schools under reform with those not under reform. Children in schools under reform have slightly better success rates in both language and mathematics than children in schools not yet under reform (Table 12). The breakdown of those that do overcome the minimum level is very similar. Given the new materials distributed and the innovative pedagogical approach in schools under reform, one would have expected a greater percentage of students at higher achievement levels.

Table 11 Level of Achievement in Mathematics and Language by Third Grade Students in Urban and Rural Areas (2000) (percentage of students at a given level)				
Level of Achievement	Urban		Rural	
	<i>Mathematics</i>	<i>Language</i>	<i>Mathematics</i>	<i>Language</i>
Failure	27.1	4.7	27.9	8.5
A	44.6	22.0	38.5	28.3
B	16.8	51.7	15.9	46.2
C	11.5	21.6	17.7	17.0
Total	100	100	100	100

Source: SIMECAL (2001).

Note: Failure implies that students did not reach the minimum required for the grade level. A is a lower level of achievement than C.

The above results are inconclusive and have been questioned. So, too, has the reform's capacity to teach children to learn (Mengoa Pancla et al. 2002).

Utta von Gleich Personal Communication (2003) provides an interesting caveat on the validity of test results:

I am not concerned that the results of the SIMECAL for the intercultural bilingual mode are still modest. You cannot expect miracles at the end of the third grade. This mistake of too early evaluations is not new to me. I think it is dangerous and used sometimes on purpose to close or to kill the reform. Wait until the end of the fifth grade and then

compare to the previous results in the PEIB project, which obviously had a continuous evaluative monitoring system.

Although her comments refer to results in bilingual education, the criticism of reliance on testing in third grade is valid, particularly given the initially haphazard and probably partial reform implementation. We are likely too anxious to measure impact in learning outcomes and will have a much better vantage point in a few more years.

This education reform has been the most comprehensive and wide-ranging change in Bolivia's education system since the liberal education reform of the 1910s and 1920s. As Contreras (2003) has shown, the 1955 reform during the national revolution entailed more the legal ordering of education regulations and the start of the co-management of the education system by teachers and the state. Thus it was enshrined in an education code that the current reform abolished. However the 1955 Code began to expand education and create a national pedagogy, despite the fact that the education reform of the mid-1950s had no pedagogical or curricular proposal.

Table 12				
Level of Achievement in Mathematics and Language by Third Grade Students in Urban and Rural Areas (2000)				
(percentage of students at a given level)				
Level of Achievement	Language		Mathematics	
	<i>Under education reform</i>	<i>Without education reform</i>	<i>Under education reform</i>	<i>Without education reform</i>
Failure	6.2	7.7	27.4	31.6
A	24.6	25.9	42.1	41.8
B	49.5	49.9	16.5	14.1
C	19.7	16.5	14.0	12.5
Total	100	100	100	99.3

Source: SIMECAL (2001).

Note: Failure implies that students did not reach the minimum required for the grade level. A is a lower level of achievement than C.

Comparative Perspective

Very few studies have covered all aspects of the reform's major changes (Contreras 1988). Even fewer have done so in English (Aikman 2000 and Contreras 2003). Most are specialized studies that cover particular aspects, including two recent U.S. doctoral dissertations that focus on intercultural and bilingual education (Biermayr-Jenzano 2001 and Gustafson 2002).

Perhaps because the current reform is not well known outside Bolivia, comparative regional analyses have not done it justice (see Gajardo 1999). For example Bolivia is excluded from Gajardo's study which includes a synthesis of the region's main curricular reforms where Argentina, Chile, Mexico, Dominican Republic, Brazil, Uruguay, Costa Rica, and Guatemala figure prominently (see Table 14). Yet in the opinion of education specialists closer to the Bolivian reform, its curricular proposals are "the most advanced and revolutionary in all Latin America" (Siebes Interview 2003).

At the reform's inception, a group of international experts from Sweden, Italy, the Netherlands, Chile, and Argentina noted that "there was no other comparable effort in the Latin American region in terms of the extension and the radical nature of the changes pursued" (Ministerio de Desarrollo Humano 1996). More recently other external observers have pointed out that relative to the network of uncoordinated education projects in Central America, Bolivia's focused and coordinated reform policy is noteworthy. This has allowed for donor coordination and greater effectiveness. Thus the Bolivian education reform is a showcase for the Netherlands government in terms of its comprehensiveness, openness toward innovation and experimentation, and achievements (Siebes Interview 2003). Similar favorable comments were made by the president of REDUC (Red Latinoamericana de Información y Documentación Educativa), Sergio Martinic of Chile. Martinic highlighted the reform's intercultural and bilingual emphasis, which made it more complex, and the fact that the Bolivian reform "produced changes in the classrooms, in educational practice, and in the contents to improve learning" (Presencia 2001).

Strategy and Political Support

There have been many criticisms of the reform's design and implementation. Ideally its design should have been more participatory and gradual. However as we have seen, the process of developing the proposal was indeed "gradual, iterative, and incremental." According to both Amalia Anaya, who headed ETARE, and Constance Corbett, the World Bank task manager, all those willing to consult with ETARE were invited to do so. Union leaders were invited on many occasions, but consistently declined to attend. According to Corbett, "When one party refuses to come to the table, it is hard to have a discussion. And that was the way it was essentially all along" (Corbett Interview 2003). The alternatives seemed limited, and given the state of Bolivian education and the real possibilities of change coming from the MEC or teachers, in hindsight the chosen path was not far off-target. There was an opportunity, and reforms made the most of it.

