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A CASE STUDY OF CHILE 1965-70
Noel McGinn and Ernesto Schiefelbein
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1.0 Introduction

The politician in a pluralist state, faced with fragmented power and divided authority, begins by asking "What can be done?" Only after the possible action alternatives are defined does he ask, "What is to be done?" or "What do we want to do?" He answers his first question with information about the current reality, and his second, with an inspection of his values and objectives. Information cannot tell us what we should want to do. For that we must rely on previously formulated values. But information can indicate what it might be possible to achieve.

That reliance on information indicates the critical role that the planner can play in the process of change. As a technician expert in the collection and display of information, and as one trained in social analysis, the planner can help others to relate their values to feasible action. Planning, as a means for organizational guidance, makes sense when it speaks to those who have authority and power. Recommendations to the politician, to the administrator, to the decision-maker, must therefore be presented in terms of variables important to those actors. The planner's rational analysis must include as essential information, the political gains and costs of alternative policies and operational strategies.

This is as true in education as in any other social organization. Just because it is so important to the development of society, many groups attempt to shape education to satisfy their interests. Over time, skillful administrators (read politicians) are able to work out complicated compromises among

the more powerful groups with a stake in education. The system enjoys stability so long as it is possible to continue to satisfy those interests.

1.1 Resistance to Change. Proposals for change threaten that equilibrium, and consequently engender resistance. Those proposing educational reform cannot rely on rational arguments to secure acceptance of proposed changes. To gain enough adherents to be approved and implemented--both within a Ministry of Education and in the larger society--a Reform must develop a political power base sufficient to overcome the forces of resistance. No change is possible without strong support from the top positions in the national political hierarchy. But even with that support, reforms sometimes fail to get off the planning board. Unless the Reform mobilizes support from those inside and outside the Ministry who participate in its realization and supervision, change may occur only in the top layers of the bureaucracy, and leave the rest of the old system intact.

This process of mobilization requires information, and that is how planning can be organized to contribute to educational reform. Planning must contribute to an understanding of the power structure in which education operates, helping to identify the interests of various groups as well as to generating innovations that meet the interests of enough groups to insure that change will be supported. Because planners have no privileged knowledge of the future, they cannot through application of their technical skills identify the perfectly optimal solution. They can, however, use those and other skills to generate an environment of confidence in the ability of the proposed Reform to satisfy interests of participating groups. To contribute to a successful Reform, therefore, planning must go beyond the analysis of technical data with respect to education, and beyond a strict deterministic or mechanistic view of the

educational system. Planners must see themselves as one of the several actors in the complex drama that is the pluralist state.

1.2 Content of This Paper. This paper illustrates these maxims in the experience of one successful attempt to carry out an educational reform. This reform was successful in that many of its immediate objectives were reached: it did result in a radical restructuring of the educational system.¹ The reform may have failed, or have been frustrated in more ultimate objectives of contributing to radical restructuring of society, but the educational planner should not be faulted for that.² Most significantly, this reform was accomplished in a parliamentary democracy in which the governing party did not control the Legislature, and could not rely on the military. It is a case where educational planning necessarily included attention to the political process in the generation of change.³

¹Additional details of the Reform process are included in Ernesto Schiefelbein, "The Politics of National Planning: the Chilean Case," Educational Planning, 1:3 (January 1975), pp. 27-34; Kathleen Fischer, Political Ideology and Educational Reform in Chile, 1964-1970, Unpublished Ph.D. dissertation, University of California, Los Angeles, 1977.

²For a critique of the non-educational effects of the Reform see Carlos Calvo, et. al., Educational Reform and Political and Economic Change in Chile: 1964 to 1970, Washington: World Bank, Staff Working Paper, June 1976.

³For other cases illustrating this point see Guy Benveniste, Bureaucracy and National Planning - A Sociological Case Study in Mexico, New York: Praeger, 1970; Noel McGinn and Donald Warwick, "The Evolution of Educational Planning in El Salvador: A Case Study," Paper #17 in this series.

2.0 Background of Educational Reform in Chile

The Educational Reform in Chile was carried out between 1965 and 1970. During that period of time, the following were some of the activities:

- an extension of compulsory education, in fact as well as by law, from 6 to 8 years of schooling;
- total revision of all subjects in the primary school curriculum;
- revision of secondary-school curriculum, including the elimination of a class-based separation between vocational and academic tracks;
- expansion of enrollments at both levels to accept all applicants;
- creation and operation of a national educational television station;
- programs of adult education based on concepts of community development and upgrading of workers;
- initial progress in integrated planning of university development.

How was it possible to accomplish so much in so little time?

2.1 The Content for Educational Change in Chile

Presidential elections were held in September 1964, after a long, active, and sometimes violent campaign. Public interest in the elections was high, and a greater proportion (91%) of the electorate went to the polls than ever before in history. Because the conservative parties had not been able to agree upon an attractive candidate, the election was a two-way race between the leader of the center-left Christian Democrats and the "Popular Front" coalition of the Socialists, Communists, and anti-clerical Radicals. With no conservative candidate, the Christian Democrats did not have to make campaign overtures to the right and the campaign turned on issues of whether the "revolution" needed by Chile should be bloodless, or based on class struggle. The Christian

Democrats promised a "revolution in liberty" while Popular Front rhetoric (and CIA subterfuge) raised specters of armed conflict.

The Christian Democrats won the presidential election easily, with more than 56% of the popular vote. This was the first time in many people's memory that a President had won with an absolute majority; many people concluded that the Christian Democrats would enjoy undisputed power. One Party chieftain rejoiced, "We'll be in power for 20 years."

2.1.1 The Party's Weak Position. The jubilation was short-lived. The Christian Democrats did not have a majority in the Legislature; in fact the Party held only 4 of the 45 seats in the Senate, and 23 of 147 positions in the House of Deputies. Congressional elections would not be held until March 1965, at which time, half of the senators, at most, could be replaced. Despite deep and bitter ideological differences, the conservative and Popular Front camps met soon after the elections to plan how they could frustrate as much as possible of the "revolution" promised by the Christian Democrats. Looking back in history, it is clear that this was to be one more minority government in Chile's history.

The Party's minority position in the Legislature is explained by their short history. Christian Democrats participated in national politics for the first time in 1952 (when candidate Eduardo Frei received less than 5% of the votes). Most of their supporters were young, and most of the leadership was politically unseasoned, except for a long history of struggle in the nation's universities and secondary schools, where the Christian Democrats had won power several years previously. The Party drew its strength from women, skilled working class, small landholders and members of rural cooperatives, and a burgeoning number of secondary school and university graduates with technical training.

Its ideological roots were in the social gospels of the Catholic Church, which argued both for a fundamental structural change in society, as well as for a democratic process marked by respect for the rights of all. The Party saw the major obstacles to the nation's development as rooted in the resistance of vested interest groups, both capitalists and political parties that build their futures on the failures of others. The Presidential campaign had commented on the cultural and social fragmentation of the country, on the lack of unifying values and ambitions. President-elect Frei called for a crusade by all citizens to build a new order based on solidarity and social justice. This would be a participative process, he said, in which all citizens would contribute to forming the new Chilean man.

