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GUATEMALA

EDUCATION SECTOR ASSESSMENT
1985

GUATEMALA CITY,

GUATEMALA, C. A.

FOREWORD

This Assessment of the education sector in Guatemala reviews the country's education and training system in connection with national goals, needs, constraints, and opportunities. The purpose of the Assessment is to:

* strengthen the base for systematic planning of Guatemala's human resource development system;
* identify priority areas of education and training for the investment of internal and external resources;
* focus attention on the constraints affecting the impact of such investments; and
* provide a sound basis for monitoring system performance.

Although much has been learned about Guatemala in the process of preparing this Assessment, it is likely that the document suffers from errors of both commission and omission. Our intent is that the Assessment serve as a stimulus to discussion and improvement of the educational system of Guatemala, rather than as a list of uncontestable affirmations.

The first chapter of the Assessment is an Executive Summary which describes the current political and economic situation and reviews each section of the education system, highlighting goals, strategies, and current programs. The Summary then identifies needs, constraints, and plans, and analyzes present strategies with respect to national goals and system capacity. This analysis is used as a basis for summary conclusions and a set of priority-ordered recommendations.

Chapter 2 of the Assessment is an economic analysis of human resource development in Guatemala. This chapter focuses on economic characteristics and performance, manpower demand and supply, program costs, and rates of return.

The Assessment next addresses the formal education system, encompassing pre-primary, primary, and academic secondary schools in Chapters 3 and 5. Given the current situation of Guatemala, these chapters are the centerpiece of the study. Chapter 4, on school maintenance, assesses the capability of the Ministry of Education to maintain rural primary schools, particularly those built under previous AID loans.

In a departure from previous studies, this Assessment addresses the education of the indigenous population of Guatemala. Thus, Chapter 6 presents data analysis and recommendations relating to the participation of Guatemala's Mayan Indian population in secondary, technical, higher, and adult basic education programs.

Chapter 7 reviews the status of vocational and technical education in Guatemala, including both formal and non-formal programs. A systematic description of 17 rural normal schools is found in Chapter 8, along with an assessment of teacher education and training. Chapter 9 deals with higher education provided by Guatemala's five universities. Chapter 10 examines non-formal education, with special attention given to distance education programs.

The Assessment was prepared by a team of consultants organized by the Academy for Educational Development (AED). Non-Guatemalan members of the team spent from two to five weeks in Guatemala, working in close collaboration with a counterpart team made up of members of the Sectoral Unit for Education Research and Planning (USIPE) of the Ministry of Education. Both groups are listed in Appendix I. In addition to weekly meetings, members from the two groups visited sites, analyzed data, and discussed policy alternatives as they prepared the final report. The entire process was greatly assisted by the participation of Prof. Rolando Méndez Mora, former Minister of Education of Guatemala. Prof. Méndez not only contributed information and ideas to several of the chapters, but also prepared papers on the evolution of educational policies and on the administrative structure and problems of the Ministry. These are included as Appendices III and IV.

The production of this Assessment could not have been accomplished without the assistance and support of a great number of people. Listed in Appendix II are those many individuals who provided information, ideas, and encouragement. The length of the list is testimony to the strong commitment of many Guatemalans to the improvement of education.

But perhaps most important in the process was a staff whose unflagging enthusiasm and cheer, and excellent insights into the nature of the task, smoothed over difficulties and encouraged greater productivity. The staff was organized and led by Susan Cowan, whose contribution went far beyond her title of Administrative Coordinator, as she made significant contributions that were critical to progress. Her ability to collect and analyze information was invaluable, as was her keen editorial eye. She was assisted by an extraordinary production team: Maria Mercedes de Leon, Executive Secretary, who provided translation, research, editorial, and typing assistance, along with Lucrecia Borjes; Lillian Giammattei, who served as Secretary of the Assessment team; and Timoteo Xoyon, who compiled data, derived comparative ratios, and constructed many of the tables in this document. Our thanks go as well to Roger Cowan, who graciously provided his assistance in the review of several sections of the Assessment; and to Roberto A. Canton, who applied his considerable skill in graphic arts to many of the charts.

Last but certainly not least, final production of this document in the U.S. could not have been accomplished without the able assistance of Ruby Rudman, word-processing supervisor, and Ray Lardizabal, of Wang Laboratories, Inc.

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CHAPTER 1

EXECUTIVE SUMMARY

1.1 Introduction

This report has among its objectives an updating of the Guatemala Education Sector Assessment of 1978. That report provided a comprehensive description of the problems and opportunities of Guatemala immediately after the 1976 earthquake.

Despite the tremendous destruction of physical capital, especially housing, Guatemala recovered fairly quickly from the earthquake, in part thanks to the generosity of other nations, and in good measure to a quickened sense of unity among the Guatemalan people. But during the last seven years, Guatemala has been shaken by another kind of cataclysmic event, with grave social, economic, and political consequences. There has been a period of social conflict in which hundreds of thousands of people have been displaced, and more than fifty thousand have been killed. The effects of the earthquake live in the memories of those who suffered most during that time, but the violence of the last few years has touched almost all, and has contributed to serious unravelling of the social fabric.

One effect of the violence has been increased mistrust among the various strata of the society. There is heightened criticism of the venality of public officials, and of the inability of the government to contribute to the solution of collective problems. The latest military government finds itself a "lame duck" pending presidential elections in November, and without revenues to respond to legitimate and increasingly desperate cries for assistance from various sectors of the population.

Expectations about the ability of the educational system to grow, and to contribute to healthy political and economic development, must be evaluated in a context of negative rather than low rates of economic growth. It seems reasonable to suggest that the task of an Assessment such as this is not to recommend a massive reform of the educational system of Guatemala, as much as reform may be needed. Rather, it is to identify those few activities that can be done now, to make possible the implementation of needed reforms in the future, when resources and social stability return education to its position as a national priority.

1.2 Historical and Social Setting

The social structure of Guatemala is built on a centuries-old pattern of land-ownership by a small group of families descended from the Spanish conquerors, who both exploited the indigenous population as a labor force and drove them from the most fertile lands further north into less arable territory. Because much of the territory of Guatemala is mountainous and not given to plantation agriculture, the indigenous

population, and later those who abandoned their indigenous identity and entered the Spanish society, were able to develop a small-holding agriculture which allowed them not only to survive, but also to expand their numbers.

The indigenous people--most of Mayan descent--lived for many years in small settlements with little communication between them, giving rise to as many as 23 distinct languages with few common words. Ladino governments provided few opportunities for education; what schools the state operated in rural areas required indigenous children to know Spanish in order to pass even the first grade. Only a handful of religious organizations sought to provide written languages for the indigenous people or operated schools that provided instruction in indigenous languages.

At present, the indigenous population is estimated to make up 40 to 50 per cent of the 8 million inhabitants of Guatemala. There are several reasons for uncertainty about the proportion, as well as about the total population. First, because the indigenous people live in remote regions of the country, especially in those where recently there has been much killing, census enumeration is incomplete. The 1981 Census ignored complete departments because of the violence. Second, the definition of "indigenous" is unclear. Most Ladinos are of Mayan ancestry, so that physical differentiation between indigenous and Ladino persons is not always reliable. Today, many people who consider themselves indigenous speak Spanish as well as one or more indigenous languages. Except in the most remote regions, most indigenous men wear Ladino dress. Many indigenous people are Christians. Some indigenous people have Spanish surnames. Except for a small percentage in the northern departments, the indigenous people are fully integrated into the national economy; they are not marginal to Guatemalan society, even though they may have been denied access to the benefits of that society.

Especially in recent years, indigenous people have demanded that the state provide them the same privileges of citizenship as Ladino Guatemalans, in the form of schooling, health facilities, and other public services, as well as equal treatment under the law. The social conflict that Guatemala has suffered during the last five years can be understood in part as a result of both a growing awareness among indigenous people of their common identity despite different languages, and the extent to which political and economic structures have systematically acted to their disadvantage.

It should be kept in mind, however, that there have been many periods of social unrest in Guatemala, in which the main protagonists were not indigenous people but Ladinos seeking political and economic justice. While the indigenous people as a group are the most disadvantaged group in Guatemala, the social structure of the country is best seen as a pyramid rather than as two clearly divided groups, indigenous and Ladinos. As will become evident from this Assessment, there are clear differences between urban and rural populations in terms of educational equity; but even within urban populations there are sharp distinctions, based more on differences in wealth and income than on cultural identity.

The 1978 Sector Assessment reported that 4 per cent of the families in Guatemala accounted for 33 per cent of all personal consumption. Another 15 per cent of families were identified as "middle class." Together, these two groups receive more than 66 per cent of annual income, while the other 80 per cent of the population receives less than 34 per cent. The poorest 20 per cent of the Guatemalan population in 1980 received less than 7 per cent of national income. The top 10 per cent of land owners control 81 per cent of the total land, while the bottom 10 per cent own less than 1 per cent. Less than half of the adult population was literate in 1980, and only 64 per cent of children between 7 and 14 years of age were enrolled in school. Caloric intake in 1977 was estimated to be 92 per cent of minimum daily requirements. Approximately 50 per cent of the population had access to potable water.

It is the sons and daughters of the upper 20 per cent who predominate in private schools, who complete secondary school, who attend the university, and who take positions of power and privilege within Guatemalan society. It is also members of this group that have felt most threatened by the most recent wave of social unrest; some of them now are pushing for some degree of social change.

1.3 National Goals, Development Policies, and Strategies

Over the past 20 years, Guatemala emerged as the leading manufacturer in the Central American region. Most of the growth was stimulated by regional tariff protection and other fiscal incentives, and the industrial product consisted principally of light consumer goods, relying heavily on imports of raw materials. Prior to the 1976 earthquake the economy had been growing at about 5.5 per cent per year, with expanding industrial and agricultural exports, the latter principally in coffee, cotton, and sugar.