The reform's design was intended more as a strategy than a blueprint. Both ETARE and the World Bank envisioned the reform as a process where, during the implementation phase, there would be key new design issues incorporated by the implementers. This occurred, for example, in the development of educational projects (PEN, PER, and PEI) and in the incorporation of universities for the reform of teacher-training schools.

According to Nelson (1999), the reasons behind Latin American education reforms were:

- consolidation of fiscal and market-oriented reform,
- the growing pressure of international economic integration,

- renewed attention to reducing poverty, and
- the demands or need for new or renewed democracies.

These are “pull” factors, promoting change from the outside and using education as a means to a higher end (democracy, poverty alleviation, etc.). Although Cerreño and Pyle (1996) also saw education reform as a natural continuation of economic and political reforms, young Latin American leaders advocated “push” factors, i.e., sector deficiencies that drive change in order to satisfy new criteria of efficiency, equity, effectiveness, and participation in the education sector.³⁶

In Bolivia’s case a new external context (Education for All at Jomtien and CEPAL’s Knowledge for Development) placed education on the reform agenda. The new pull factors mentioned by Nelson (except factor number 2) brought to bear a new pressure for education-sector reform and were pivotal in tipping the balance. These worked in tandem with long-time push factors in the education system. Nevertheless, in the past neither had been articulated in a coherent manner. Once Bolivian elites became concerned about them, there was technical and political support to develop, formulate, and implement a reform strategy. ETARE was in the position to fill a gap in the Bolivian context where a strong ideology long imbedded in the existing education-system design, coupled with the paucity of solid national education research, had left the country in a “vacuum of social and educational theory to confront the challenges posed by a new educational reform” (Rivera 1992).

Another common criticism has been that the reform was too ambitious (Newman and Herrán 2003).³⁷ To some degree the complexity was reduced by focusing exclusively on primary education, which itself gave rise to the criticism: what about adult education, secondary education, and universities? However even just focusing on primary, the reform was comprehensive and complex. According to the World Bank representative in La Paz, “What would have been the counterfactual? What would you have left out?”

³⁶ According to Cerreño and Pyle, “education reform, the politicians and economists agree, is essential to sustaining the economic and political reforms already made ... It is important to stress the need to further a broader reform, for education is inextricably linked to continued economic and political reform.” Multilateral banks and donor countries funding Bolivian reform agreed: “the Mission observes that the Education Reform has moved forward, both in its conceptualization and its execution of the role assigned to it in the context of the political, economic, and social reform that the country has been recently implementing” (Ministerio de Desarrollo Humano 1996).

³⁷ For Herrán, “to some degree this reflected the predominant views among many education reformers in the early nineties that reforms had to shift from providing inputs to a more systemic approach” which in the Bolivian case in his opinion “may have gone too far since the Reform did not even foresee the need for any investments in school infrastructure and forgot about investing in teacher training”. As we have shown, while we agree with the first appreciation (as borne out by Box 1), the latter two perceptions are not correct. According to Corbett: “The reform itself included a complete transformation of teacher training, both pre-service and in-service. While it is true that the plan for the transformation of pre-service teacher training was delayed, and the whole process was slow to get off the ground, it is not true that the need for investment in teacher training was not anticipated. With respect to infrastructure investment, infrastructure costs were extremely conservative, since they could be quite elastic on the upside. On the other hand, we could not make more precise estimates in a situation in which there was so much uncertainty regarding the number of actual schools in existence and in which such extensive reorganization of the system was contemplated. A deliberate decision was made not to include financing for infrastructure in the reform project itself, since it would have sent the wrong message, implying that infrastructure investment was a *sine qua non* for reform, and because experience indicates that infrastructure quickly becomes the focal point in a project in which it is included. We clearly stated that, once the process of institutional reform was well underway, the first loan should be followed up and complemented by additional projects to support the very substantial investment needs in the sector.”

In terms of sequencing, perhaps teacher training should have been more emphasized. But this was precisely the area that was least advanced in the ETARE proposal (Corbett Interview 2003). Therefore perhaps it is not so surprising that it took five years to get off the ground. Should the MEC have waited to reach the classrooms in 2000 instead of 1995? Political pressures would not have allowed such gradual advances. Moreover, according to Corbett (2003) a pilot phase was not an option that either Anaya or Ipiña seriously considered:

They were firmly convinced that there were some overall policy actions that simply had to be taken at the outset to get the process going with a stroke of a pen and then stand your ground. In addition, there were many people (including many with a vested interest in the status quo) just waiting for the opportunity to undermine and derail the reform before it could get off the ground. [Anaya and Ipiña] were keenly aware of this and believed that the way to neutralize the opponents of the reform was to get the process started and begin to make some changes that were tangible and visible. This could win allies for the reform, such as parents and teachers at the grassroots level. However the support of these potential allies could be lost if time went on and they could not see any evidence that the reform could bring real benefits to them and their children. I think they [Ipiña and Anaya] were both very much convinced that they would lose the war in the process of doing a small-scale test that would take a year or two. They thought that the public would perceive that the reform was either not serious or that it was not going to benefit them. Political reality being what it was, two years was likely to be the term of a minister. The argument that a full-scale, national-reform strategy that promised to get something tangible on the ground quickly and establish some forward momentum was a pretty compelling one.

While the fact that a taskforce external to the MEC designed the reform has drawn much criticism, this may have been a strong point. According to von Gleich Personal Communication (2003): “The design of the educational reform in Bolivia ... [was] well prepared as a social reform by an external taskforce, ETARE, and not just a series of [haphazard] concessions caused by pressures from below ... Indeed the reform proposal had greater coherence as a result.”