2.1.2 Importance Given to Education. In this process, education was to play a critical role, Frei announced in his inaugural address. The extension of educational opportunity to all-- "democratization" of education he called it-- was necessary both to achieve increased agricultural and industrial productivity, as well as to build patterns of popular participation in political decision-making, and to encourage a more favorable distribution of income. Education was the single-most important investment the nation could make, because it was an investment in its own people. A new education, based on authentic national needs and values, would enable people to master changes in their rapidly-changing environment, using the power of science and technology to make a better life for all.

Several days after his inauguration Frei announced that there would be a major educational reform. No details were provided about the Reform, other than to restate the need for rapid expansion of educational opportunities at all levels, and the revamping of curriculum to bring it into line with modern science.

As his Minister of Education President Frei appointed Juan Gomez Millas, a former Rector of the University of Chile. Trained as an historian, Gomez was considered as an administrator capable of getting things done. A charismatic speaker, he enjoyed excellent relationships with educators and other professionals interested in education. He was not a member of the Christian Democratic party. President Frei promised Minister Gomez he would have complete support, including whatever fiscal resources were required.

2.2 Previous Efforts at Education Reform

The history of education in Chile was replete with experiments in new educational structures and curriculum. These included a plan for consolidated schools (a nine-year institution combining academic and technical subjects) begun in the late 1940's; the experimental academic secondaries that in the 1950's introduced the elective curriculum and active teaching methods; and the development of a special program in Arica, in the northern part of Chile, that attempted to integrate all levels of education and actively reduce dropouts.

The number of efforts at reform, going back to the 1920's, reflects both the rich intellectual history of Chile, as well as the profound problems facing education. Each of the experimental programs had the backing of prestigious persons within the intellectual community; none of them had any appreciable impact on the great inert mass of the educational system. In fact, in 1964 the catalogue of educational deficiencies in Chile was almost as extensive as that from 1944. In 1964:

- Not all children were enrolled in school although the Constitution required school attendance;
- Less than half of those who did enroll would ever finish the 6th grade;
- The education provided was thought to be of low quality, ill-suited to

training people for productive roles in a society seeking to escape the twin tragedies of chronically low rates of economic growth and chronically high rates of inflation;

- Educational opportunity was highly associated with social class, and biased in favor of those living in urban areas, particularly the capital city.

None of these problems had been affected by previous efforts at educational reform.

2.2.1 Prior Planning Had Failed. Furthermore, little had resulted from efforts of the Integral Education Planning Commission created by decree by President Alessandri in 1962. But not because of lack of energy. In fact the Commission, headed by brilliant educator Oscar Vera, had worked long and hard hours to do a thorough analysis of the needs for educational reform in Chile. In addition to a description of the system's failure to provide education to all, the Commission's report described the changes that would have to occur in the administrative apparatus of the system. Vera's group proposed creation of a nine-year basic education cycle, in which all children would be enrolled; changes in the academic and vocational high school programs, and creation of short degree programs at the higher educational level. The plans were based on two-and-a-half years of work of 140-150 persons, as well as that of foreign experts provided by USAID, UNESCO and other groups.

But presentation of the Commission's recommendations, including the creation of an Educational Planning Office, provoked considerable controversy. During the formal hearings in the Legislature on the Commission's proposal for a law creating an Educational Planning Office, representatives of parents, trade unions, teachers' unions, universities, private schools, student federations, all

protested that they had not been consulted during the planning process. The Commission's proposal for legislation died in committee in early 1964.⁴

3.0 Preparing for a New Educational Reform

Minister Gomez quickly decided that the Educational Reform could not be carried out following the strategy used by the earlier Educational Planning Commission. He recalled that the Commission had tended to ignore the political basis for educational decision-making, and had acted as though only educators and a few university-based intellectuals had vital interests in the educational enterprise. In the political arena, the Christian Democrats faced the "unholy alliance" of Marxists and reactionaries, formed soon after the inauguration, that was searching for ways to embarrass the new Government. Within the Ministry, Gomez soon found, most of the bureaucrats had tenure and were loyal to the parties, now in the Opposition, that had given them their positions.

But he had to act, and quickly. President Frei had already announced there would be a Reform; he expected Gomez to give him some action that he could use to show that the Party intended to carry out its promises.

The action was an announcement in mid-December 1964, given front-page attention by all the media, that beginning the new school year in March 1965, all children who wished to enroll in school would find space. For the first time in the history of Chile, the Ministry proclaimed, no child would be turned away because of lack of space or teachers. At the time this announcement was made, only 89 percent of the age group was enrolled in primary school, and there seemed to be no excess of teachers or classrooms. Something had to be done, and fast, to make good on the Minister's promise.

⁴But some educational planning continued. Part of the effort is described in Russell Davis, "Manpower Planning in Chile," Paper #77, Harvard Graduate School of Education, Center for Studies in Education and Development.

3.1 The Organization of the Planning Office

Gomez Millas turned for help to the team of technicians that had worked with him while Rector in the University of Chile. This small group of young economists and accountants had helped plan the strategy that ended up consolidating power in the Office of the Rector, breaking the stranglehold that isolated and autonomous faculties had held for years. As Director of his Educational Planning Office, Gomez named Ernesto Schiefelbein: economist; no experience in educational bureaucracy; not a member of the Party. The Minister located the Office under the Superintendency of Education, as the Superintendent was one of the few appointments the Minister could make without approval of the Legislature. Legal authority for the Planning Office was presumed under the same Presidential Decree (never revoked) that had created the 1962 Educational Planning Commission. The Minister felt he could use the Commission decree as a general umbrella to hire people (on a non-tenure basis) without having to go through the usual legislative channels for approval. The Educational Planning Office would report directly to the Minister and his Sub-Secretary, Patricio Rojas.

In addition to the few full-time professionals he brought with him from outside the Ministry, Schiefelbein hired some people as consultants, obtained others on loan from other departments in the Ministry, or from the universities, and stirred up enough enthusiasm to receive a number of volunteers who would work for short periods. Recruitment and selection was accomplished by asking the Directors of the operating divisions of the Ministry, their staff, and leading professors in the pedagogical and normal schools, to nominate people who could contribute. Some members of the defunct

⁵The Minister had the power to transfer the Directors of the major departments (Primary, Secondary, etc.) and replace them with his own people, but a long-standing tradition defined these positions as "professional," and therefore not subject to the "seniority" rule.

Educational Planning Commission were included in the group, as were persons drawn from all the major political parties in the country.

3.2 Gaining Control Over the Bureaucracy

The success experienced in putting together the staff for the Educational Planning Office provided the guidelines for later recruitment of staff for the operating divisions (i.e., Primary, Secondary, etc.). New positions could not be added without legislation, and the chances of success there seemed slight. Some people could be hired onto the Minister's personal staff, but in general salary schedules in the Ministry were lower than the "market" was paying, and it was thought that it would be difficult to attract competent people. Some people could be hired using research or service contracts from external agencies, for example with UNESCO, which allowed higher salary rates than the Ministry paid to its permanent employees.

In total, however, the numbers of people that could be hired through these devices was small compared to the needs, given the size of the Reform and the kind of change strategy adopted. The decision to avoid the Legislature implied adding-on activities, rather than replacing them. That required more and new hands. Furthermore, it was assumed that many of the functionaries in the Ministry did not have the requisite knowledge to carry out the kind of Reform that was contemplated.