After 1978, the economy began to falter. Gross Domestic Product per capita has declined each year since 1981, and is currently lower than it was in 1976. The direct causes of the decline are said to be a deterioration in world prices for major exports, a contraction in trade within the Central American Common Market, a reduction in the volume of tourist traffic, and a major drop in both national and foreign private investment. To some extent the last three factors are related to the political instability and social conflict that has affected all the countries of Central America since the mid-1970s.

Public economic policies have exacerbated some of the problems, and have contributed to further internal dissension. The high rates of growth experienced in the earlier part of the last decade were not accompanied by improvement in social indicators or distribution of wealth and income through expanded employment. Open unemployment in Guatemala was estimated at 2.7 per cent in 1973, but grew to 7.8 per cent in 1981, and to 12.7 per cent in 1982. Low interest rates, a minimum wage law, and tariff protections discouraged labor-intensive production. The 1976 earthquake, combined with expansion of plantation and mechanized agriculture, forced subsistence farmers off the land into the cities. Although more farm land was brought under cultivation, the number of large farms increased rapidly, and the size of holdings of small farmers

declined. Between 1978 and 1981, the government sharply increased spending on large capital projects, without increased revenues. Social expenditures declined.

The new military government that took power in 1982 was faced with resistance from armed insurgents in the Highlands region, and a grave economic situation. The government was successful in its aggressive campaign to reduce the insurgent threat through military action, but could not resolve the economic crisis. It was replaced by another military government in 1983, which has attempted a series of economic reform measures, promoted the writing of a new constitution, and will hold elections for a civilian president in November of this year.

The stated objective of the current government is to re-establish the legitimacy of the Guatemalan state by increasing the participation of various sectors in the process of decision-making. A major activity has been the National Dialogue, an economic advisory council to the military government composed of nearly equal members of representatives from government, the national university (USAC), cooperatives, labor unions, and the business sector. The Constitutional Assembly, elected in 1984 by popular vote for representatives from legal political parties, has also provided a forum in which various sectors of the polity could express their opinions on national goals and strategies. Although the major part of these discussions has focused on methods to restore economic solvency, the Constitutional Assembly has given attention to indigenous people. For example, the new constitution recognizes the legitimacy of indigenous languages, although Spanish remains the single official language. There appears to be a recognition by some military and business leaders that the future development of Guatemala will require at least some concessions to the demands of rural and especially indigenous groups, if not the elaboration of economic and political structures that permit the full participation of groups previously excluded from access to public and private sector decision-making.

This emphasis is linked with a proposed economic development strategy that calls for increased productivity in agriculture, particularly with respect to export of non-traditional products and further expansion of the production of handicrafts and textiles for internal consumption and export. The strategy also requires the reduction of internal subversion and social conflict, to legitimate an economic system that will require higher levels of savings and lower levels of consumption.

1.4 Economic and Financial Conditions

The current economic crisis is seen by many as so profound as to require major changes in the economic and political structure, changes that have been, are being, and will continue to be resisted by those who feel that they will have to sacrifice more than others. The willingness of some to resort to violence to prevent reforms in political and economic structures has created an atmosphere of fear, not just for personal safety but also for the viability of Guatemala as a society.

The inability of economic elites and the government to agree on a coherent plan for economic development, despite the National Dialogue, has constituted a serious obstacle to restoring a climate of confidence.

One consequence has been a reduction in private savings and in national and foreign investments. To reduce a worsening imbalance of trade which began in 1979, the government adopted import quotas and exchange controls. But these measures were not enough to correct the problem and foreign reserves began to decrease rapidly. Beginning in 1980, tax revenues, already historically low, declined as a percentage of GDP, especially with respect to taxes on foreign trade. At the same time that the government sought to reduce its deficit, it shifted expenditures from social programs to capital investments, principally large infrastructure projects such as dams and ports. The military government that took power in 1982 reversed this trend and increased social expenditures, including those for education, but with a smaller total budget. As a result, real per capita expenditures on education were less in 1982 than in 1973.

Efforts to increase government revenues have met with considerable opposition from some elements of the private sector, which have called for further reductions in public spending, including the elimination of the 7 per cent value-added tax whose introduction two years ago was one contributor to the replacement of the military government by another. It should be noted that the growth of revenue from a personal income tax introduced in 1983 decreased from an average rate of 22 per cent between 1970-1978, to minus 3.2 per cent during 1979-1982, as declining income was multiplied by increased evasion. In short, the economic crisis is accompanied by, and in part is a result of, reduced consensus between and among economic decision-makers in both the public and private sectors. The lack of consensus makes difficult the imposition of economic policies that could enable Guatemala to emerge from the current crisis.

1.5 Labor Market Overview

The government stopped publishing employment figures in 1983. Current unofficial estimates suggest no change from those made in that year, when open unemployment was about 13 per cent and underemployment (defined as working less than 8 hours per week or earning less than the subsistence income) was estimated at 30 per cent.

Underemployment is especially acute in rural areas. Employment and level of income are associated with levels of education, and rural adults have lower levels of education than do urban adults. In addition, employment opportunities and wage scales are lower in rural than in urban areas. Rural men in 1980 received incomes that were 58 per cent of those received by men living in Guatemala City with the same levels of education. For all levels of education, rates of return on investments in formal education are higher for urban residents than for rural residents.

The labor supply exceeds demand in both urban and rural areas, an imbalance which has contributed to pushing labor costs even lower: real wages in 1984 were below those of the mid-1970s. Large-scale generation

of jobs sufficient to reduce unemployment and to raise levels of income will require aggressive expansion of industrial and agro-industrial sectors using domestic agricultural inputs, combined with marketing of traditional artisanal products outside the Central American Common Market. Short-term forecasts are pessimistic with respect to employment prospects, as the labor supply is projected to grow more rapidly than the economy will be able to generate new jobs.

1.6 Unit Cost Summary[1]

Average public expenditures per student enrolled in 1981 ranged from Q18 in the bilingual program at the pre-primary level, to Q17 in the basic cycle of secondary school. Because of the high rate of failure, the cost per promoted student is much higher at every level of the system. These per-student expenditures fluctuate over time and levels of education, as well as across the regional departments of the country.

Such variations imply that opportunities exist for improving the internal efficiency of the Guatemalan education system. This is encouraging, given the current need to provide increased educational services with a decreasing financial base.

1.7 Constraints

The educational system of Guatemala has been seriously underfinanced for some time. Given a history of low levels of spending for education--the sector receives the second-lowest proportion of GNP in Latin America, which as a region spends a smaller proportion of its GNP per capita than do other regions of the world--the first decision to be made must be to commit more resources to education. Many of the most serious problems facing the system can be attributed to inefficiency; but others derive from resources which are insufficient to act efficiently.

For example, the most recent reductions in spending on education have so limited the availability of transport that supervisors are unable to carry out their function of visiting teachers in classrooms. Schools without basic equipment and textbooks necessarily operate at low levels of efficiency. Teachers with inadequate training cannot be expected to perform at high levels. Administrators with inadequate office space, restrictions on use of materials, and little or no office equipment, often are unproductive.

In a situation of severely constrained resources, the state has to decide between a set of alternatives. Should the government make every effort to extend access to primary education to all its citizens as a move

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[1] The only figures available on which to compute the costs of education in Guatemala are national government expenditures in the sector. Components such as depreciation of physical plant, family costs, and contributions by municipal governments are not included. Therefore, in this Assessment, public expenditures per student are used to represent unit costs of education.

toward social equity--and hold to present levels of secondary and post-secondary expenditures--or should it instead invest selectively in those forms of education that are presumed to contribute more and more quickly to increased productivity?

While the alternatives are not necessarily contradictory, they also are not necessarily complementary, so that in many situations outcomes favorable for one group may not be favorable for another. This means that they require political decisions; that is, choices among values or goals as distinct from choices among means.

The available evidence suggests that these decisions have not yet been clearly formulated, let alone taken. There has been work on educational policies within the Ministry of Education. A clear trend has emerged in favor of increased coverage by the system, especially at the primary level, and in rural and indigenous areas. But the list of policy options is greater than what can be implemented, and there are no rules for setting priorities.

There is considerable ambiguity in Guatemala about the operation and effectiveness of the educational system, given a shortage of information and analysis. Instead of basing judgments on empirical knowledge, decision-makers as well as the public often must rely on assumptions that in other countries have been demonstrated to be incorrect. For example, the fact that the current educational system currently reaches only 60 per cent of the 7-14 age group, and is characterized by a high level of repetition in the early grades of primary school, is explained in terms of attitudes of parents toward education. No systematic research is available in Guatemala to support the assumption that rural parents withdraw their children from school because they believe that school is irrelevant. Research from other Latin American countries indicates that poor parents in general make extreme sacrifices to keep their children in school as long as possible, because they see education as a means toward improved economic status, and that they withdraw children only when they have been failed repeatedly. The prevalence of the assumption in Guatemala acts as a constraint on efforts to expand access to rural primary education, and on efforts to reduce repetition rates. Other assumptions not based on scientific information which also constrain programs to expand and improve education include:

1) The language and culture of indigenous people makes them less educable.

2) People from rural areas do not need and should not have more than three years of schooling.

3) The desertion rate from school is fairly high while repetition is fairly low.

4) Students fail at the upper levels of the system chiefly because of inadequate preparation at the lower levels.

5) The principal problem is motivation of the learner, rather than the availability of appropriate content.

6) Teachers generally will resist any kind of change.