From a political perspective, Grindle (2002) has highlighted the importance of policy entrepreneurship by political executives as key to education policy initiatives. The Bolivian experience bears this out. Consider the role of Enrique Ipiña, first as Minister of Education of Paz Estenssoro in the 1980s and author of the *Libro Blanco* and *Libro Rosado* initiatives, then as consultant to ETARE in the early 1990s, and finally as the first education secretary in charge of reform implementation in 1995. Also consider the role of Amalia Anaya, first as head of ETARE in the early 90s, then as Vice Minister in the Banzer presidency, and finally as Minister of Education in the Quiroga presidency.

In Grindle's analysis the reform leadership was in the Sanchez de Lozada presidency. While he was crucial to the ERL passing, there were also other people in key leadership roles. First, in the ETARE (preparation) stage, the Minister of Planning, Samuel Doria Medina, was vital. Without his support

ETARE would not have been revived under Anaya nor would Enrique Ipiña or Victor Hugo Cardenas have been hired in ETARE. During preparation Sanchez de Lozada was kept fully, albeit unofficially, abreast of ETARE's proposal and was in agreement with them (Corbett Interview 2003). The Minister of Finance during the preparation phase, Jorge Quiroga, was also an important supporter and by getting acquainted with the reform and getting to know Anaya, he was then able to place the reform in the ADN electoral platform and recruit Anaya, first as Vice Minister and later when he became president, as Minister of Education.

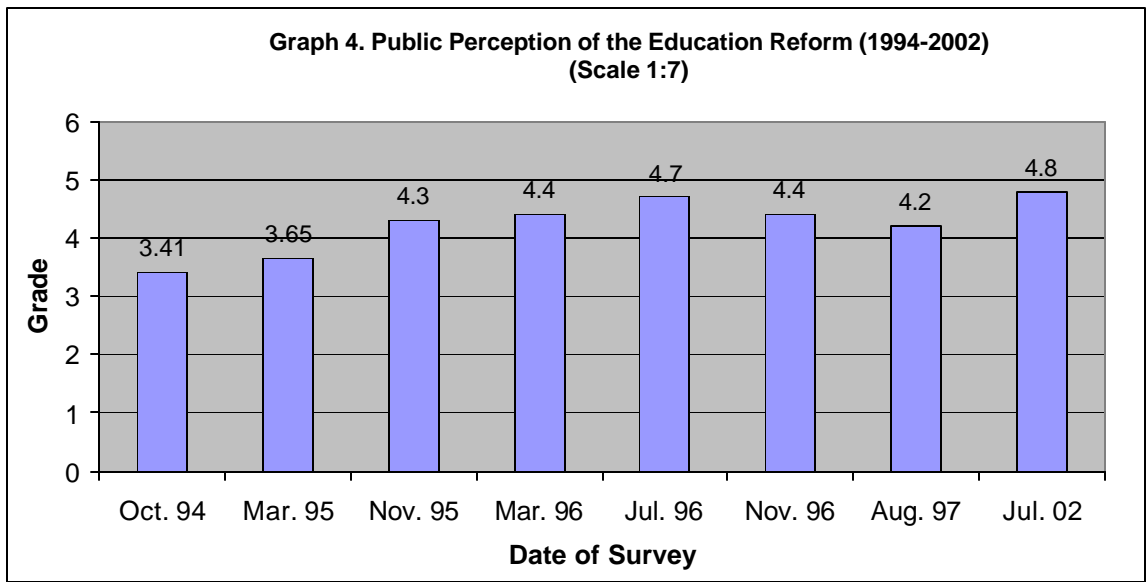
We agree with Grindle that the like-minded team was key and that their placement and composition was very important. Grindle's strategies, networks within government, networks within international funders, limited entry to discussions, and reliance on the executive for political management, were all used successfully in the Bolivian case.

Public Perception of the Reform

In light of the radical changes proposed and the opposition encountered by teachers' unions, how did the Bolivian population perceive the reform? According to surveys by the Bolivian Catholic University in La Paz during the first two years after ERL passage (when there was greater union resistance and less knowledge about what the reform implied), reform approval increased from 39 percent in March 1994 to 60 percent in March 1996. When the Popular Participation unit launched a countrywide (urban and rural) citizenship survey in June 1996 at the end of the Sanchez de Lozada Administration to determine which government reform the population most agreed with, education reform received the most votes (48 percent) over popular participation (45 percent) (Contreras 1998).

Despite difficulties public perception of the reform has gradually improved since the law was passed in August 1994. In October 1994 those surveyed in urban and rural areas graded the reform 3.41 (on a scale of 1-7), the lowest to date. The gradual increase of that grade to a score of 4.8 in June 2002, the highest to date (see Graph 1), no doubt implies that the reform has gained wider acceptance. Broken down by socioeconomic group and age, the highest marks of the July 2002 survey correspond to those with the highest socioeconomic background (who probably are not direct beneficiaries of the reform) and to younger people aged 18-25 (Encuestas y Estudios 2002).

Public perception of the education sector's major problems points toward the lack of qualified teachers (24.7 percent), low teacher salaries (20.8 percent), poor infrastructure (15.6 percent), lack of teachers (13.7 percent), lack of schools (11.9 percent), and school stoppages due to strikes (last with only 3.7 percent) (Encuestas y Estudios 2002).



Source: Encuestas y Estudios (2002).

Conclusions

Reforming education in any country is a difficult process. National education systems have a particular organizational history, with vested interests built around existing organizational structures. Teaching methods and content have long histories. Examination systems and the curricula they drive have become part of the nation's culture. The educational system in many countries, states and municipalities is the single largest source of income for local professionals. Such structures are extremely difficult to change because they are as much a way of life as a way of making a living.