3.2.1 Use of the Capital Budget. The agreement finally hit upon was the use of funds from the capital budget to hire personnel for the short-run effort to get the Reform started. Large sums of development capital had been set aside for Education by the Christian Democratic administration. The Ministry formed a small extra-official group, made up of persons of confidence, to control its disbursement. This meant there were few restrictions on the use

of the funds, and that it was relatively easy to hire on new persons as needed, as "Advisors" or "Consultants" (the Chilean term was "tecnicos") who served as a shadow staff for the Directors of the operating divisions. Although these Advisors had no legal position in the table of organization and no formal authority, they did have the confidence of the Minister. As a result they could get funds and authority for a cooperative Director, or hold back funds from those Directors who did not cooperate with directions from above. Some of the advisors were too political, and others tried to get permanent positions in the Ministry, but in general this control device worked well during the early stages of the Reform. Later on the incentive of early retirement was used to remove many of the Directors and other staff who were not cooperative.

Much of the capital development money came through a large (\$26 million) sector loan from USAID. This was the first experience of USAID with an education loan not tied to a specific project, and evaluation and control procedures were not clearly worked out. The Chileans accepted the money and began to use it before USAID overseers could get into place. The Ministry of Education insisted on the right of approving all the technical advisors to be sent under the loan, and then deliberately stalled in that process. When they finally arrived, technical advisors to the Educational Planning Office were assigned a research project and encouraged to go off on their own, but they were not invited to planning meetings or otherwise allowed to interfere in the design of the Reform process.

3.2.2 Legitimation of Decisions. The practically defunct National Education Council was resuscitated with the idea that it could serve as a legitimating device for Reform decisions. The Council was chaired by Minister Gomez, and

included representatives of universities, teachers' unions, private education, parents' associations, and business groups; 26 members in total. The Council could advise the Minister on educational policy, curriculum, planning, teacher training, finances, research and legislation, but the Minister was not obliged to follow its advice. Prior to 1965 the Council had met only sporadically and symbolically. The Minister created a special Liaison Committee to link the Council with the work of the various working committees to be established for the Reform, and named the Director of Planning as the chairman of this Liaison Committee. All curricular reforms were to pass through the Committee to the Council for approval.

The first hectic weeks of the Educational Planning Office were spent reviewing all the proposals for reform that had been developed over the years. The planners noted the groups that had supported them previously and evaluated each proposal in terms of its possibilities for requiring even more changes in the system further down the line. The Minister and his planning staff had decided, soon after creating the Office, that there was not enough time to come up with new ideas for change. They hoped that among the existing proposals for change would be found those that could both gain approval from a sufficient number of interest groups, and yet induce changes in the entire educational system.

4.0 The Nature of the Reform Process

In the following sections we review the history of five of the kinds of proposals for change backed by the Planning Office.

4.1 Expansion of Enrollments

Both in his Inaugural Address and later speeches President Frei had called for the extension of educational opportunity to all: to stimulate

greater agricultural and industrial productivity; and to build patterns of popular participation that would lead to national unification. These goals were supported not only by the Christian Democrats but also by the Socialist, Communist, and Radical parties.

It was clear that educational opportunity meant more than just entrance into school, but the planners gave first priority to rapid expansion of enrollments for two reasons. Most obvious was the desire to provide schooling to all children as a basic social right. A second motive was to create disequilibria in the system that would enhance the successful introduction of innovations in structure and curriculum. The planners decided early in 1965 that the main dynamic of the Reform would be flow of students through the system. This had not been discussed publicly, but it was believed by the small group making critical decisions for the guidance of the Reform that opening the doors of the schools to all students would force the Ministry, and the system in general, to make a series of adjustments that would lead to further changes.

The new group of students coming into the system would bring cultural characteristics and attitudes unlike those of many of the present students. Their intellectual interests and abilities would be different. The greater number of students would require adjustments in class sizes, teacher behaviors, district organizational patterns, and Ministerial procedures.

The planners assumed, more than knew, that the major obstacle to enrollment was lack of space. They decided, before having the necessary data, that previous governments had not built sufficient numbers of new classrooms to absorb increases in enrollments. They therefore turned their attention to the factors affecting construction of schools.

4.1.4 The Situation in School Planning. Prior to 1965 schools in Chile were built either by the Ministry of Public Works, or by the School Construction Society. Public Works' schools were large and elaborate, built to last. In part because of cost, in part because of the procedures followed by Public Works, several years would elapse between the time the Ministry of Education would decide it needed a building, and Public Works would complete it. An analysis of where Public Works schools were built showed that most ended up in wealthy neighborhoods, and most were secondary (rather than primary) schools.

The School Construction Society was a public stock company in which the Ministry of Education controlled 90 percent of the shares. The Directors of the Society were top officials in the Ministry. Prior to 1965 the Society had done its planning at the state level, preparing straight-line projections showing the square meters of construction needed as a function of population growth. They also developed building plans. The society did not, however, plan for site acquisition nor do site studies until a specific request had been received for school construction, usually from a legislator. Funds for site acquisition usually had to be obtained through an extraordinary request to the Treasury. According to an architect in the Society,

What happens is that a politician seeking to make a hit with his voters takes the Minister out to lunch or dinner, and explains what he needs. The Minister then passes the request on to the School Construction Society. We have lots of academic secondary schools because the middle and upper class children who go there are better represented in politics than primary school children in low-income neighborhoods. (Interview, July 1973)

In effect, because the School Construction Society saw its role as responding to requests, it had developed no fund of information that would allow it to intervene in the process of deciding whether a school was really needed, where

it should be located, and what its characteristics should be.

But the planners did not have time enough to do a full-blown census that would give them "good" data on where children were and how many were attending school. Nor could they wait for Treasury to appropriate money for site acquisition. On the other hand, they didn't want local politicians to be able to specify where schools would be built.

4.1.2 Mobilization. The planners decided to take advantage of the opportunity created by Gomez' peremptory announcement of open enrollments. They launched a national campaign to motivate parents to enroll their children in school; press agents were hired to broadcast the message through the radio, newspapers, announcements from the pulpit, wall posters, and speeches by leading Christian Democratic politicians including the President. The planners had three immediate objectives: 1) assess the overall volume of demand for new spaces by urging parents to pre-register their children; 2) identify areas of the country most in need of space; and 3) secure donations of sites from interested (and patriotic) citizens. Coverage in the nation's leading (and conservative) newspaper was thorough, thanks to a personal relationship between the Minister and publisher, but even the Communist newspaper gave the campaign full coverage. A team of 40 volunteer students of architecture, engineering, and economics from various universities (most of whom were members of the Christian Democratic youth wing) spread over the country visiting each and every school to obtain more complete information on space utilization.

By the end of January 1965 the planners felt they had enough information to begin assignment of children to schools for the coming year. First, they had found that many schools had unused space. Enrollment could be increased by about 20 percent, without additional schools, through double-shifting and

use of space previously idle or occupied by offices or special purpose classes. Site donations were so many that for the first time in its history the School Construction Society found itself behind in terms of possibilities for building schools. The planners brought architects and educators together to design a school that would meet technical requirements, yet which could be built by volunteer labor, have a lower unit cost for construction, and could be built in less time. Class sizes were expanded on the average from 37 to 43 students, an increase perhaps too small to be noticed at the school level, but one which made a big difference in the aggregate. New schools were built with more classrooms, reducing costs of site preparations.