7) Education is already too expensive, and a poor country like Guatemala cannot afford to educate all its children.

These gems of "conventional wisdom" are certainly not found only in Guatemala. And, in fairness, it should be noted that many Guatemalan educators recognize the limited validity of these statements. But beliefs of this kind are prevalent enough to make even more difficult the mobilization of support for expansion and improvement of education.

Without such support, there is likely to be a lack of political commitment, or will to adhere to a given policy position despite the costs incurred. Some groups in Guatemala are in favor of expansion and improvement of higher education. Another group has called for expansion of technical training at the secondary level. A third group wants to increase access to primary schools and to reduce illiteracy, especially among indigenous people. Some groups call for reduced total expenditures on public education, arguing that private education is more efficient and the establishment of competition in education would lead to increased efficiency.

Assuming that the new government of Guatemala can identify a set of economic and social objectives, and the educational policies that might contribute to them, it must then commit itself to dealing with political opposition and resistance to those policies. It must also be willing to invest the resources required to implement them.

Although there are constraints to increased expenditures on education, they are not absolute. Guatemala currently spends about 1.8 per cent of its GDP on public education, a lower percentage than every other country in Latin America except Haiti. Fiscal resources could be made available, given a national commitment to education. At current levels of funding, however, resources constitute a serious constraint to expansion of the system.

The expansion of the primary system means that more students will continue on to secondary schools, and eventually to the university. As a consequence, the share of the total education budget that can be allotted to primary schools declines. For example, primary education received 69 per cent of the total educational sector budget in 1966 and 53 per cent in 1974, while in 1984 it received only 43 per cent.

Support for expansion of primary education requires a long-term commitment to increasing the amount of real expenditures for this subsector. At current levels of spending, no significant expansion of primary education can occur without jeopardizing the advances in qualitative improvement achieved in recent years.

It will be possible to make improvements in the quality of secondary and higher education without major increases in costs; and as these levels currently enroll a high percentage of the graduates from primary schools, no additional resources would be required if primary enrollments did not grow. But if improvements are made in primary schools, then the current level of funding for secondary education will act as a constraint to improving quality and increasing enrollments.

Limited resources may have led to reduced quality in the national university, which has increased enrollment 5 per cent per year with no increase in income. If the university receives 5 per cent of the current national budget, however, as is promised in the new constitution, it would have no fiscal constraints on either expansion or improvement of quality.

Another resource constraint is the quality and number of buildings, materials, and equipment available to the system. There are not enough primary-school classrooms to provide all children access to all six grades, although it is possible that the system could provide universal access to the first grade by more intensive use of the existing space.

Buildings do not act as a constraint on secondary-school enrollments in urban areas, but the relative absence of secondary schools in rural areas does constitute a disadvantage to rural children who graduate from primary school.

Another constraint to improvements in quality of education is the shortage of didactic materials, equipment, and textbooks throughout the system. The availability of teachers is a mixed problem. At the primary level, there is no shortage of persons in the labor force who are qualified as teachers. At the secondary level, there is a shortage of teachers who are university graduates from teacher training programs and therefore certified to teach at that level.

Improvements in the quality and efficiency of education will require increased numbers of better-trained administrators and supervisors who can both assess the needs of the system, and create the organizational processes necessary to carry out new programs. Of particular importance in this Assessment is the constraint on utilization of foreign assistance by administrators poorly trained in program implementation, and a governmental structure that makes difficult the rapid and effective disbursement of available funds.

1.8 Characteristics and Key Issues of Education and Human Resources

1.8.1 External Efficiency

A major obstacle to systematic educational planning in Guatemala is the lack of information about the external efficiency of individual programs. With the exception of worker skill training and one adult education program, none of the programs regularly collect data about the degree to which their efforts contribute to the realization of some objective other than production of graduates. As a consequence, there is no way to assess the cost-effectiveness of programs, and to

choose between them. This is especially problematic for the diversified cycle of secondary education and for higher education, where unit costs are relatively high and programs should contribute directly to either social or economic development.

There is the most general information on economic returns to completion of various levels of schooling. As would be expected, incomes and lifetime earning streams increase sharply with increased levels of education. By subtracting the direct and opportunity costs of that education, it is possible to compute the rate of return upon reaching a given level. Table 1.1 shows the internal rate of return for various levels of education within the Guatemalan system, using 1982 data. The rate of return is generally interpreted as an indication of the demand by the economy for persons with a given level of education as a function of costs. The highest rates of return, equivalent to an annual interest rate of 30 per cent, are for completion of primary school, followed by completion of the diversified cycle, the basic cycle, and the university.

Table 1.1

INTERNAL RATES OF RETURN TO INVESTMENTS IN FORMAL EDUCATION, 1982

Level Attained (compared to immediately lower level)	Annual Rate of Return
1-3 years Primary	20.1%
4-5 years Primary	25.2%
Complete Primary	30.1%
Any Basic	22.0%
Any Diversified	25.0%
Any University	19.0%

SOURCE: SEGEPLAN, Criterios para la Planificacion de los Recursos Humanos, 1984.

There is almost no information available about the employment of graduates from any of the formal school programs, with the exception of normal schools at the diversified-cycle level. In 1983, public and private normal schools produced 5,355 graduates. The following year, the Ministry of Education hired 1,800 new teachers at most, half of whom were replacements for persons leaving the Ministry, with the other half filling new teaching positions. If it is assumed that the number of teachers who found positions in private education was in proportion to the private sector's 14 per cent share of primary enrollments, then the total number of teachers hired was about 2,100, or less than half the number of graduates. This could be interpreted as indicating low external efficiency of normal schools. Enrollments in primary education would have to grow at 14 to 16 per cent per year, instead of 5.5 per cent, for the number of new teachers produced each year to match the number of new jobs. Only under that circumstance would the external efficiency of the normal school system be optimal.

In the absence of employment statistics, the external efficiency of formal programs cannot be determined. Only INTECAP, the national technical training institute, and the Francisco Marroquin University (UFM), regularly conduct follow-up studies of their graduates. INTECAP reports that the employment rate in the field for which training was given is higher after training than before. The UFM states that monthly salaries of graduates are equal to one year's tuition.

No information is available about the learning or knowledge produced by the various formal programs. There are no standardized tests in the Guatemalan system, except those used to determine admission to two of the private universities, and those used to screen applicants to industrial schools at the diversified level and to the two public residential normal schools. The absence of systematic measures of student learning or knowledge is a serious impediment to the organization of a more effective system.

1.8.2 Internal Efficiency

All levels of the Guatemalan educational system are characterized by high rates of failure, especially in the early grades of a cycle. One indicator of internal efficiency is the number of years of instruction necessary to produce a graduate. The number is larger than the total of grades in the cycle, as some students fail and repeat years and others attend for some years but drop out before completion. If this indicator is applied and comparability of standards across schools is assumed, the most efficient primary schools are private urban schools, which require 7.7 years of instruction to produce a sixth-grade graduate. Urban public schools require 9.3 years of instruction; and rural public schools, 18.9 years. As more than half of all students are in rural public schools, this last figure points to serious problems of internal efficiency.

On the other hand, it should be noted that the system has made tremendous strides since the 1978 Sector Assessment, which reported that urban public schools used 13.5 instruction-years to produce a graduate, and rural schools, 52.9 years. This apparent improvement in internal efficiency is a result of improved promotion rates in all grades, but especially in the upper grades. Even so, failure rates are still high: 50 per cent per year in first grade in rural schools, and 36 per cent per year in urban public schools.

Internal efficiency is also low at the secondary level. In any given year, about two-thirds of basic-level and one-half of diversified-cycle students fail one or more subjects.

There are no available statistics for the university level, but USAC officials report that an average of 14 years is required for a student to complete the thesis and graduate.

Some non-formal programs are highly efficient. IGER, a private radio primary program for adults, reports that 80 to 85 per cent of those who begin, finish the two-year program.

1.8.3 Access and Equity

In 1977, approximately 48 per cent of children aged 7 to 14 were enrolled in schools, compared with 60 per cent in 1983. At this rate of expansion, the system will not enroll and hold 100 per cent of the age group in school until the year 2005. Nearly 23 per cent of children drop out before they are 15 years old, after having failed one or more grades, one or more times.

Access to school is distributed inequitably according to place of residence. The 1978 Education Sector Assessment reported that 75 per cent of the urban age group were enrolled, compared to 34 per cent of children in rural areas. Because enrollments in rural schools have grown more than twice as fast as those in urban schools, this difference will have diminished to some extent. Much of this growth has been the result of improvements in the ability of rural schools to retain students once enrolled.

The problem of access is especially acute for indigenous children. Schools are in shortest supply in those departments in which indigenous people form a majority of the population, and in almost all schools in Guatemala, Spanish is the language of instruction. Monolingual indigenous children are effectively denied access to education, as only 10 per cent are served by the pre-primary bilingual readiness program.

Access to education is also inequitably distributed according to gender. Fewer women than men--a difference of 8 percentage points--even enroll in school. Women are more likely than men to leave school early or to be failed in rural areas, where indigenous girls are less likely than their brothers to speak Spanish.[1/]

Finally, access to education is a function of family income and parents' education level. Children of better educated parents are much more likely to reach the university.

1.8.4 Administration and Supervision

One of the major recommendations of the 1978 Education Sector Assessment was a reform of the administrative structure of the Ministry of Education. The project was implemented but cut short because of changes in central government policies. As a consequence, a number of its objectives have yet to be achieved.

The Ministry is a highly centralized organization that requires top officials to attend to an abundance of details, preventing them from devoting their attention to major problems. Communication between operational units within the Ministry is also difficult, in part because they are located in approximately ten buildings spread over Guatemala

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1/ Even with equal levels of education, women receive incomes about one-half those of men.