Inter-American Development Bank (2000)

The reform was systemic, comprehensive, and ambitious. It sought changes in virtually every front and is in the process of achieving many of its objectives. The reform established the base from which to change Bolivian education significantly. Thus, Bolivian education will never be the same again. Forward momentum is well established.

The reform created a teaching culture that was not open to experimentation and learning. This is apparent from the reform's starting point, its curriculum and pedagogical practices (in place before the reform began), and the type of training teachers received. This rigid culture was very deeply imbedded in teacher-training schools, teachers, and schools, and indeed permeated the entire education system. Thus in assessing the reform's effective achievements, we must bear in mind that this adverse initial environment made it difficult to implement reforms, regardless of how well they were designed. Furthermore, we do not really know to what degree teachers implemented the reform in classrooms dominated by characteristics of the prevailing teaching culture.³⁸

Despite the shortcomings in the implementation of bilingual and (particularly) intercultural education in Bolivia in the last decade, relative to developments in Mexico, Ecuador, and Peru, the Bolivian initiatives have made headway. There have been cognitive advances, and attitudinal ones are still pending (see Albó 2002). The German expert von Gleich (2003) summarizes: "I consider Bolivia a positive exception; here we can witness a process from bottom-up and top-down with many indicators of an honest intercultural dialogue between the government and the indigenous populations." This process was supported by the innovative CEPOs.

The strategy to introduce the reform to classrooms via pedagogical advisors did not fully take into account the cultural characteristics of teaching. The reform was designed from above and "the expectation that its proposals would percolate through the education system by the action of pedagogical

³⁸ To make matters more complex, the pedagogical and curricular innovations were ambitious and profound.

advisors did not bear out" (Newman Interview 2003). This would allow the reform to be better tailored to the requirements of particular regions or municipalities. There is the perception that the current strategy of disseminating the reform is too centralized with a one-size-fits-all approach (Newman Interview 2003). In the new strategy, school principals should play a key role. This will require training in school management and leadership, as well as economic incentives.

Introducing the reform to individual classrooms and not to schools was also a mistake. The reform should have reached the school and incorporated the school principal at the same time. School principals felt displaced by the reform process given that the pedagogical advisors were given the main role of implementing the transformation program in a predefined number of grades. The rest of the school was left under the improvement program. Thus schools were fragmented between classrooms under transformation and classrooms under improvement, which further increased tensions in the school climate.

There is the need for understanding Bolivia's teaching culture before we even attempt to transform it. Changing teaching cultures is a very complex and, therefore, long-term process. The reform was able to modernize initial teacher training for the first time since the government created the normal schools at the start and middle of the twentieth century. In doing so the MEC developed a basic curriculum and incorporated private and public universities in the process with favorable results in improved teaching preparation, reflected in part in a significant increase in the number of applicants to the INS. Bringing universities on board the reform process was a key step in incorporating important higher-education actors in the implementation of the reform. The reform opened the door for thousands of graduate teachers from normal schools to obtain their undergraduate degrees in both public and private universities, and now most school principals in urban areas have university degrees. If the reform has developed a system for initial training, the design and implementation of an in-service training system and how it relates to what goes on in schools for both current teachers and new INS graduates are key pending issues.

Contrary to what was expected by critics in Bolivia and abroad, the public education system was not debilitated by the education reform. The central government did not abandon education and leave it in the hands of helpless local governments. Education expenditures did not diminish to satisfy the IMF's fiscal austerity requirements or other global watchdogs. On the contrary, education expenditure increased, and the MEC strengthened the public education system.

The role of multilateral banks and donors was very important. At the same time, there was constant Bolivian leadership, and by 2002 the degree of local ownership dispelled public perceptions that multilateral banks and donors had imposed the reform. We agree with Gustafson's (2002:98) appreciation that:

Contrary to Gill's (2000) description of educational reform as a somewhat monolithic project imposed by the World Bank on hapless Bolivia, the transnationalized 'domestic' political scene suggests that educational reform emerged in a highly conflictive and uncertain political setting with significant intra-elite conflicts.

Moreover, as we have seen, there was no overall agreement either among donors or even with the World Bank on exactly what to do (see Box 1). There was no pre-established blueprint. Instead, it was a process.

There was wide consensus on the need for reforming education. What is still unclear is when the union leadership was marginalized (or when it marginalized itself). The reform proposal was designed outside both the Ministry of Education and the union leadership. As such it was widely regarded by teachers as having an anti-teacher bias. Both teachers and unions resisted the reform. This has gradually changed, and we estimate that a majority of rural teachers and over 60 percent of urban teachers now support the reform. As more teachers become involved in the implementation, acceptance will only increase. However teachers' compliance with the reform due to pressures brought about by legislation and higher salaries does not necessarily indicate teacher buy-in. To determine this, better survey data than that currently available is required. As stated above there is a need for greater involvement of teachers as major actors in future reform re-design.

The degree to which the curricular and pedagogical proposal has actually been implemented in every school is still unknown. Thus another area pending further analysis is a quantitative study of effective curricular and pedagogical implementation by schools. The literature on comprehensive school reform in the U.S. strongly suggests that until we have some better indication, the reform's impact on learning outcomes will be moot (Desimone 2002).

As with other Latin American education reforms (Carnoy 2002), there is still no conclusive evidence that the reform has improved student learning as measured by achievement tests. There are some doubts regarding the reform's effectiveness in improving the teaching of reading. There is also no evidence that before the reform students learned more than they do today. There is no evidence that the reform has actually worsened the process of teaching reading. More time is required to extend and deepen the reform's implementation and to consolidate and analyze the results. Changes in educational systems are never uniform and consistent across schools.