Given the inability of public construction groups to respond to the demand, the Ministry stimulated the formation of several private school construction firms. Credit was extended to entrepreneurs who could produce prefabricated schools following Ministry designs. In addition, the Armed Forces were asked to use their construction battalions to assist in putting up schools. The government housing agency provided a site in each of its developments (which were many as the Christian Democrats had also promised to alleviate the problem of inadequate housing for low-income groups). The whole nation seemed to have thrown itself into the task of school construction; daily newspaper reports of square meters finished read like accounts from the battle lines.

4.1.3 Results. When schools opened in March 1965, all children were accommodated. Given public attention to the construction of schools, and the expansion of construction, little pressure was received from the Legislature, at least during the first two years. (It is true, however, that many schools seemed to need to be constructed in areas where Christian Democrats had the greatest likelihood of winning elections, areas that had not received attention under previous

governments, and which were not dominated by the Popular Front parties).

Demands on the Ministry to build schools where they would win votes for this Senator or that Deputy, already campaigning for re-election in 1969, began to increase near the end of 1966. The Ministry even had difficulty with Christian Democratic legislators, as Party discipline was beginning to flag. At the end of 1966 a Presidential decree gave the School Construction Society sole responsibility for school construction, eliminating the Ministry of Public Works. Simultaneously, the Ministry formed a School Construction Technical Committee, made up of members of the Planning Office and the Construction Society. The Decree authorized this Committee to develop a master plan that would indicate, year-by-year, the total number of schools to be built, the towns or locales in which they should be located, and alternative sites (where possible). Requests from legislators to the Minister or President now went to the Technical Committee, which could use its considerable bank of data on local needs to justify the denial of unreasonable demands. The actions of the Technical Committee were described in the press, in an attempt to encourage both local participation in construction, as well as reduce the possibility of "private deals."

4.2 Automatic Promotion

The collection of data on school enrollments had a major unintended consequence. The planners discovered that, contrary to conventional wisdom, almost every child did enroll in school at some time in his/her life: previous statistics had been misleading because children were eliminated from school before the 4th grade. For example, only 70 percent of the children enrolled went from the 1st to the 2nd grade. The planners' data demonstrated also that most students did not "drop" out of school through a free choice or lack of interest but because they were failed by teachers, and forced to repeat the early grades of primary.

In fact true drop-out rates in Chilean primary grades were negligible, while repeater rates were high.⁶

Additional research conducted by the planners indicated that school failure was more common among working class children and those living in rural areas. This finding was interpreted not as a deficiency of the culture or the families from which those children came, but as a result of lack of financial means, and inappropriate criteria of academic excellence imposed by teachers. The planners spent time visiting and evaluating one of the pilot projects of the previous government that had experimented with ability grouping of children. The evidence from that experience indicated that teachers could handle more heterogeneous classrooms, and that bright children were not favored in homogeneous classrooms (and hence not disfavored in mixed groups).

The planners decided to recommend a policy of automatic promotion through the first six grades, to begin in the 1965 academic year. The issue was discussed with the Sub-Secretary but not the Minister. Rojas' major concern was whether the system could afford to keep those children now being washed out of the early grades. He asked, "How many teachers will we have to add to the payroll? What additional inputs will be needed to maintain the present level of quality?"

4.2.1 Use of a Planning Model. To answer these questions the planners made the first major use of the computerized linear programming model of the educational system that had been under construction since November 1964.⁷ Not all of it

⁶The same has been demonstrated to be true in most Latin American countries. See Ernesto Schiefelbein, "Repeating: An Overlooked Problem of Latin American Education" Comparative Education Review, 19:3 (October 1975). pp. 468-483.

⁷For a description of the structure and use of this model see Ernesto Schiefelbein and Russell G. Davis, Application of Programming Models to the Planning of Educational Reform in Chile, Lexington, Mass.: D.C. Heath, 1974.

was complete, and the planners had to consult with a number of teachers and other experts to set some of the optimal, maximal and minimal values of the variables in the model. But the model was complete enough to allow one to see the effects on the system (in terms of demand for teachers, classrooms, and other physical resources) of increasing the proportion of children promoted from one grade to another.

The results of the model were counter-intuitive, in that they demonstrated that a policy of automatic promotion would lead to lower enrollments. This was true in the sense that at any given time fewer children would be occupying seats in schools, although over time many more children would enter school and reach higher levels in the system. In fact, the planners argued, using the computer's output to impress the Sub-Secretary, automatic promotion would make it possible to enroll all children in the existing space in the system at no additional cost and with no additional teachers.

Sub-Secretary Rojas was persuaded, and was willing to make a formal proposal to Minister Gomez to be carried up to the National Educational Council. But at the same time considerable opposition to the idea of automatic promotion had developed among the professional educators, especially those in Primary Education. The Director of Primary Education, a member of the Radical party and an "elder statesman" in the teaching profession, threatened to "go to the mat" on the issue. He argued that the policy would lower the quality of education provided. He also threatened that automatic promotion would require higher salaries and reduced class sizes, as children with minimal levels of ability would be passed on from year to year making the teachers' jobs more difficult. The issue of automatic promotion was temporarily shelved as planners got busy analyzing the structure of salaries of teachers, and considering

whether an increment in salaries could be tied to a request for higher productivity.

4.3 Extension of Compulsory Education

The lengthening of compulsory education from 6 to 9 years was another idea considered by the planners, and a legacy from the Educational Planning Commission. The use of the programming model helped the Reform planners decide that the system could not afford to enroll all children through 9 years of education, but that it could afford 8 years, in terms of available teachers, classrooms, and government revenues allocated to education. Several advantages were seen in the extension of compulsory education. First, public financial support for education would now run for 8 instead of 6 years, reducing social disparities. Second, an eight-year Basic Education (as it was called) program would take two years away from the academicist secondary schools, and perhaps provide an opportunity to introduce curricular reforms into secondary education. Third, the Basic Education program would eliminate the connection of primary schools with academic secondary schools, common in the private system (and in public secondary schools in wealthy neighborhoods). Because of their relationship with a secondary school, these (so-called "preparatory") schools typically had much better-trained teachers in their classrooms than did most public/primary schools. Now all children would attend the same kind of primary or Basic Education program. The lengthened program would require a new curriculum, one that could be self-contained, instead of merely preparing (some) students to go on to secondary schools. A new curriculum would require re-training of teachers, which was seen as an opportunity to revise the secondary normal school system in which public school teachers were trained. The creation of a Basic Education cycle was supported by every major group in Chilean society, even those that had not

thought through the implications for the rest of the structure of the educational system.

4.3.1 Solution of Obstacles. There were, however, some problems within the Ministry that had to be resolved. The transfer of the 7th and 8th grade from control of the Directorate of Secondary Education to the Directorate of Primary (now Basic) Education meant some loss of power for the Director of Secondary, and for the secondary school principals. The affected teachers were likely to lose some status (and perhaps salary as primary teachers were paid considerably less than secondary teachers).