City, and in part because of unclear lines of communication and authority. The administrative reform project trained a number of personnel in modern management techniques, but few of those persons remain in the positions for which they were prepared, given the high degree of staff turnover.

Two problems in central administration deserve special mention. The first is the absence of system-wide criteria for determination of priorities. This results in part from the financial constraints under which the system operates. Units depend on externally financed projects for funds which allow them to go beyond routine operations. This encourages a multi-focus planning process and the establishment of competing goals. The administrative unit responsible for system-wide coordination, USIPE, does not appear to play a critical role in the development of a unified approach within the Ministry.

The second administrative problem is the Ministry's limited ability to develop and implement new programs. Especially troublesome are problems with procurement and the nomination of key personnel. In part, this is a function of the need for the Ministry to gain approval from other entities for the funding of new programs as well as the designation of personnel to coordinate them. Start-up time can stretch over two or more years; this serves to increase the government's total cost and make more likely the possibility that the new program will be truncated because of shifts in policy priorities.

The highly centralized organization of the Ministry also limits the degree to which effective supervision can be carried out in the field. There are too few supervisors, and their location in urban areas discourages meaningful contact with the majority of teachers who desperately need guidance, given their inadequate training and the lack of curriculum guides. Given the chronic shortage of travel funds, there is little contact with rural schools and teachers in distant departments.

The government has had under consideration for some time a decentralization of the system. Under this reorganization, which has not yet been funded, departmental or regional supervisors would be given authority to treat some of the issues that now congest the central administration.

1.8.5 Costs and Financing

There is considerable variation in actual expenditures per student across the 22 departments of Guatemala. For example, in 1982 per-student costs at the primary level ranged from Q45 in Totonicapan to Q137 in El Progreso. This can be interpreted as either an indication of system inefficiency or as evidence of inequities in the quality of education. The range of variation in actual per-student costs at other levels is even greater.

As in other education systems, teacher salaries account for about 90 per cent of total costs. This figure indicates how little remains to be spent on instructional materials, equipment, and school maintenance.

With the exception of INTECAP, which is financed by a 1 per cent payroll tax, and the national literacy program, which is partially supported by a lottery, all educational programs in the public sector are financed from central government revenues. In addition, families bear indirect educational costs for books, school supplies, clothing, transportation, and food. These indirect costs are about 25 per cent of the cost to the state for public primary education. But educational costs to families account for only 1.2 per cent of total annual family expenditure. This low percentage suggests that families could be asked to bear more of the cost of their children's education. This rate of expenditure also reflects the relatively low level of inputs to the educational process, which is in turn related to a low commitment by the society to the expansion of education.

1.9 Summary and Conclusion

There is great uncertainty in Guatemala at the moment about the future direction of the nation. In part this is a function of the democratization process that will culminate in presidential elections in November. But only if disparate political, economic, and social groups unite behind the definition of common objectives and strategies will it be possible for any new civilian government to mobilize national acceptance of the draconian measures required to correct fundamental economic and social problems.

Increased spending for education is likely, therefore, only as an effort to increase political support, and not as part of any systematic development plan. The most likely prognosis is that spending increments will be relatively small, even though evidence indicates that investments in education yield high rates of return.

If there is no significant increase in funding, the natural evolution of the system will cause the balance of costs to be shifted from lower to higher levels. Given a fixed total, there will be less money available for primary schools than for secondary and higher education, just at the time when it will become possible to achieve equity in access to primary schooling.

1.10 Level-Specific Overview and Recommendations

The possibilities for improvement of the Guatemalan educational system are many, and they exceed the resources and administrative capacity of the society. Not everything can be done at once, and many things that should be done will necessarily be postponed until funding and human resources are available.

A full list of the range of ways in which education could be made more efficient and more equitable is provided in the chapters that follow; each deals with a specific level of the system. The purpose of this section is to identify, on the basis of available information, those actions considered to be most feasible at the present time, which have the greatest possibility of improving efficiency and equity. An overview is first presented of the current status of each level of the education system, accompanied by recommendations for action at that particular

level that are of greatest need and most feasible. Those recommendations to be given highest priority are then presented in summary form.

1.10.1 - Pre-Primary and Primary Education

1.10.1.1 Overview. There are two types of pre-primary education in Guatemala; together they enroll only a small fraction of the eligible age group. Enrollments in the readiness year of the bilingual program are likely to grow with that program; the urban-based program will not be able to expand unless additional funds are provided. There is evidence that pre-school education in Guatemala, as elsewhere, contributes to success at the primary level. But as the unit costs of pre-primary are higher than those of primary, it seems appropriate to delay expansion of pre-school until all children have access to primary education.

Although almost all urban children enroll in school at some time, only half of rural children do, principally because they do not have access to schools with teachers. Lack of access is particularly acute for indigenous children, who are more likely to live in the remote, less populous regions of the country.

More than half of all rural schools have less than six grades, and about 75 per cent have only one or two teachers. The extension of rural education has been achieved principally by assigning teachers to teach more than one grade at a time, rather than to teach two shifts, morning and afternoon. Only 11 per cent of urban schools have multiple-grade classrooms, compared with 90 per cent of rural schools.

Rural education also faces the problem of language. Most rural teachers do not speak the indigenous language of many of the children they are to serve, nor are they familiar with the local economy and social customs. Although there are many excellent rural teachers who adapt inappropriate urban curricula and school calendars to fit the needs of their students, too many others rigidly apply an educational methodology designed for an urban setting.

In both urban and rural schools, teachers fail large proportions of their students, especially in the first grade. Many children who fail repeat one or more years, rather than leave the system entirely.

Grade failure is to some degree the result of improper attitudes among teachers as to their role; children are failed because they do not measure up to the teacher's image of an educated person, rather than because they are no longer learning. Despite very large classes and few contact hours with individual students, teachers with little or no training in assessment are expected by the system to be able to determine which students will not be able to handle the material of the next grade.

Teachers, especially those in rural schools, receive little or no in-service support. There are no master teachers who serve as school principals, and the few supervisors in the Guatemalan system are unable to reach rural schools even once a year. In sum, teachers are poorly

trained for the schools in which they work, and they receive little or no administrative support.

These problems can be corrected, as has been shown in several outstanding pilot projects that have provided teachers with additional training, didactic materials, and supervisory support. The result has been a dramatic improvement in the retentive capacity and internal efficiency of the school. Especially important has been the assignment of teachers according to their knowledge of a Mayan language. Bilingual education promoters with only six years of education are as effective in terms of retention and promotion of students as monolingual teachers with twelve years of education. Bilingual teachers with twelve years of education should be even more effective than the promoters.

1.10.1.2 Recommendations. The major objective for primary education should be to achieve universal enrollment as quickly as possible, to be followed by improvements in educational quality that lead to retention of a larger proportion of students through the sixth grade.

The first requirement is expansion of the enrollment capacity of the primary school system. This can be accomplished by taking several complementary actions. First, increase the number of classrooms in small schools in communities with populations sufficiently large to warrant a six-grade school. In the smaller of these communities, it will be necessary to operate two shifts, perhaps with the lower grades in the morning and the upper grades in the afternoon. Especially in remote rural communities to which teachers must travel some distance, it would be preferable to use the same teacher in both shifts to reduce teacher absenteeism. Subsidies to private schools that do not charge fees should be considered among the policy alternatives.

Communities without sufficient population to support a school with six grades should be linked with larger neighboring communities. The smaller communities could offer only the lower grades in their schools, and older children could travel the longer distance to a nuclear school with upper grades located mid-range between the feeder or satellite schools. Finally, an effort should be made to provide all communities in Guatemala with some access to schooling. It may be necessary in the most remote and smallest communities to introduce a radio-based education program using a single teacher with instructional content for the upper grades.

Every effort should be made to provide access to school for all children as quickly as possible, through construction, double-shifting, networks of nuclear and satellite schools, and distance-education programs.

Improvement of the internal efficiency of primary schools can be approached in several ways. First, the Ministry should adopt a formal policy with respect to the proportion of children who can be failed in the first grade. Teachers should be required to indicate at mid-year what proportion of their students are likely to be failed at the end of the year. If that proportion exceeds 5 or 10 per cent, teachers should

be required to indicate what steps they will take in the second half of the year to reduce the failure rate. The intent is to shift the responsibility for student success from student to teacher, and to indicate to teachers that almost all students are expected to pass. The current examination policy, which sets a numerical standard for promotion or failure, should be changed to encourage first-grade teachers to use qualitative and process criteria to assess the rate, rather than the amount, of student learning.

The quality of primary education will be enhanced considerably by the widespread distribution of the new textbooks now being produced, along with curriculum guides and training for teachers. The expansion of the bilingual education program from 40 to 400 schools, to reach slightly less than half of the estimated population of indigenous children with bilingual promotors, teachers, and indigenous-language textbooks, will also have a powerful impact on the system's efficiency. Given the high potential of these programs and the fact that the government is unlikely to accept additional loans in the immediate future, all possible efforts should be made to expedite and monitor their implementation. The results of the formal evaluation of the impact of this intervention should be disseminated as widely as possible among all teachers in the Guatemalan primary education system, as well as to parent groups.

The involvement of supervisors in a review of experiences with the program could be combined with efforts to create regional supervisory centers, intended to encourage rationalization of the assignment of teachers by language ability; development of in-service training materials and programs more sensitive to regional variations; and adjustments in school calendars to match differences in agricultural cycles.

Two activities can be begun now that would require relatively low levels of funding from the GOG.