The real impact of the reform on teaching practices and results will only be measurable after one or two decades. According to McGinn (2002), "Early research in the United States calculated that innovations on average take about 20 years to be adopted by half the schools." As has been shown in this study, it took twenty years for behaviorism to consolidate its practices in Bolivian schools.

Although there have been advances in education coverage, there are still important unmet challenges. According to recent estimates of the Ministry of Education, in 2002 approximately 320,000 or 14 percent of children ages 5-15 were not in school. To overcome this the Bolivian government is working on a program of school expansion, increased teacher availability, and a new school attendance subsidy to stimulate demand. The program would require an additional \$300 million as a grant from the international community to meet the Education for All goals by 2015 (Ministerio de Educación, Cultura y Deportes 2002b).

The Bolivian education reform is at a threshold. The extent to which progress so far is the result of improved inputs versus changed processes is unknown. Given the reform's high cost and competing demands placed on scarce resources, the authorities—and the implementers—need to know what generates more learning per unit cost in order to re-channel more resources toward areas of greatest need and the most productive approaches.

Despite all its travails and limitations, the education reform has established itself as a major public policy that has gained media and public respect. The policy debate around education has developed and strengthened. The reform process has enabled the development of a new cadre of professionals in all education areas (curricular, pedagogical, administration, and planning, among others) and also stimulated other professions to study and participate in education policy debates. Similarly the reform has stimulated the development of teaching book writing, design, and publication.

A key attribute of the Bolivian education reform has been the overall continuity it has enjoyed over the last nine years and four administrations. This has been a very positive aspect in terms of assuring implementation, but has also had its downside. According to Herrán Personal Communication (2003):

The Bolivian Reform has been characterized by a strong sense of mission and the impressive continuity ... is uncommon and very important in the education sector in Latin America and the Caribbean (other examples may be Chile for over 20 years and Brazil over the last 10 years). This strong leadership and sense of mission may, on the downside, have generated an 'inward looking' ethos and a culture difficult to permeate from outside the team that has conducted the reform. This has alienated other important actors, which are now turning against the reform and have hurt its continuity and sustainability (regardless of the merit or objectivity of their accusations).

Because of all the activity in the education sector due to the reform implementation, education is definitely on the agenda of Bolivian society. This in itself is a very positive outcome and one that presents a great opportunity to continue improving the reform and expanding it to secondary education. According to Cuadra Personal Communication (2003), improvements in the internal efficiency of the primary level are putting pressure on secondary-school reform.

This case demonstrates that to have a real impact, education reform has to respond and adjust to the changing reality of the Bolivian context. Ultimately the success and continuity of the reform rest on its ability to adapt. To do so, monitoring and evaluation, synthesis, and reflection are key. This is even more important now because of greater demands placed on education and the reform by the actors (teachers, parents, local governments, politicians, and the media) and society as a whole.

Lessons Learned³⁹

Continuity in policy and leadership is critical to achieve lasting results in Bolivia, as was the case in Chile and Brazil. This is important because changes in education occur over the long term and developing institutional capacity is key. In Bolivia four governments included education reform on their policy platform. Equally important, there was continuity in the team that designed the reform at ETARE and then implemented it in the MEC. A poignant example of this is the ascent of Amalia Anaya from head of ETARE to Minister of Education, after first having been a director of a unit and then a Vice Minister of Initial, Primary, and Secondary Education at the MEC. This is similar to the experiences of Chile and Brazil.

In Chile policy stability has been achieved despite changes in personnel and even government. Notwithstanding the dramatic change from a military to democratic regime (1990), the positive legacy of the Pinochet government (school choice) was protected. Since the *concertación* (alliance of Christian Democratic Party with parties of the left) took over, they put in place measures to correct the deleterious equity effect of radical market approaches such as targeting. Seven successive Ministers of Education have each improved on his/her predecessors' policies (Delannoy 2000). Similarly in Brazil, eight years of the Cardoso Administration allowed Minister Renato Souza to introduce bold measures which led to a dramatic improvement in basic quantitative indicators (enrollments, repetition, age-grade distortion) and to put in place evaluation instruments and frameworks with a view to establishing a culture of accountability (Souza 2001). In all cases, however, reform efforts did not follow a blueprint. On the contrary, they were processes that developed in an iterative and interactive manner.

There is a need for basic provision of materials in all schools in order for innovation to take hold. The Bolivian education reform provided books, a wide variety of school supplies, pedagogical advisors, school education councils, and to a lesser degree, infrastructural improvement. It also sought to change curricular and pedagogical issues. This was seen more clearly in Brazil (and Chile) where “minimal operational standards” were in place (adequate infrastructure, minimally trained teacher, basic set of material, parental commitment, and a support system).

There is also a need to ensure that basic institutional capacities are developed within the ministries of education. An information system, capabilities for curricular development, and mechanisms for planning and monitoring the education system provide a minimum platform from which to develop and implement the education reform. Bolivia was able to develop an information system and capacity for curricular development, but is in the process of developing planning mechanisms and has yet to start

³⁹ We thankfully acknowledge the help of Françoise Delannoy in this section. We reiterate that all the limitations and errors are our responsibility. The usual caveats of drawing lessons from one reality to illuminate another one apply.

developing a monitoring system. In the case of Brazil, the centralization and development of educational information was one of the first actions undertaken by Minister Renato Souza.