In fact, many principals were glad to get rid of the troublesome primary schools that had been attached to their secondaries. The promise of the Ministry to appropriate funds to improve the academic secondaries may have helped to co-opt the Director of Secondary Education. Only 600 teachers were directly affected by the transfer of the two grades. About one-fourth accepted an early retirement, another fourth accepted administrative appointments (most as assistant principals in primary schools) that gave them equivalent salaries, and the other half chose to stay in their academic secondaries. To make this possible the Ministry created, by Presidential decree, new support roles such as Librarian, Audio-Visual Specialist, and Guidance Counselor, and provided appropriate training. It was also possible to persuade the Directorate of Secondary Education that within two years large classes of students would be coming out of the 8th grade, numbers larger than previous years, and that secondary education would increase rapidly in importance. The shortage of teachers for the 7th and 8th grade was solved by recruiting 2000 unemployed academic secondary school graduates who had been denied admission to the university. These students were given an intensive two-month training course and

taught under the supervision of a master teacher.

4.4 Curriculum Reform

In the meantime (mid 1965) the National Educational Council through the Liaison Committee was considering reforms in the curriculum for the new Basic Education program. In a few short months a Curriculum Committee organized by the Planning Office had produced recommendations for a new plan of studies for the eight years of Basic Education, and syllabi for the 1st and 7th grades. The original Committee began its work in January 1965 with a discussion of the educational philosophy that would be used in the development of the curriculum. Agreement on the basic philosophical ideas came easier than had been expected. None of the Committee members had an investment in the existing curriculum (e.g., a textbook on the market). They agreed that time was too short to develop an optimal proposal; they would only attempt to lay out some basic ideas that later could be developed and lead to further change. The Curriculum Committee also was influenced by the planners. One member reported:

I had thought the planners wanted everything well-planned and thought-out ahead of time. Instead the attitude they had was to "don't be bashful." "Get something out, anything, so we can discuss improving it." So we escaped the quagmire of planning to perfection before beginning. Planning meant doing. (Interview May 1973)

Although not all were members of the Christian Democratic party, none of the original Curriculum Committee members had strong allegiances to any other political group.

Once the basic ideas were laid out, however, membership on the Committee was expanded, as a series of task forces were created in each of the major curriculum areas: mathematics; national language and literature; social sciences; natural and biological sciences; and complementary activities. Each of the original members recruited teachers and professors of education to help in

development of curricula. The task force members were chosen on the basis of professional prestige and creativity. Some resistance was encountered from Christian Democratic party officials to the nomination of a winner of the Lenin Prize to serve on one of the committees, but the Planning Office insisted and won. Contact with the Directorate of Primary Education was high.

4.4.1 Contact with Classroom Teachers. Participants in the curriculum area task forces were encouraged to try out new materials and procedures as they were developed. To make this possible, the Planning Office solicited the collaboration of primary school principals. The curriculum people then worked directly with classroom teachers, from time to time bringing in groups of them to discuss ideas for new approaches in curriculum. The word quickly spread among teachers that the Ministry was really interested in their ideas.

At the same time, the planners were learning what was reasonable to expect of teachers, given their training. Most primary school teachers in 1965 had only 11 years of formal education, and most of that in low quality schools. Woefully unprepared for the creative demands of teaching, they faithfully and slavishly followed the guide provided them by the Ministry. As this guide itself was limited, little more than a list of topics and themes to be covered in each unit, classroom teaching was thin. Most teachers placed heavy emphasis on rote memorization of abstract and usually irrelevant material. In effect, they taught what they had been taught, using the same deadly methods.

The first proposal made by the planners was that teachers concentrate on basic principles in the various subjects, rather than asking students to memorize facts. This suggestion was rejected outright by the teachers, and the planners began to understand that, without providing them additional training and support, it was not reasonable to ask teachers to be creative. Instead,

the planners reasoned, the best strategy would be to take advantage of the teachers' tendency to conformity, and to give them a detailed curriculum guide that they could follow that would require them to use new teaching techniques. But first, it would necessary to "unfreeze" the commitment to present teaching techniques.

To avoid the delays that would be occasioned by controversy, the planners decided to begin with only one subject area rather than the whole curriculum. In choosing the subject area, they used the following criteria:

- the subject had to be considered a fundamental part of the curriculum by teachers. It had to enjoy a certain amount of "prestige" so that success in this subject would influence teaching in other subjects;
- the methods used to teach this subject should have implications for all facets of the teaching role, that is, not be subject-specific;
- it should be possible to reformulate plans, programs, methods and materials for the subject in a short period of time.

Mathematics seemed the best choice to the Committee. Math was a "prestigious" subject because of its traditionally high "difficulty" level. Much work had been done on Modern Math in other countries, and Chilean newspapers and magazines had begun to diffuse some of those developments. Math seemed relatively culture free, so that technical advisors offered by, for example, the Ford Foundation, could be used without provoking resistance from nationalist educators.

In addition, several members of the Committee had recently learned about the Cuisenaire rods, a set of colored sticks graduated in length from 1 to 10 centimeters. The rods were touted as facilitating the learning of addition and subtraction, and mastery of the mysteries of multiplication and division.

Use of the rods in the classroom would require teachers to work with small groups of students, to allow students to experiment on their own, and to almost completely abandon teaching mathematics in abstract terms.

Once again the Ministry swung its press agents into action, this time to promote Cuisenaire rods, and "modern" mathematics. Sunday supplements, in both the elite and the working class newspapers, told parents how they could collaborate with teachers in helping their children to learn mathematics, through the use of the rods. When public demand mounted, the Ministry was ready with stocks of the rods (produced in Chile) for sale at prices within the reach of all but the poorest families. Schools distributed the rods without charge to families unable to buy them. No direct pressure was put on teachers to use the rods in their classes, but the Ministry offered (including through prominent announcements in newspapers) to provide special courses in their use. Meanwhile a sub-committee began work on the production of a national version of modern mathematics textbooks (that used number-line concepts rather than rods).

4.4.2 Other Developments. A number of other curriculum decisions were being made at the same time. The National Educational Council, on the urging of its Liaison group, accepted the recommendation of an eight-year Basic Education cycle, the plan of studies, and the syllabi for the 1st and 7th grades. Presidential decrees in early December 1965 gave official sanction to what was now being pre-tested in a number of pilot schools (some officially supervised by the Ministry, others with entrepreneurial principals). One decree described the structural changes noted above, authorized the Ministry to train secondary school graduates to become primary school teachers, and stated that the programs for the 1st and 7th grades would be tried experimentally in 1966, and in the other grades successively. Another decree indicated what was to become of

secondary school teachers then teaching in the 7th and 8th grades.

In the 1966 academic year experimental versions of the 1st and 7th grade curriculum were used in several hundred schools. All teachers using the new materials were provided with curriculum guides that specified not only the objectives of each of the units, but also provided detailed suggestions on how to teach the unit. In addition, about half the new teachers received some kind of short training program in the newly created Teacher Training Center. The Ministry began to publish a monthly Educational Review (that eventually had 30,000 paid subscriptions), which published official versions of the curriculum plus articles on how to implement it. Several newspapers, including El Mercurio, the nation's largest and El Siglo, of the Communist Party, published Sunday supplements providing additional suggestions for teachers, and explanations for parents.

During 1966 the Curriculum Committee kept in close touch with teachers using the new curricula. Results were generally positive, and further cooperation from teachers seemed assured with the signing in October 1966 of the Teachers' Agreement on salaries. In December the President issued a decree creating the 8th grade, and in March 1967 all schools began using the new 1st and 7th grade curriculum. In 1967 experiences were again highly positive, and for the following year the Educational Council approved extending the new curriculum for the first three primary grades to all schools. The 7th and 8th grade curriculum continued in an experimental status.