The first would be a comprehensive collection, evaluation, and synthesis of all existing research and reports on education in Guatemala. This would include a review of the various assistance projects funded by donor and loan agencies, as well as educational research carried out through Guatemalan universities. The objective of the review would be to create a data bank and produce a series of policy recommendations that would serve the educational planning process described in the section that follows. The volume of research to be reviewed is limited; the task could be accomplished in a year. The review process should be designed to involve all sectors of Guatemalan society and to raise levels of awareness about the nature, magnitude, and significance of problems in education for the development of Guatemala.

The second activity would be the development of programs to improve the administration and supervision of Guatemalan education. This would involve training within country and abroad of both Ministry personnel and university faculty. This project could link one or more U.S. universities with the Ministry and participating Guatemalan universities. Every effort should be made to develop a team of Guatemalan supervisors,

Ministry administrators, planners, and researchers, with experience in working together for the purpose of participating in the major educational planning/reform effort described below.

Finally, a national diagnostic examination should be developed and applied at the end of the fourth grade or to children 10 years of age. One model is the National Assessment Examination of the Educational Testing Service. The objective of the examination would be to provide information about the performance of the system; it should not be used to evaluate individual children. It should be criterion-referenced; i.e., it should specify a minimum level of ability and knowledge. The test would be applied each year to a sample of children, rather than to all children in the nation, with results reported according to scores by type of school (e.g, complete, incomplete; urban, rural; morning shift, afternoon shift), not by individual student, classroom, or specific school. The test should be designed by inviting teachers to recommend items, according to what a fourth-grade graduate or a child of 10 should know or be able to do in their particular region of the country. A central committee would then cull the items to build a test that represents all of Guatemala and not just urban areas. Items would cover aspects of community and family life as well as traditional subject areas, testing behavioral as well as cognitive abilities. The item bank should be large enough to build a number of equivalent versions of the test. Results should be widely publicized in the media each year, and the items should be published. A national teachers' commission should be formed to recommend curricular and program changes necessary to improve test performance. Parent groups at all levels, and especially in rural areas, should be organized to provide suggestions on how to improve their contributions to schooling.

Given the preparatory efforts described above, it is possible that by 1989 or 1990 a major planning/reform process could be undertaken. At the primary level, the objectives would be the achievement of universal access by 1995 and the improvement of quality and efficiency to raise the rate of completion of sixth grade to at least 50 per cent of those entering the first grade. The reform would affect curriculum, develop regional participation, and further extend educational access to rural and indigenous people. The success of the planning effort would depend on the preparation of cadres of administrators, supervisors, planners, and researchers prior to its initiation; on the development of increased public support for education at all levels; and on access to financial assistance from external agencies.

1.10.2 Secondary Education

1.10.2.1 Overview. Secondary education includes the basic cycle, or lower level, which lasts three years; and the diversified cycle, or upper level, with programs which last from two to four years. All diversified-cycle graduates are eligible for entrance into the university.

With the exception of the PEMEM schools begun in the early 1970s, there have been no reforms of the basic-cycle curriculum since 1963. There has been no systematic review of the diversified cycle since its inception in 1965, although the number of programs offered at this level has mushroomed to more than 25.[1/]

The secondary level in general has been even more under-financed than the other levels in the system, particularly since the shift in priorities to primary rural education. Enrollments at the basic level have grown in direct proportion to the increase of graduates from primary. At the upper secondary level, enrollments have grown less rapidly, in part because of a high failure rate in basic-level schools, and in part because there are few upper-level schools in rural areas.

The basic-level program incorporates eight academic subjects and relys heavily on teaching by lecture rather than by problem-solving or discovery methods. English is the second language taught; no attention is given to indigenous languages. The PEMEM schools add to the already heavy curriculum a load of industrial and manual arts courses.

The same observations about the nature and quality of the curriculum can be made with respect to diversified programs. Although there are some outstanding institutions, most are under-equipped and under-supplied, and teaching is often lackluster.

Schools in both cycles are operated with little or no attention to the consequences of their actions. Basic-cycle teachers do not know whether what they teach prepares students for the next level. Schools in the diversified cycle organize programs without any attempt to determine whether what is taught is in fact used in the workplace, or even if students actually obtain employment in the fields for which they are prepared. It may be that the curricula are appropriate, but there has been no systematic attempt to find out.

Private schools account for about one-third of the enrollments in the basic cycle. Another 15 per cent of the students are enrolled in cooperative schools, financed jointly by the Ministry of Education, the local municipality, and parents. These schools were opened in 1962 to relieve the financial burden on the central government.

Secondary education is primarily for urban students. Only a few cooperatives, a handful of agricultural schools, and three regional normal schools are specifically designed to serve rural youth. Only 8,000 of the 190,000 students in both cycles of secondary attend a rural school. As a consequence, the costs of secondary education are higher for rural than for urban students.

[1/] A reform proposed in 1978 was never implemented.

Given this urban bias, it is not surprising that an even smaller proportion of indigenous youth are enrolled at the secondary level as compared with primary. In the basic-cycle agricultural schools run by the Ministry of Agriculture, which are designed for rural youth and include indigenous languages in their curriculum, only 39 per cent of the students are indigenous.

Women, under-represented in both cycles, are more so in basic than in diversified; this may be because the technical programs in the diversified cycle include several, such as secretarial training, that primarily attract women.

Both the basic and diversified cycles are marked by high rates of failure: as much as 50 per cent per year in some of the grades. The failure and repetition rate in the first year of the diversified cycle is so great that the number of students enrolled in a given year is almost 70 per cent higher than the number of students who graduated from the basic cycle the year before.

1.10.2.2 Recommendations. The problems faced by secondary education are so fundamental that no increased investment is recommended until a complete reform can be designed and implemented. That process will require four or five years at the minimum and cannot be started at this point, given the severe financial constraints under which education suffers. Accordingly, the priority recommendations for this level are the following.

First, cooperative schools at the basic cycle should be supported to the fullest extent possible, and in preference to other kinds of basic-cycle institutions. These schools reach into the countryside and provide parental involvement in the educational process. Many have very high rates of indigenous enrollments. They may not work well now, but they represent a model that could be studied, redesigned, and improved, creating a new general format for lower-level secondary education.

Second, an assessment should be made of the economic demand for the various kinds of secondary education currently offered, to determine what new kinds of programs should be established. This study should measure the fit between the outputs of schools and the expectations held by parents, students, and employers. Institutions should follow up students who leave or graduate, to identify the kinds of outcomes experienced as a result of education. The purpose is to determine the adequacy of the methods and content of the educational programs. Basic-level institutions should be concerned that more of their graduates succeed in diversified-cycle programs. Diversified schools should attempt to reduce the unemployment rate of their graduates.

Third, it is recommended that between now and 1989 the necessary steps be taken to prepare for a comprehensive analysis and reform of secondary education. This involves the compilation of existing information on the performance of secondary schools, the sponsorship of new research to assess internal and external efficiency, and the dissemination of information to businesses, government entities,

universities, teachers, and parent associations, in order to stimulate public debate about the need for secondary-school reform.

1.10.3 Vocational/Technical Education and Training

1.10.3.1 Overview. Under the rubric of vocational/technical education are included programs at the basic secondary level, the diversified secondary level, and others aimed at primary and secondary graduates, but not related to the formal system. In general, "vocational" refers to entry-level skills, while "technical" describes occupational skills at a higher level. The four major kinds of programs available in Guatemala include those offered at secondary schools by the Ministry of Education; agricultural schools run by the Ministry of Agriculture; schools for nurses, medical technicians, and related health workers operated by the Ministry of Health; and the national technical training institute, INTECAP, responsible to the Ministry of Labor.

1.10.3.1.1 Schools of the Ministry of Education. Vocational programs at the basic level are offered in the 26 experimental PEMEM schools, which were financed with loans from the Inter-american Development Bank (IDB). These programs, which enroll approximately 20,000 basic-level students, provide entry-level skills in the first three grades of secondary school. The schools are well built and have adequate space, but lack the kind of equipment and supplies necessary to provide "hands on" training.

The same deficiencies can be observed in many of the basic-level and diversified technical programs. There are too few machines, supplies are inadequate, equipment is obsolete, instructional aids are scarce, and teachers have inadequate knowledge of their subjects. As a consequence, failure and repetition rates are high. Few if any follow-up studies are conducted to determine whether graduates find employment, and if that employment is related to training.

The demand for some types of technical training is high. The industrial schools which apply entrance examinations turn away three candidates for each one accepted. In recent years, there has been a proliferation of private schools in new areas such as tourism, computing, and guidance, which suggests unmet demands for skill training. It is possible that there is a serious shortfall of skilled workers in some areas. But there is no systematic knowledge of labor-market opportunities for graduates of these programs or for others not yet established. In effect, there is no Ministry policy with respect to diversified education except that schools should meet minimal standards.

1.10.3.1.2 Agricultural Schools. The Ministry of Agriculture runs three Schools of Agricultural Formation (EFA) at the basic level, and one Institute of Agricultural Technology (ITA) at the upper-secondary level. The total enrollment is less than 1,500, in a country that earns a major portion of its foreign income from agricultural exports. Most of the graduates of the ITA become government employees and work in the extension programs, principally with large and middle-size landholders. The EFA is producing its first graduates this

year; it is expected that some will go on to the ITA, while others will return to their communities. Most students come from rural areas and about one-third are indigenous. The programs of the EFA appear to be appropriate, and the schools are well equipped; but the ITA has antiquated equipment, inadequately prepared teachers, and a restricted budget, so that its quality of instruction is low.