All levels of education systems have complementary roles to play in a reform. Vertical alignment and articulation between their goals and methods, along with the development of local capacities, are also important determinants of quality local capacity. For system-wide reform, as in the Bolivian case, profound transformation is needed in each classroom and eventually every school. This requires working at several levels:

1. **The macro level or system**, which sets directions, makes the investment, monitors quality and ensures equity;
2. **The in-between:**
 - a. **The school**, because it is the locus of learning and where the micro and macro dimensions intersect and are integrated;
 - b. **The municipal/district level**, which usually provides support; and
3. **The micro level or classroom** (constructivist and other pedagogical approaches).

If governments and reformers only work at the classroom level (or bottom-up), education systems may have “a thousand points of light” but change will not go to scale. If reformers only work at the macro level (or top-down), they are unlikely to reach the classroom with the deep cultural transformation that is required for sustainability. As shown in the Bolivian case, there has been more systematic development at the macro level. There have also been interventions at the micro level and some in-between. What is still pending are the linkages between the levels.

There are severe limitations here given the political and predatory approach of prefects (at the departmental) level toward resource distribution in education. Given that this is a multi-level, complex process, accomplishing it is difficult and has not been fully achieved in countries such as Chile which has been undergoing reform for two decades. In Brazil, on the other hand, because the federal government plays a stronger role than in the U.S., they are providing (e.g., through the FUNDESCOLA project) software and training to strengthen municipal and school capacity in strategic planning, budgeting, salary cost projections, career restructuring, etc.

Going to scale requires creating a learning organization featuring integrative processes, professional networks, and a new style of leadership. Practically all reforms suffer from fragmentation and overload at some point, and Bolivia was no exception. Teachers were overwhelmed. New and more demanding curricula and pedagogy turned their worlds upside down. Incorporating bilingual and intercultural education added further stress and challenged long-held assumptions and values. An exercise such as the school development plan—or the Bolivian variant of the cluster educational plan whereby the staff collectively reviews all the school’s processes, policies, programs, organization, etc. in light of their goals—can serve as an integrating process. Everything that does work or help is kept and reinforced; everything that does not meet the test is discarded. This simultaneously decreases staff isolation and promotes ownership and priority setting. It increases the institutional capacity to collectively resolve concrete problems of application in a specific context

and is a form of professional development. In Bolivia school plans were replaced by cluster plans, but the principles of information sharing remain the same.

Learning requires opportunities to reflect on practice. Given Bolivian teachers' isolated manner of working, a key challenge is the development of meaningful learning circles with a clear purpose among the teachers. Teachers need to be heard. As pointed out earlier, it is in-practice training that makes initial training sustainable and the major challenge is for "teachers [to] become simultaneously and seamlessly inquire oriented, skilled, reflective, and a collaborative professional" (Fullan 1999:326).

In order to develop into a learning organization, the public education system must answer certain questions. How well are we doing? Where and how do we have to improve? These are key for monitoring educational quality and accountability. Therefore the central question is, does the education system have the tools to further improve the pupils' cognitive outcomes, bearing in mind that it is easier to improve quantitative than qualitative indicators? If not, what should those tools be and how far could they "take" the system in terms of student learning? To what extent is the Bolivian model a Latin American alternative to the standards and assessment model?

The array of instruments found in high-performing education systems, as identified in the TIMSS or the OECD PISA,⁴⁰ tends to include:

- **Clear and specific goals** (a definition of quality), expressed in standards⁴¹ which cover the curriculum, teaching, leading, and preparing teachers and leaders, schools, and assessments. The rationale is that one must know where one is going in order to get there, even though there are many different paths. This is compatible with the constructionist approach, which is open-ended, but it goes further by setting more challenging societal expectations.
- **Measuring instruments** to continuously monitor quality on formative and summative bases. Student assessments are the very minimum, but also in more sophisticated systems, teacher and leader performance appraisals, department evaluations, program accreditations and teacher certification mechanisms, school quality reviews, and parent surveys.⁴² These instruments help answer the question "how well are we doing?" and must continuously be cross-referenced to obtain a richer picture. In a well-aligned system such as the United Kingdom's Literacy and Numeracy Strategy, the package of corrective actions to improve outcomes is designed around the learning weaknesses identified by the assessments (e.g. pedagogical fiches and extra-training for teachers around specific student learning problems).
- **Support and pressure mechanisms**, all converging toward the stated goals. Support includes, for instance, professional development and pressure, and the publication of results. The stronger the coherence (alignment) between the mechanisms, the higher the likelihood that you can improve quality. The support also includes access to best practices in order to correct the weaknesses identified.

⁴⁰ Whether in Australia, Ireland, Finland or Singapore.

⁴¹ Sometimes referred to as frameworks.

⁴² One good example is North York in the province of Ontario, Canada.

- ***A public conversation around quality***, as evidenced by the measuring instruments at all levels of the system—classroom, school, cluster, municipal, parents, and nation—to determine the level of public satisfaction with the outcome (the famous “accountability”), what to do about it, and how success will be measured.
- ***Feedback and corrective strategies***, which take into account research findings.

We would like to suggest that the trade-off is not between pedagogy-based reforms versus standards- and assessment-based reforms. Rather there is a need for both. The Bolivian case so far is a pedagogy-based reform and, in our opinion, will have to complement this with teaching and learning standards and the mechanisms for measuring them to provide adequate support and enough pressure (in that order) to the education system at all levels to improve student learning.