In 1968 the decision was made to skip further experimentation, and to use the new curriculum for grades 1 through 8 in all schools. In four years a new (and to some observers' eyes) fundamentally different curriculum had been implemented in all schools in the nation, without major conflict or

resistance.

4.4.3 Analysis of Experience. Even the educators of the Curriculum Committee were impressed with how fast the process had gone. They felt that critical to their own work was the use of a curriculum planning model developed by Ralph Tyler (with additional work by Benjamin Bloom). They confided privately that almost any model would have served the purpose of organizing their discussions and decisions, but this one enjoyed the benefit of being the "international rage" among educators in Chile. The following comments, taken from interviews with members of the Curriculum Committees were offered to explain the rapidity with which the curriculum was developed and put into place.

- What made the most difference was that we believed we could do it, that we could plan a curriculum and make a significant change in education. This had been coming for some time, the country was ready to do something really significant.

- The Ministry's decision to open up the schools to everyone made a big difference. We were faced with a fait accompli. Those students were coming in and they had to be taught. We had to work out something for the 7th grade. The teachers felt it, too. Parents' groups were asking the Ministry to do something.

- At the time it seemed like chaos. Everyone was working at breakneck speed on his or her piece, nobody had any idea of the whole program, only the Coordinator (the Director of the Educational Planning Office). All the groups had to write their ideas down on paper, and it all flowed through him. But if you needed anything -- secretaries, materials, access to teachers or children -- you got it right away.

- There are some really outstanding people on the Committee's task force. Some of them have studied abroad and have a universal perspective. And it helps a lot that many of the task force people are good in committee work. The people in politics and the teachers' union are the best; they know how to organize a meeting and work out a compromise when necessary.

4.4.4 Secondary Education. The successes described above were all with respect to Basic Education. Much more difficult was the task of generating a process of change in secondary education. The planners wanted to create a program in

which there would be few or no distinctions between students bound for the university and those who would end their educational careers after secondary school. Opposition to the planners' arguments in favor of the combined program came both from conservatives, and representatives of the Popular Front. The conservatives wanted to maintain a classical humanistic formation for those who would go on to the university, and a separate vocational track for those who would go directly into the labor force. The Popular Front also wanted a separate vocational-technical track that would send some students on to the State Technical University (where it appeared that the Communist Party had made significant inroads and would shortly gain control of the university). The final compromise agreed to a four-year middle school program with separate humanistic-scientific, and professional-technical tracks. Students in both tracks would study all the same subjects the first year and many of the same the second year, and could transfer between the tracks if their grades were good enough. Both degrees would allow a student to apply for admission to a university. The humanistic-scientific programs were to include some vocational courses. Examinations for admission to secondary schools were eliminated, although many of the elite private, and public, secondaries continued to limit admissions.

5.0 Salary Increases for Teachers

Not all of the Ministry's dealings with teachers worked out so well. The case of the conflict over salaries demonstrates the need for planners to include political variables in their analyses, and to go beyond the limited set of factors normally included in economic analysis.

Study of the salary schedules of teachers had been one of the first tasks of the Planning Office, during the first discussion held early in 1965. At

that time enough detail of the global strategy of the Reform had been roughed out to make it clear that teachers would have a vital role to play. But the planners did not yet know how much support and cooperation they could expect from teachers. Especially the economists in the Planning Office anticipated serious resistance. They argued as did the following person:

Of course there will be resistance to the kinds of changes we are proposing. Teachers have been in the same traditional rut for years; they do what they know how to do, and we will be asking them to strike out in unknown territory. But unless we can get them to listen to what we are proposing, nothing can happen (paraphrased from interview May 1973).

The economists argued that a significant increase in pay would serve as a means to motivate teachers and convince them of the good faith of the Ministry. They were opposed by one or two other members of the planning team who felt that other incentives could be offered teachers. They suggested national prizes for good teaching, or similar "moral" incentives. There was a brief discussion among the team of how good teaching could be identified in the schools, and how to keep politics out of the process. In late March 1965 the planners approached Sub-Secretary Rojas and Minister Gomez to ask their opinion on the feasibility of a significant pay raise for teachers.

Gomez Millas responded that in principle he approved of such an action, although he would have to be shown that in fact teacher salaries were low. (At that point the planners had little idea of teachers' salaries relative to persons with similar levels of education). He pointed out that there had been no public signs of discontent among teachers with respect to salaries. "Perhaps," he mused, "you are going to create a problem where none exists. But go ahead with your analysis and then we will discuss the proposal again."

Relevant data was collected by September 1965. The planners discovered that Teachers' salaries had remained constant in real wage terms for 10 years,

even though between 1961 and 1963 per capita GNP (in constant dollars) had risen 8.25 percent, and overall wages and salaries had increased 28 percent. As a consequence, teachers were being paid less than other professionals with comparable education. But, it was noted, teachers worked less hours during the year.

The planners spent several months interpreting and discussing these findings. Some felt that salary increases should be tied to increases in the "productivity" of teachers. For example, teachers could be asked to work more than the usual 36 hours per week, or to extend their 9-month year to 10 or 11 months. Those planners with some experience in teaching argued against these proposals on the grounds that these traditional work schedules were not on the teachers' list of "negotiable" items.

In December 1965 the planners asked Treasury to tell them the amount of money that would be available to the Ministry of Education for the next five years. They then ran the linear programming model making several assumptions about the amount of increases in pay that might be given to each of the various categories of teachers. The result of these analyses was the conclusion that the educational system could afford to grant teachers an increment in real income, over and above inflationary increases, of 50 percent over the five-year period.

Some time was spent discussing the advantages of a proposal offering increments over a five-year period. The teachers in the planning group felt that this long-term commitment by the Ministry to salary improvement would serve as a powerful incentive for experienced teachers to remain in the profession. The amount of the yearly increment would be about 7 percent in real income, a salary jump greater than any that teachers had even been offered. After a study on the legal procedures necessary to effect such a policy, a formal

recommendation was made to Sub-Secretary Rojas, and the Planning Office turned to other activities.

5.1 Reaction to the Proposal. The Government chose to include the plan to increase teachers' salaries with its general proposals for income redistribution among government employees. This redistribution would be accomplished by granting proportionately larger cost-of-living increases to those with lower salaries than to those with high salaries. A month later the Ministry of Education announced the creation of a special committee to solve problems of teachers. The Committee, an advisory group, included the Sub-Secretaries of Education and Treasury, the President of the National Federation of Teachers, and the presidents of the constituent unions of teachers.

As soon as negotiations were underway the teachers' unions seemed to realize they were in a strong bargaining position. The teachers' first move came on Sunday, June 5, 1966, with a public announcement that they would stop work on Tuesday in all districts where teachers had not received their pay. (Delays in paying salaries to public employees were notorious in Chile.) No mention was made of salary increments: all complaints were directed toward the antiquated methods used by the Ministry of Education to process payrolls. The Ministry of Education admitted that they were behind in payments, but that it was acquiring IBM equipment to speed up the process in the future. A number of teachers failed to show up for work on Tuesday. The following Monday, June 13 the National Federation of Teachers announced plans for a two-day work stoppage that week if salaries for June weren't paid by the 15th. The Federation also announced other demands, including providing permanent positions for all teachers with one-year contracts. The protest had originally begun over delays in payment of salaries to primary school teachers: the NFT demanded that

teachers in adult evening schools also be paid immediately. On the 15th the NFT included another demand on its list: compliance with the agreement to pay teachers 70 cents a day for lunch.