1.10.3.1.3 Nursing. Nurses are trained in a post-secondary national nursing school. Admissions have been cut in half because of restricted funds to employ graduates, almost all of whom enter government employment. Similar cuts have been made in programs that employ medical and laboratory technicians, rural health workers, and nurses' aides. There clearly is a need for medical services of all kinds throughout rural Guatemala; but no detailed study exists on which are most needed, or on the ability of rural people to support private health services if they were available.

1.10.3.1.4 Skill Training. The major center for skill training is INTECAP, the national technical-training center. Financed by a 1 per cent payroll tax, this autonomous organization under the Ministry of Labor has well-equipped classrooms and laboratories, no serious budgetary problems, and generally operates an effective and efficient set of programs. Drop-out rates within programs are fairly low. Most of the training is given to workers already employed, through direct arrangements with employers. Some training is provided to the unemployed to stimulate self-employment, and there are a limited number of programs for management.

1.10.3.2 Recommendations. All aspects of technical and vocational training and education in Guatemala need attention. The three recommendations that follow apply to each of the various kinds of training and education programs described above.

No large-scale effort should be made in technical and vocational education and training until completion of a national assessment of human resource requirements. This study would inventory the current stock of human resources; determine the current levels of production of graduates at measured skill levels by the various programs and their capacity for expansion; identify those sectors of the economy most likely to need expansion over the near and longer term future; and examine the mechanism, including labor markets and planning agencies, for linking the outputs of schools and training programs with industry, commerce, and agriculture. A study of this kind would not only evaluate the current process of human resource production and placement, but would also serve to focus both public and private-sector attention on the importance of education and training in raising levels of productivity. It would generate information essential for the design of new programs and the elimination of those no longer necessary; it would create a basis for guiding students according to future employment possibilities; and it would indicate clearly to employers the kinds of economic returns to be expected from the variety of education and training packages which exist. This study, which could be executed in one year, should involve representatives of the education and training institutions from the outset.

It is strongly recommended that a variety of linkages be developed between employers and education and training centers. A useful model could be the education-industry council, which brings representatives of labor, management, and educational institutions together to collaborate on policy issues relating to technical education and training. The advisory board of INTECAP approaches this concept, but private-sector participation is too limited for INTECAP to take full advantage of the contributions which employers could make to training programs. The councils would provide information to schools on the kinds of skills that employers require; generate work-study opportunities for students; contribute to the supply of materials, machines, and instructors available to schools; and stimulate curricular innovations. Although this is a low-cost proposal, it will require technical assistance to educate both employers and school administrators about the benefits of this kind of relationship.

While we recommend no efforts to expand technical and vocational education until a human resource requirements study has been completed, we do suggest that attention be given to the improvement of program quality, through small projects to supply instructional materials, tools, and equipment, as well as provide training for instructors.

1.10.4 University

1.10.4.1 Overview. Higher education enrollments in Guatemala are still dominated by the massive national University of San Carlos (USAC). The USAC's enrollment has grown at an annual rate of only 5 per cent since 1978, but that amounts to the addition of more students than the combined enrollments of all the private universities. The USAC currently enrolls 48,000 of the 63,000 university students, making its share of the total 76.8 per cent, as compared to 79.9 per cent in 1978.

Of the private universities, only the Francisco Marroqu§n has grown rapidly, at an annual rate of more than 17 per cent since 1978, and now turns away 75 per cent of those who apply for admission. Mariano Galvez and the Del Valle have grown at less than 10 per cent per year. Enrollment at Rafael Landivar has actually declined since 1982. The overall growth rate for higher education enrollments of 5.6 per cent is among the lowest in Latin America.

The USAC has no plans to turn students away, even though the university enrollment in Guatemala City is about 10,000 larger than the planned capacity of the campus. The pressing problem at the moment is less the physical crowding than a shortage of professors to handle students in conventional class sizes.

USAC officials blame the low quality of education that students receive in secondary school for high failure and repetition rates at their institution. Even at Del Valle and Marroqu§n universities, where admission examinations are used to select the best students, professors complain about their students' study habits, knowledge of Spanish composition, and mathematical skills. These two universities provide special services for their students to help them acquire the necessary skills, but still fail a number of those admitted.

Access of indigenous students to higher education is also limited, by the same factors which limit access at each of the lower levels. The USAC enrolls about 2,600 indigenous students, 5.4 per cent of their total enrollment.

While rates of growth and enrollment figures reflect student demand, the universities have no precise information on labor-market demand for high-level human resources. Few data are available to determine whether it would make sense for Guatemala to invest in the expansion of university enrollments.

The four private universities are supported almost completely by student fees. The USAC is financed through the budget of the Ministry of Education with a set-aside that is now 2.5 per cent, and in the new constitution is fixed at 5 per cent, of current government revenue. The USAC also receives income from fees and other sources. The Marroquin is partially subsidized by individual donors, as well as by national and international business groups.

Costs of instruction are lowest at the USAC, but it is likely, given an apparently high rate of repetition, that the cost per graduate is higher than at the private universities. Costs are highest in the scientific, engineering, and medical faculties. Although the USAC does some research for outside clients, this is not a major part of its program, and fees from research are small.

There are constraints to improvements in the quality of education at both the public and private universities. All find it difficult to attract well-trained professors who can teach and do research to generate new knowledge. In addition, all of the universities, especially Mariano Galvez and the USAC, have poorly equipped libraries and laboratories. Many university students are without books; they are not readily available and have become even more expensive with the devaluation of the Quetzal.

1.10.4.2 Recommendations. Two sets of recommendations are made here. The first refers to conventional interventions to improve the quality of university education, without necessarily increasing quantity. The second refers specifically to actions to improve access to higher education for the indigenous population.

1.10.4.2.1 Improving Quality. The first problem that universities must resolve is the level of preparation of students who are admitted. There are three complementary actions that could be taken without major additional expenditures. First, the USAC can act to influence directly the quality of education provided in secondary schools. At present the links between the two levels are minimal. The University could develop pre-service and in-service training to prepare teachers for secondary schools, especially at the diversified cycle. The University could also study the experiences of students from the various sending schools, to identify those schools whose graduates are least successful and to provide direct assistance to them in the improvement of their programs. The University could work with the Ministry of Education in a reform of secondary-school curriculum to insure a high level of

correlation between the academic requirements of the two levels. These kinds of projects could be accomplished through a pairing arrangement with one or more U.S. universities.

A second approach would be for the universities to change those internal practices which relate to student failure. Research is needed to determine the major causes of low achievement among students, and to identify those kinds of teaching/learning situations in which the current supply of students can learn most effectively. There has been considerable research done in other Latin American and U.S. universities on more effective alternatives to the traditional lecture method. The Monterrey Institute of Technology in Mexico, for example, relies heavily on the use of personalized instruction techniques in the first years of all its programs, and reports considerable success in overcoming the knowledge and study-habit deficiencies which students carry from secondary schools.

The second problem that universities must resolve is the serious shortage of books, instructional materials, and equipment. Attention should be given to the development of adequate library facilities, particularly for the USAC. A second effort would be the production of textbooks for relevant subjects, perhaps through a rejuvenation of the RTAC program which translated U.S. texts into Spanish. A third effort could be the development of collaborative programs between Guatemalan and U.S. universities in which professors would work together on the development of instructional materials and equipment that could be marketed in Guatemala and other Central American countries. Given the very large enrollments, this would seem particularly appropriate for economics and engineering, but attention should also be given to agricultural subjects.

Finally, consideration should be given to the provision of further training, perhaps at the graduate level, for university professors in the U.S. or in other countries. The LASPAU model--which specifically prepares university professors to return to their institutions as improved teachers and administrators--would be one possibility. No massive program of scholarships should be implemented, however, until there is first a careful study of the human resource requirements that Guatemala now has and is likely to face in the future. A full-scale labor force study would provide information which could be used to improve the external efficiency of both university and upper-secondary programs. It could also form the basis for long-range planning of human resource development and indicate how to strengthen the operation of the labor market in Guatemala.

1.10.4.2.2 Increasing Access. The second set of recommendations focuses on the development of a higher education capacity to enhance the status of the indigenous population. The centerpiece is an institute or university that has as its central mission the study and assessment of indigenous concerns in Guatemala.

This institution, which could be part of an existing university or created as an autonomous entity, would enroll both indigenous and Ladino students interested in understanding and contributing to the advancement of indigenous Guatemalans, as part of the national strategy for greater

equity and a more balanced development. It is likely that such an institution would also attract students from other countries, as the indigenous people of Guatemala occupy a unique position in history.

The center should be located in the Highlands of Guatemala, where the indigenous population is concentrated, and should have three major emphases. First, it would contribute to the study and teaching of indigenous languages and evolved culture. Second, it would be a national and international center for the study of the historical Mayan culture and people. Third, it would organize programs with the explicit objective of contributing to the economic and social development of the rural Highland regions, through preparation of professionals as well as research and development projects.

This institution would serve as a symbol of earnest purpose for the Guatemalan people as they seek to build a new society. It may also be seen as a model for other nations where ethnic differences contribute to strife and detract from efforts at development and economic growth. A project of this kind should seek the widest possible base of financing, including the private sector as well as international organizations.

1.10.5 Teacher Education

1.10.5.1 Overview. Teachers for primary schools in Guatemala are trained in normal schools, which form part of the diversified cycle of the secondary level. Teachers for secondary schools are to be trained at the university level. Almost all primary-school teachers are normal-school graduates, but only one-fourth of secondary-school teachers hold the correct credential. Many, particularly in private schools, are normal-school graduates with some university studies; others hold university degrees in fields other than education.

The fact that almost all primary-school teachers are certified reflects the current productive capacity of teacher education at the secondary level. There are 109 normal schools, of which 30 are public. Many of the private schools are small, with a total enrollment in 1983 of 6,921, only slightly more than half that of public schools. But there are 18,000 students enrolled in the three-year program, and each year approximately 5,000 new teachers graduate.