Annex 1					
Key Education Indicators for Bolivia					
	Latest Single Year			Same Region/Income Group	
	Early 1990s	Mid-1990s	2001	Latin America & Caribbean	Lower-middle Income Countries
Illiteracy rate (%)	20	16.6	13.3	12	15.9
Gross enrollment rate (total)	69.8	77.6	88.4		
Pre-school	31.5	36.9	48.6		
Primary	94.5	103.3	108.4	113.4	106.6
Secondary	38	45.3	66.8	71.9	71.1
Net enrollment rate (total)			76.1		
Pre-school			38.3		
Primary	91		97	93.9	89.8
Secondary			51.1		
Girls as a % of total enrolled (primary)	47.2	48	48.5	48.7	48.0
Girls as a % of total enrolled (secondary)		46.4	47.4	51.5	45.5
Dropout rate (public schools)					
Primary school	6.2	8.2	5.9		
Secondary school	10.1	11.6	6.7		
Sixth grade promotion rate (public schools)					
National	52.8	77.3	84.7		
Urban		77.2	85.3		
Rural		77.5	83.7		
Repeaters as % of total enrolled (primary)		7.1	3.8	14.1	2.5
Repeaters as % of total enrolled (secondary)		10.6	8.6		
Public expenditure on education as % of GDP	2.4	3.5	5.6		
Public expenditure on education as % of total public expenditures	6.9	10.4	23.7		
Human Resources (public schools)					
Students enrolled in primary school (millions)	1.141	1.429	1.666		
Number of teachers		80,678	91,782		
Primary school teachers		61,828	70,177		
Number of school teachers without diplomas		31,881	33,665		
Pupil to teacher ratio in primary schools	15	25.5	25.1	26.4	21.1
Physical resources (public schools)					
Number of school buildings		12,041	14,758		
Buildings with electricity (% of total)	20		38.1		
Buildings with water hook-up (% of total)	9		19.7		

Source: World Bank Bolivia Country Office (2003), based on Information Education System (SIE), National Census of Population (2001), various household surveys, and World Bank Education Statistics.

Annex 2 Articles of the Education Reform Law Relevant to Formal Pre-University Education (and Currently Rejected by the Authorities of the Teachers' Union)		
Articles of the Education Reform Law	Current Status	Balance
The exclusion of teachers from Education Boards at the school, <i>núcleo</i> , and district level (Article 6).	At the school level teachers participate in school boards, especially in rural areas where teachers effectively lead school boards. In urban areas the presence of teachers in the education boards is less frequent.	No adherence in the rural areas. Partial adherence in urban areas.
The transformation of the normal schools into Higher Normal Institutes (INS) and the possibility that teachers may be trained in universities (Article 15).	The MEC transformed normal schools into INS and currently are part of the National System of Teacher Training created in March 1999.	Full compliance.
The recognition of graduates from the INS as having the status of associate degrees (Article 16).	The degree awarded by the INS has the status of an associate degree.	Full compliance.
The administrative unification of urban and rural education that implied the unification of urban and rural union representation (Article 32).	At the MEC, there are no longer separate administrative units for urban and rural education. However, teacher pay structure continues to recognize different base salaries for working urban and rural teachers. There is still an Urban Teachers Confederation (CTEUB) and a Confederation of Rural Teachers of Bolivia (CONMERB).	Partial compliance at the administrative ministerial level. No effect on structure of teachers' union.
Opening the positions of Director General, Departmental Director, and District Director to professionals who are not teachers (Article 33).	At the beginning, in some selection processes professionals other than teachers were considered. Currently almost 100% of the executive positions in departmental and district offices and in the SEDUCAs are occupied by teachers. In the announcements three years of experience in the educational sectors are required. This limits the participation of professionals who are not teachers.	No compliance.
The establishment of a competency exam for teachers before they enter the government payroll (Article 34).	No competency exam was developed.	No compliance.

Annex 2 Continued		
Articles of the Education Reform Law	Current Status	Balance
The social control over the performance of educational authorities, school principals, and teaching staff by the education boards, with the authority to propose their hiring and dismissal (Article 36).	This is one of the functions that education boards currently exercise and, according to the union leadership of both urban and rural unions, what they have been reduced to. This is more true in urban than rural areas.	Partial compliance.
The modification of the pay structure (<i>escalafon</i>) and the creation of new career paths: administrative and teachers (Article 37).	The union leadership of both unions considered the separation of a teaching stream and an administrative one as an affront. The pay structure used in 2002 is the same as the one in 1992.	No compliance.
Developing norms to regulate teacher administrative permanence, access requirements into the teaching profession and criteria for remaining in it (an entrance exam and a renewable accreditation exam every five years) (Article 38).	There is no exam to enter the profession, nor an accreditation exam to determine proficiency every five years in order to remain in service as requirements to have teacher inamobility (i.e., to serve as a civil servant for life).	No compliance.
The prohibition of the right of unionization for administrative staff with executive responsibility (Article 39).	Administrative personnel of both the urban and rural schools continue to be represented by the CTEUB and CONMERB, respectively.	There is compliance in administrative personnel with executive responsibility at the national and departmental levels. But there is no compliance at the school level.
Municipal governments must finance office infrastructure and supplies for the district and sub-district level (Article 43).	In some municipal offices, furniture and supplies were provided for the education district offices.	Partial compliance.
The municipal treasury must administer and finance the construction, repair, and maintenance of the school infrastructure and also provide furniture and didactic materials to initial, primary, secondary, and alternative education (Article 48).	See section on PROME, PEN, PER, and PEI. It is significant that the MEC has no comprehensive information of the budgetary outlays of the municipal governments.	There is scarce compliance, but there is improvement.

Source: Based on document by Gutierrez (2003).