By the 20th of June the NFT had developed a counterproposal to that made by the Ministry. This proposal, supported by the parties in the Popular Front opposition, called for a separate salary schedule for the Ministry of Education, full-time positions for all teachers, an increase in salaries, and a system of salary incentives based on in-service training. By this time the negotiating committee had been meeting for almost two months. Their final recommendations, not made until late September 1966, were close to the original proposal made by the planners, that is, annual real wage increments of about 7 percent. The NFT immediately made a counterproposal calling for increments of 15 percent per year for two years, and called for a plebiscite among teachers.

The plebiscite was held in October 1966. Primary school teachers voted 2-to-1 in favor of the NFT proposal, while secondary school teachers voted against it. About half the teachers in the nation--6 percent of the total voting population--voted. The NFT called teachers out on strike until the Government accepted their demands. The strike finally ended with a compromise worked out between the NFT and the President of the Christian Democratic Party (not President Frei). In return for the teachers going back to work, the Christian Democrats promised to propose legislation creating a schedule of salary improvements for the next four years. These increments, to be specified in the legislation, would be about 10 percent per year in terms of real wages. Other less important fringe benefits were also included.

It looked as though the government had come out of the negotiations fairly well-off. Although the 10 percent per year increments were larger than the 7

percent that the planners had thought could be afforded, they were much less than what the NFT had sought. The settlement was described publicly as the "Teachers Agreement" as if it were a binding contract that would insure teacher collaboration until 1970.

But that was not to be. In March 1968, just before the beginning of the school year, the teachers' unions again demanded salary increases from the government. The facts seemed to be that the Government, faced with a reduced overall budget because of declining revenues from copper (subject to world market prices), was trying to squeeze by with cost-of-living adjustments for public employees that were considerably less than the real increase in the cost-of-living. The NFT demanded compliance with the letter of the law of the Teachers' Agreement, but included a long list of other petitions, among them, abolition of all private schools, and a congressional inquiry into the publishing of primary school texts "based on foreign documents which ignore our special character." (The latter was in reference to distribution of a basal reader published in Spain using drawings depicting aspects of life in Spain.) A protracted strike followed, and again ended only after a compromise on economic issues.

Neither of these two conflicts affected the process of planning the Educational Reform. Teachers continued to work with curriculum planning groups, to try out new materials, to accept new responsibilities, and in general to contribute to a fundamental redirection of education in Chile. But the additional financial burden of the increments in teachers' salaries reduced the funds available for other elements of the Reform. There was, as a consequence, a limitation of the scope of projects such as new textbooks, improved teacher training, and scholarships and nutritional programs for children from families

with low incomes.

6.0 University Planning

If the dispute over teachers' salaries was a failure in which planning included too little attention to political variables, the development of university planning is a success story. In this instance, political action made it possible to make decisions using the richer base of information that technical planners can provide.

Prior to 1960 universities in Chile made annual budget requests to the Treasury based on a linear expansion of existing programs by an amount corresponding to the historical growth rate of the institution. Each university submitted its own proposal, without consultation with others. The proposals provided information on the total amount requested for each unit (faculty or school) of the university, and some sketchy information on the teaching and administrative payroll. Universities generally received what they requested except when the national budget was particularly restricted, in which case their requests would be granted proportional to the total amount requested.

In 1959 the InterAmerican Development Bank invited the University of Chile to submit a proposal for capital development. The amount the Bank was willing to lend was a considerable fraction of the annual budget of the University. Accompanying the invitation were detailed suggestions about the kind of information the Bank required in order to act favorably on the request. Gomez Millas, then Rector of the University, used his team of economists and accountants, to generate data on the number of professors and their distribution by hours and students, on students by program, on the flow of students through the system, on the utilization of space in the University, and the fit between graduates and manpower needs of the economy according to CORFO (the national

planning agency). The loan was made and the IDB promised more.

Rector Gomez then institutionalized his group of technicians, by creating a Budget Office to prepare the next submission to the Treasury. Among the analyses done by the Office was an estimation of the amount of money that Treasury could afford to grant the University, given national revenues. Using data included in the IDB proposal, the University of Chile's budget request for 1961 asked for a real income increment of 16 percent over the previous year, about three times the normal increment.

The University's request was granted, largely because Treasury had no counterarguments. In following years the University continued its practice, and with the same kind of success (although with less enthusiasm after Gomez Millas left the University in 1963). Other universities had some form of budget group that prepared a detailed brief with data to accompany its annual budget request.

Despite these developments, Minister Gomez Millas was preoccupied with the situation of the universities. A critical element in the economic development strategy of the Frei government was the creation of Chilean-owned industries and the nationalization of large firms then held by foreign interests. For this to be possible, the country needed many more engineers and physical scientists. A CORFO study showed that plans for economic expansion would fail unless universities could rapidly increase the number of graduates in technological and scientific fields. But Gomez' own experience suggested that this could not be accomplished simply by giving more money to university rectors. Because of the political structure of the universities, the rectors would find themselves pressured into expansion of less-needed programs, such as those in humanities and the social sciences.

Minister Gomez addressed this problem by seeking out long-time friends among Deans in the University of Chile, especially those in Engineering and Medicine. He brought them together in informal meetings with a representative of the Treasury (where the Minister also was a long-time friend) to discuss the general objectives of their faculties. From time to time he asked Ministry of Education planners to provide data describing the country's needs, and the situation of the faculties. The planners were not involved in the meetings themselves. These informal, extraofficial conversations resulted in grants from the Treasury to various faculties in the University, of 10 to 15 percent increments in real income. Similar arrangements were worked out in 1966, and in the case of one or two faculties the agreements covered a three-year period.

Encouraged by this experience the Minister asked his planners to draft legislation to formalize the arrangements. The Ministry of Education already had legal authority to control the budgets of the universities, but no Minister had ever dared to exercise it. The new legislation would build on the spirit of cooperation the Minister had been cultivating. The planners proposed creating a University Planning Council that would have the power to evaluate the universities, and to allocate the national investment in higher education.

Each of the university presidents found something in the proposal he did not like, but most resistance came from the University of Chile, which argued that it should be considered apart from the other seven universities of Chile. There was no formal, public opposition to the proposed legislation. Instead, the universities recommended change after minor change in successive drafts, dragging the process on for months.

With the outbreak of the University Reform Movement in 1966, first in the Catholic University of Valparaiso, then the Catholic University in Santiago,

and only later in the other institutions, attention shifted away from the proposal. Students and faculty members were demanding participation in the governance of the university, and tension in Chilean society was high. At the same time, government revenues were much below expectation given declining copper prices. Looking ahead to the elections of Rectors in 1968, political predictors were predicting that at least three universities would choose men who belonged to political parties openly hostile to the government. Treasury was beginning to feel that investment in higher education was not such a good move at the moment.

But more than ever higher education in Chile needed planning. The demand for entrance to the university was rising rapidly, and would accelerate once the effects of the Reform worked their way through secondary education. Costs of higher education were rising, too, as better trained professors demanded higher salaries, better equipment, and better facilities. Unless investment in higher education could be linked to national productivity goals, the government could be accused of supporting elitist educational institutions.