The number of graduates has exceeded the number of teachers hired during the past several years. In 1984, for example, perhaps 2,100 teachers were hired. The Ministry estimates that there are approximately 20,000 normal-school graduates who are not working in education. If primary-school enrollments were to expand overnight to include 100 per cent of the 7-14 age group, the number of teachers would have to increase by about 60 per cent in order to maintain current teacher/student ratios. Some 24,000 teachers would be required, which equals the existing stock plus one year's crop of graduates. Once universal enrollment has been achieved, the demand for teachers would grow at an annual rate of about 6 per cent to accommodate the 2.5 per cent population growth plus a turnover rate of 3.5 per cent.

There is too much capacity in normal schools. Even so, the physical plant of most normal schools is under-utilized. Most schools with their own buildings operate one shift of teacher training per day, with another shift devoted to basic-cycle classes. Class sizes are not overly large, especially in the upper grades, although there may be a shortage of qualified normal-school teachers.

The demand by students for normal-school education results primarily from the absence of alternatives. The indigenous population, in particular, finds access to other, more preferred, kinds of upper-secondary education blocked by a lack of schools or by an admission examination. The overall capacity of the diversified cycle of secondary education has grown more slowly than the growth of graduates from primary school. There are few available programs that provide some promise of improved employability--the industrial programs, for example, apply entrance examinations and turn away candidates. Most of the academic schools are private and charge high fees.

The education provided in normal schools is not well suited for employment other than in teaching, or for university-level studies. Almost two-thirds of the three-year course sequence is given over to pedagogical subjects rather than to general intellectual development.

The greatest number of graduates from normal schools are trained as urban primary-school teachers--about ten times as many as rural teachers --even though rural primary schools hold more than 50 per cent of the total enrollment. Only graduates of the rural primary program are likely to learn how to teach in one of the indigenous languages, although monolingual indigenous children comprise at least 50 per cent of the primary-school age group.

In short, the normal school system is an anachronism: overgrown, underqualified, prepared to accomplish a task that is not appropriate for Guatemala, discriminatory (although perhaps without intention), and showing the effects of extensive in-breeding.

But it is not an inexpensive system. The per-student cost at non-residential public normal schools is about 60 per cent higher than the mean cost per student of all diversified programs. Internal efficiency is no higher and might be lower than other diversified schools, except at the three boarding schools where retention is high.

1.10.5.2 Recommendations. The available evidence argues for a reduction in the production of normal-school graduates. There are two major alternatives that could be followed to achieve this objective.

The first would require shifting a number of normal schools from teacher education to some other field. At this moment we cannot determine those unmet human resource needs that could be filled by new diversified-level programs. Nor can we indicate just how large the teacher-training capacity of the country should be. Nor is it clear how teachers currently employed in normal schools could be re-trained to serve in another kind of upper-secondary school.

It is clear, however, that while not a crisis, the condition of secondary normal schools is serious and serves as a detriment to the overall effectiveness of education in Guatemala.

The implementation of the first recommendation would require a detailed study of the existing normal-school system to determine:

1) Which existing diversified programs should be expanded, and which new programs created.

2) Policies with respect to teacher re-training and relocation.

3) Location and number of the reduced set of normal schools.

4) Procedures to radically improve the quality of teaching/learning in the remaining normal schools.

This study would have to be preceded by another to assess the actual cost-effectiveness of normal schools as compared with other secondary programs. It is possible, though not likely, that even with all its faults, normal-school education is an inexpensive way to provide access to secondary school. This study would form a crucial part of the campaign to move teacher support away from these institutions and persuade students to enroll in new programs.

The second alternative is more bold and can be postponed; but it is the option that will eventually be required. The path has been taken by all other countries seeking to upgrade their teacher-training capability. What is proposed is the creation of a system of higher normal schools, or teachers' colleges, that would train all primary and secondary-school teachers. These would be autonomous institutions, not part of the current university system, located in each of the seven major regions of the country. It is possible that the existing regional normal schools could serve as the sites for the new teachers' colleges.

The size of these institutions would be adequate to meet the need for teachers once universal primary enrollment has been achieved. All current teachers and students now in normal schools would be certified under a "grandfather" clause. The teacher-training programs now in existence at the universities would be upgraded to train the professors of the higher normal schools.

The development of these institutions, which could be accomplished without difficulty over a four or five-year period, would be enhanced by pairing each new teachers' college with a sister institution in the United States.

The regional colleges in the Highlands would develop programs specifically designed to support the expansion of the bilingual education program, with instruction in indigenous languages, development of teaching materials, and research on teaching/learning problems and methods.

The current normal schools, other than those that are upgraded, would be converted into other kinds of diversified-cycle programs. It may be possible to close some schools, particularly in Guatemala City, that must rent classroom space, and those whose teachers are close to retirement. Other normal-school teachers will require retraining or assignment to other positions within the Ministry. The total size of secondary education should not be reduced; on the contrary, it should be possible to generate increased opportunities through more intensive use of existing physical facilities.

1.10.6 Adult, Non-Formal, and Distance Education

1.10.6.1 Overview. Adult, non-formal, and distance-education programs in Guatemala have a common audience: the disadvantaged poor. Those groups identified as target populations for non-formal education programs have high rates of illiteracy and low levels of schooling. They are located primarily in isolated rural areas and the largest proportions are monolingual and indigenous.

A recent survey indicates that there are over 100 public or private non-formal education programs operating in Guatemala at the present time. These include programs with teachers, classroom instruction, and textbooks; distance-education programs, using the mail or the radio to deliver the instructional content, which is supplemented with readings and reinforced by promoters; or informal-education programs, with content delivered by mail or print but not directed to a particular set of curricular objectives and frequently not followed up by personalized instruction.

One of the most successful programs currently in operation is the Instituto Guatemalteco de Educacion Radiofonica (IGER). This system combines the use of printed instructional material with programs broadcast by radio. Each week the students meet with a monitor who corrects their homework and helps them with their learning. The IGER program was devised to provide effective adult education in a very efficient manner, at a cost of Q32 per pupil. Statistics show that 85 to 86 per cent of those enrolled pass the course.

1.10.6.2 Recommendations. There is a great need for adult and non-formal education programs in Guatemala, if a large part of the population is to be freed from ignorance. But already limited resources cannot be diverted from other education levels, particularly primary education for children. Ways must be found to provide adult education as inexpensively as possible to the maximum number of adults who are most educationally and culturally deprived.

Those most in need of education services are adults in the rural sector and, particularly, the Indian population. At this time, IGER is the institution which has the greatest capacity for reaching these people inexpensively. IGER has programs in Spanish, Kekchi, and Quiche, and should be assisted and encouraged to develop programs in Mam and Cakchiquel.

The role of the Adult Education Directorate should be to provide support to entities such as IGER that have demonstrated their ability to help adults through the use of volunteer labor and effective techniques. The night schools should not be expanded. They should be upgraded, however, to serve as demonstration schools. Student results at these schools should be compared with those at IGER and other institutions, to make sure that the out-of-school programs are maintaining high standards.

In non-formal education, the Ministry should give priority to its role as a coordinator and service entity. If it spends its resources on actually presenting non-formal programs, the Directorate of Non-Formal Education will only dilute the important assistance it can give to other ministries and private organizations.

Instead of doing extensive programming, the Directorate should develop prototype materials and help the other programs to present their educational activities more effectively. The few programs that the Directorate-General does offer should be seen as demonstration projects and should be very well done so that they can serve as models to other organizations.

Private, non-formal education programs which operate close to the people need to be given emphasis and support. For example, IGER and its five member radio stations and centers should be encouraged, since they have a direct impact on increasing the quality of life of the rural adult population that they serve.

I.10.7 A Reduced List of Recommendations

What follows is a skeletal list of the many suggestions contained in this Assessment, with respect to the improvement of education in Guatemala. Excluded from mention here are those actions that are properly the responsibility of the Ministry of Education alone. Also excluded are those projects already underway which merit support and should be expanded to the extent possible. Smaller projects are omitted, in order to emphasize the larger tasks to be taken on. They are arranged in chronological sequence only to suggest that not all should be tried at once, and that some logically precede others.

1986

Conduct a comprehensive review of all educational reseach and evaluation in Guatemala, organized by levels of the system. Produce a series of reports similar in structure to this Assessment, recommending action steps, with some attention to feasibility. These reports should attract the widest possible public attention in their design as well as execution and reporting. They could be done using joint U.S./Guatemalan teams.

Establish a Pre-Planning Commission to devise a proposal for the Center for Indigenous Studies to be located in the Highlands. This Commission would work in Guatemala, but representatives might travel

abroad to solicit financial support from private sources and seek collaborative relationships with other institutions, perhaps in the U.S.

1987

Conduct a national study of human resources, to assess the operation of labor markets, demands for human resources, returns to education, and related topics. Seek widespread involvement of business and labor representatives in the conduct and dissemination of this study.

Conduct staff development needs studies and begin systematic training in Guatemala and abroad of 1) educational administrators, supervisors, and teachers who will form teams for future work; and 2) university faculty. This could be done in collaboration with U.S. institutions.

Develop a program to provide financial and human resource support to cooperative schools. This program would require the design of a series of interventions that could be financed by relatively small grants from USAID prior to execution.

Select for training abroad a team of leading figures in normal-school education, to serve as the nucleus for planning a system of regional higher normal schools.

Let contracts for the design of the Highland Center for Indigenous Studies.

Implement the project to improve regional supervision, employing first returnees from 1986 training programs. This would begin as a pilot project, with heavy attention to administrative and organizational costs and difficulties.