Annex 3 Analysis of the Transfer of Education Competencies to the Departmental, District, Nucleus, and School Levels		
Norm	Compliance and Development	Current Status
Departmental - Prefecture		
Designate the Departmental and District Education Directors.	Total.	Every Departmental Prefect names the SEDUCA authorities (Departmental and District Director).
Monitor and evaluate the working of education, as well as the performance of District Directors.	Almost none.	There is no evaluation. The MEC did not promote this process. It offered technical assistance in the selection process, but not in the monitoring.
Formulate in a participatory manner the Departmental Education Plan based on the District Plans and establish education objectives and goals for the Departmental Development Plan.	Very little. Only Chuquisaca developed a Departmental Education Plan included in the Departmental Development Plan.	The impulse from the PROME has not yet been able to change Departmental planning.
Consolidate and publish the annual school calendar of the school districts in the Department.	Practically no compliance.	In general, SEDUCAs comply with the national school calendar although they differentiate the winter break in June.
Develop the diversified curricular proposal for the Department to complement the core curricula.	No advance.	There are no diversified Departmental curricula. The MEC has given priority to the consolidation of the core curricula.
Administer, supervise, and control, by delegation from the national government, the human resources and the budgetary items for personnel assigned for education human resources in the Department (Administrative Decentralization Law).	No advance.	The MEC still manages the payrolls.
Control the budgetary ceiling assigned to the Department and its Districts for teaching and administrative personnel.	Almost fully.	It is carried out at the Departmental level, but the oversight and approval of the MEC is still required.

Annex 3 Continued		
Norm	Compliance and Development	Current Status
District Level - Prefecture		
Plan, execute, and evaluate the annual educational management in coordination with the District School Board.	Very advanced.	Through development and execution of PROME, PEN, PER, and PEI, it has been possible to plan and develop education management at the district level and also to coordinate with the municipal government in the elaboration of the PROME and its articulation with the Municipal Development Plan.
Evaluate school management, the performance of teaching and administrative personnel, with the participation of school boards, nucleus boards, district boards, and the respective CEPOs.	Almost none.	No evaluation. The MEC did not promote this process. It prioritized providing technical assistance in the process of school principal selection not in their evaluation.
Coordinate with the respective municipal governments the elaboration of a Municipal Education Plan articulated to the Municipal Development Plan.	Very advanced.	The elaboration of PROME has provided a link between the planning at the district level and the Municipal Development Plan.
Manage the human, financial, and material resources assigned to the district within the budgetary ceilings and the efficiency indicators established by the MEC.	Partial.	In general, the technical teams of the district offices have not been completed. There is, however, control of the budgetary ceilings.
Hire and designate teachers, school principals, <i>nucleo</i> , and district directors. Approve the hourly teacher workload within the budgetary ceilings of each district.	Almost completely.	The tasks are carried out. The technical assistance and supervision of the MEC are still very important.
Make the payrolls and pay slips, and pay the salaries of teaching and administrative staff in the relevant jurisdiction.	Very little development.	Although the 126 District Education Directions produce the payrolls in a computerized fashion, the MEC reviews and consolidates the payrolls before the Ministry of Finance compiles the final payrolls and pay slips.

Annex 3 Continued		
Norm	Compliance and Development	Current Status
Organize training programs for teachers, school principals, and administrative personnel.	Important developments.	In addition to training offered by the MEC and other agencies (such as UNICEF), the District Education Directions have developed training for their teachers.
Channel the requirements of the <i>nucleo</i> directors and the school principals.	Interesting developments.	Through the PEN, PER, and PEI.
Promote the development and work of the school, <i>nucleo</i> , and district boards.	Much compliance and development.	However, the promotion and work of the school boards has received more impetus from the MEC than from the district offices.
Develop the annual school calendar for the district.	No advance.	With very few exceptions, district offices generally adopt the departmental school calendar although they may differentiate the length of the winter break.
Develop a proposal for district-level curricula to complement the common core curricula.	No advance.	The MEC prioritized the consolidation of the core curriculum.
Municipal Level		
Finance the construction, repair, and maintenance of school infrastructure, and the provision of school furniture and teaching materials.	Interesting developments with the application of the PROME.	The MEC does not have a register of investments and current expenditures in education carried out by municipal governments, other than those done through the PROME.
Manage the infrastructure, which implies payment of its own administrators.	No advance.	The MEC still manages administrative personnel at the school. The National Treasury pays their salaries. In some big municipalities, there is a person in charge of infrastructure (including education) in the municipal government.
Supervise the performance of education authorities, school principals, and teachers and propose their confirmation or removal (Popular Participation Law).	No advance.	Municipalities did not undertake this role, presumably because of the political costs it implied.

Annex 3 Continued		
Norm	Compliance and Development	Current Status
In charge of school break-fasts (Popular Participation Law).	Very advanced.	This is the responsibility of the municipal governments.
School Nucleo Level		
Forward to the district office the requests for teachers in schools.	Full compliance.	
Compile and send to the district level the proposed budget for the <i>nucleo</i> , approved by the <i>Nucleo</i> Education Board.	Well developed.	The development of PEN and PER has enabled this. It still has to be generalized and consolidated.
Develop the school schedule and distribute the 30 school hours per week.	Almost full compliance.	
Develop the complementary areas of the diversified curricula.	No advance.	The MEC strategy was to consolidate the core curriculum.
School Level		
The school principal selects the teachers in his school.	No advance.	This responsibility has not been transferred by the district directors.
Prepare and present the annual education project and its corresponding budget to the <i>nucleo</i> director.	Some advances in the development of instruments.	The development of a school educational project is part of the PEN (PER or PEI). Its generalization as a management toll in all schools is pending.
Develop the school timetable and distribute the 30 hours of school work per year.	Almost full compliance.	
Develop the complementary areas of the diversified curricula.	No advance.	The MEC strategy was to consolidate the core curriculum.

Source: Based on document by Gutierrez (2003).

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