The first break for the Educational Planning Office came in early 1967 through a request from CORFO. When several universities asked international agencies for capital development loans, these agencies asked CORFO to underwrite them. Fully occupied with economic development planning, CORFO turned to Educational Planning (both because the Director was a former CORFO employee and because it seemed reasonable that the Ministry of Education be consulted.) CORFO was delighted with the speed and thoroughness with which the educational planners did the necessary studies on the loan requests, and began to consult with the Ministry on all projects involving universities. In May 1967, when CORFO

received several proposals from universities for large research projects, it again seemed natural to ask the Ministry's planners for help in evaluation.

Information gathered by the Planning Office in this way was supplemented with a special task force. The search began by requesting from Treasury all the budget requests by the universities for the past eight years. The task force also combed newspapers, magazines, theses and dissertations from the various universities. Only at the end of the process were the universities approached directly for information. This was made possible in August 1967 when President Frei issued a decree creating a Coordinating Committee for the Planning of Higher Education. The substance of the decree was almost identical with the proposed and never-passed legislation drafted two years earlier by the planners, but the process behind it had differed in two important respects. First, the President had consulted privately with each of the university rectors before issuing the decree. Second, the creation of a committee was less threatening than the establishment of a Planning Council: committees have short lives, and cannot control funds. But the decree authorized planners to request information directly from the universities.

Armed with this decree the planners accrued more information on the position of the universities in Chile's development. The information was organized into a report designed to call public attention to the needs and deficiencies of the universities, in terms of national needs. The report was published by the National Planning Society, a prestigious professional organization. Rectors and planning officers of the eight universities, and other persons interested in higher education, were invited to attend a seminar sponsored by the Society to discuss the findings of the report.

Attracted by the prestige of the sponsor of the seminar, and following the

example of the University of Chile (whose planner-Oscar Vera-announced publicly that the report was filled with errors and needed to be corrected), all of the universities sent their presidents or representatives to a meeting held in May 1968. Less than a week before the session, students in the University of Chile occupied several buildings and demanded a massive curricular and administrative reform.

None of the participants in the seminar attacked the Ministry of Education for having dared to do an evaluative study of the universities. There was argument about the validity of some of the data, and criticisms of the interpretations offered, but the assertion that higher education should be planned remained untouched. Most of the university participants seemed overwhelmed by the amount of knowledge the Ministry of Education planners had about the universities.

Immediately after the May meeting the Treasury sent out the annual requests to the universities for the preparation of their budget proposals for the coming year. This time the request was accompanied by a new set of guidelines (that had been developed by the Educational Planning Office). The universities were instructed by Treasury to return the completed proposals to the Ministry of Education. The budget officers of several universities were given help by the Ministry planners. Most of these officers had little formal training, and the more detailed proposal requested exceeded their skills. The planners offered to help the university obtain as large an allocation as possible.

At the same time the planners asked Christian Democratic politicians to help them anticipate the kinds of questions that the Opposition might raise about the moves into university planning. Using that guidance, the planners

prepared background papers with 27 questions, and detailed answers, that were given to the Minister, party members, and friendly journalists.

In September, when the budgets were due, four of the universities sent theirs directly to the Ministry of Education. The others were sent to Treasury, which sent them to Education and advised the universities that all future dealings should be with Education. Each budget was examined carefully, criticized, and then returned to the university with suggestions as to how it should be changed. Many of the criticisms meant the university would receive less money, but others suggested the creation of new programs or the purchase of necessary equipment or addition of new personnel to support existing programs.

Resistance was low. In some cases universities went along because they believed that rivals had collaborated and been rewarded. A few universities were, simply put, overwhelmed by the arguments of the planners. One university chose to "fight it out" through public letters appearing in the press, but lost the debate. The Ministry of Education planners listed these five reasons as accounting for the success of this first effort to control university planning:

- some of the university presidents were Christian Democrats;
- the University of Chile was in such chaos it was possible to deal with member faculties one by one;
- the provincial universities did not form a coalition with the three universities in Santiago because they didn't trust them;
- the main theme of the student reform movement - modernization and rationalization - increased the legitimacy of the planners' arguments; and
- in fact the government had been able to arrange (modest) budget increases for all the universities.

7.0 Conclusions

This history of some aspects of the Educational Reform in Chile is useful if it serves to sensitize planners and others concerned for educational development to the importance of political information in the selection of alternatives for change. Information is the planner's single most important contribution to the process of planned change. Because decision-makers do not have the time to process all the data they receive, they rely on the technical expertise of others to gather, tabulate and interpret that data. And the more "scientific" the procedures used in the analysis, the more credible will be the recommendations made.

But the planner's contribution can be realized in ways other than the manipulation of quantified data about technical aspects of the educational system. The problems faced by the decision-makers include not only which alternative is best in some "neutral" technical sense, if that is possible, but also in terms of which alternatives are best in terms of their feasibility of implementation. That implementation involves initial approval from legislative or executive gatekeepers, as well as mobilization first of central-office bureaucrats and later of the teachers who do most of the work in education. Information about implementation includes not only an assessment of the competency of various actors to do what is expected of them, but also information about their disposition to do what is desired.

Proposals for change couched in fundamental terms are likely to arouse considerable anxiety about their implications. The discussion of the goals of education, for example, requires a high degree of political consensus if it is to result in action. Most frequently that consensus does not exist,

and programs associated with changes in fundamental goals fail for lack of support. For that reason, politicians prefer to talk in terms of intermediate objectives or targets, or even better, the means for attaining those targets. Unfortunately we do not yet know enough about the means-ends relationships in education to insure that a given means will produce a desired end. Although goal-oriented, the Reform in Chile was presented in terms of changes in operational objectives and educational practices. The planners' main concern was to insure that those practices would tend to destabilize the educational system, in the sense of prompting further changes in teachers' and administrators' behavior, or in making it "reasonable" to change curricula. Once a given set of behaviors was "unfrozen" it was easier to suggest new patterns without stimulating a discussion at the level of fundamental goals.

Planning is inherently threatening to politicians, in that it tends to reduce their degree of freedom by being specific about courses of action and expected outcomes. Resistance to planning by political decision-makers was overcome in Chile in several ways. First, proposals for operational objectives were couched in open-ended language; the intent was to increase future options rather than to reduce them. Second, the planners enjoyed the personal confidence (and in some cases friendship) of the decision-makers for whom they worked. This confidence was both earned and increased by the planners' ability to help the decision-makers achieve personal and organizational objectives. Third, the planners accepted the validity of pluralist politics, which assumes that human institutions and organizations are not perfect but are changeable. By avoiding the perfectly-optimal planning solution, and by seeking to increase participation in the planning and decision-making process, the planners demonstrated their commitment to the political values held by the decision-makers.

These conditions may not hold in all developing countries, but in many it would seem that educational planners operate in a situation in which power is distributed across a broad spectrum of social groups. In such a situation planning cannot presume consensus about basic values and goals for education. The planner's job in that circumstance is less one of discovering the ideal solution, than it is one of helping the body politic to work through its conflicts to derive a compromise that makes some improvement in the general welfare. In such countries, planning is successful when it contributes to the art of the possible.