1988

Develop national diagnostic examinations for 10- and 17-year-old children as part of a national campaign to increase attention to education. The test would use information gathered from the studies carried out in 1986. It would involve teachers in the development of regionally appropriate items.

Expand existing distance-education programs in order to increase coverage several times over, thereby testing organizational capacity.

Create a Commission for Higher Normal Schools, with funds to visit teacher colleges or similar institutions in other Latin American countries.

Open Highland Center for Indigenous Studies as a research center during the first year; it should begin receiving students during the following year.

1989

Establish a National Commission for Educational Reform, financing trips to other countries which have completed successful reforms, and bringing in panels of informed persons to participate in the design of new structures and curricula at all levels of the system. This Commission should deliver its product at an appropriate moment during the 1989 presidential compaign.

Close normal schools and create a system of regional Higher Normal Schools.

1990

Launch massive educational reform affecting as many levels and programs as possible. The costs for this reform will be high, and there will be much inefficiency, but some changes will be made and will survive.

CHAPTER 2

ECONOMIC AND FINANCIAL ANALYSIS OF HUMAN RESOURCE DEVELOPMENT IN GUATEMALA

2.1 Introduction[1/]

This chapter assumes a symbiotic relationship between the economy and the development of human resources in Guatemala. The resources needed for education must be generated by the economy. Some of the outcomes of education can in turn be expected to affect the economy's productive capacities.

The channels through which resources are allocated to educational processes are either private or public. In the first case, the individual decides to allocate a share of his economic endowment, however measured, to his education or to the education of others, perhaps his children. How much education the individual wants to "buy" depends on his ability to pay, either with his own funds or by borrowing; on the price, or cost, of education; and on the value the individual attaches to it.

The second, public type of allocative mechanism requires the pooling of resources from individuals in order to provide education to members of society, regardless of their ability to pay. The main purpose of this device is to equalize educational opportunities, while introducing a level of standardization of educational content. The demand for education can be assumed to be the same as under the private-funding mechanism; the public intervention in the delivery of educational services fundamentally alters the supply of education at

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1/ A word is necessary about the availability and quality of the data required for this part of the Assessment. There has been a general deterioration in the quality of statistical information in Guatemala in the recent past. A case in point is the Census of 1981, which seems to have undercounted the population by close to 20 per cent. Other statistical gaps exist in the areas of employment and unemployment, wages, productivity, and manpower demand and supply. Another serious limitation to the quality of data is reflected by the many inconsistencies found in financial statistics, including the ones published by the same source at different times, or in different versions or formats.

the aggregate level, and its distribution among individuals.[1] Constraints to the education of members of society include individual abilities, the society's propensity to pay, and the degree of efficiency with which the administration of public resources operates.

Whether the mechanism to finance education is private or public, the relationship between the economy and education is one of mutual dependence. The economy needs some of the "products" of education, while education needs the economy. This is not to say that all that matters from education is its economic value. Even given a consensus that education is important for non-economic reasons, however, it is necessary that the economy produce what is needed to support the educational activity. No enlightened educational system, capable of reaching all strata of a society, can exist without the society being able to achieve high levels of productivity and general efficiency in its production lines.

In developing countries, the public allocation of funds to human resource development, especially in the case of formal education, too infrequently takes into account the economy's ability to pay for education. Education is often perceived as a universal right, and one to which almost every other social priority must be surrendered. Pressures on public finances increase with the growth of the population, with practically no commitment from educational authorities to enhance the economy's capacity to generate more resources.

In poor societies such as Guatemala, the resources available for education are not sufficient to support the conglomeration of educational goals, ranging from universal education for all children under fourteen years of age, to the higher-education aspirations of increasingly large numbers of individuals. The pressures to provide more education clash with other societal values, reflected in part in the national budget. This clash is most serious when the economy is shrinking rather than expanding. As more education is sought from a relatively diminishing allocation, the quality of educational outcomes suffers, which in turn weakens the beneficial impact that education may have on the economy.

2.2 The Guatemalan Economy

The discussion of economic issues in this section does not carry the traditional assumption that the economy is a mechanism operating independently of human will. That approach tends to treat an economy as if it could be described and managed merely through the application of a set of equations. The realm of economic policy is then reduced to those factors identified as "variables," all quantitative, while leaving untouched those institutional elements generally considered

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[1] In the long run, the pattern of demand, both social and individual, may be altered as well.

exempt from rigorous treatment. The fact is that institutional and other qualitative factors are legitimate policy subjects, particularly in Guatemala, with its extremely high degree of public-sector centralization.

This does not imply that quantitative factors, or even the equations that serve to approximate the functional relationships among them, are to be neglected. Fiscal revenues, for example, which constitute the financial basis for public education, are quantitatively (though not uniquely) determined by the level of national product. Another example is that the level of remuneration of teachers is partially but strongly influenced by the general level of wages that, at the same time, is tied to the general levels of labor productivity. The omission of these and other elements is as costly as the economist's neglect of qualitative factors.

Another departure from traditional approaches regarding the impact of social policies on education will be pursued here with respect to the possible role of the private sector. Social policy is generally left to the government and the team in charge of its administration, with non-government institutions playing the role of spectators at best or at worst, of lobbyists campaigning for public actions to benefit their private interests. The magnitude of the Guatemalan crisis seems to be beyond the ken of any government administration, despite ideology or level of competence. The recently established National Dialogue, in spite of its shortcomings, testifies to the possibility of engaging private initiatives to move the country and its economy out of the current situation.

2.2.1 Current Issues

Guatemala today is facing the most severe economic crisis in its recent history. This is reflected by each of the available economic indicators, ranging from balance of payments data to indices of employment and wages. It is also attested to by the news media, the declarations of politicians, economic reports from all sources, and the day-to-day talk of the population. There is widespread pessimism, tempered by expectations placed on the "democratization" process, which is scheduled to culminate in general elections in November 1985.

As shown in Table 2.1, the level of Gross Domestic Product (GDP), in real per capita terms, fell two percentage points between 1980 and 1981. The decline accelerates dramatically during 1982, reaching a negative 6.4 per cent when compared with the previous year. Since then, real GDP per capita has continued to deteriorate, at a slower but apparently steady rate. There are indications that the crisis continues to deepen: the most recent estimates of 1985 GDP show a 2.5 per cent decrease in real terms from that in 1984.

Table 2.1

GUATEMALA: ECONOMIC INDICATORS

(Millions of Quetzales at 1958 Prices)

	GDP	Fiscal Revenues [2]	Revenues as % of GDP	Population (000's)	GDP per Capita	Employment (000's) [6]	Earnings [7]	Earnings Share of GDP
1977	2,724	293	10.8	6,364	394	709	363	0.133
1978	2,860	285	10.0	6,542	437	769	396	0.138
1979	2,995	272	9.1	6,726	445	756	411	0.137
1980	3,107	266	8.6	6,917	449	755	414	0.133
1981	3,128	256	8.2	7,113	440	591	391	0.125
1982	3,017	248	8.2	7,315	412	609	408	0.135
1983	2,934	251	8.5	7,524	390	577	352	0.120
1984	2,935	223 [3]	7.6	7,740	379	595	344	0.117
1985	2,862 [1]	215 [4]	7.5	7,963	359	N.A.	N.A.	N.A.
		160 [5]	5.6					

1/ Projection based on an estimated decline of 2.5%.

2/ Only includes current revenues. Adjusted to 1958 prices by using implicit deflator for government expenditures as given in Table 51, page 53, Banco de Guatemala, Boletin Estadistico, July-September 1984.

3/ Adjusted by assuming implicit deflator of 2.99.

4/ Budget figure, adjusted by assuming implicit deflator of 3.73, resulting from applying 25% estimated 1985 inflation rate to 1984 deflator.

5/ Estimated actual revenue, applying 74.5% from 1984 actual revenue over budgeted.

6/ Only refers to workers contributing to the Guatemalan Institute of Social Security (IGSS).

7/ Adjusted by GDP implicit deflator.

SOURCES: Banco de Guatemala, Boletin Estadistico, July-September 1984, Guatemala.

Direccion General de Estadistica and Centro Centroamericano de Demografia. Guatemala, Estimaciones y Proyeccion de Poblacion 1950-2025. January 1985, Guatemala.

The current recession had its origins in the economic downturn beginning in 1981, which was generally attributed to three factors: 1) the deterioration of Guatemala's terms of trade, meaning a continuous increase in the prices of its imports, accompanied by a decrease in the prices of its exports; 2) the severity of the political violence that has provoked the flight of domestic capital and the loss of foreign capital, forcing a steep reduction in domestic investments; and 3) the general condition of the world economy, characterized by economic recession and high interest rates. More recently, the impact of these factors has been exacerbated by the heavy debt service burden, the continuing fiscal deficit, and the disorder at foreign exchange markets.

Besides the decline in standards of living of the average Guatemalan and particularly the poorest segments of the population, two major casualties of the crisis, of special relevance to human resource development have been the level of employment and the balance of payments. Before the crisis started, fiscal revenues began to show a significant decline, complicating the economic scene of the country even more.

2.2.2 The Evolution of Fiscal Revenues

As Table 2.1 shows, the level of fiscal revenues, measured in real terms, has been decreasing since 1977. The proportion to GDP of these revenues has declined as well, from 10.8 per cent in 1977, an already low share according to international standards, to 7.6 per cent in 1984. Projections indicate the share will be 5.6 per cent in 1985, if a no-growth hypothesis is accepted.

Other factors, including relaxed tax administration standards, have contributed to deteriorating economic conditions in the country. Erosion of the tax base has continued. The government attempted to offset the trend in April 1985 by proposing adoption of the now defunct "Tax Package," intended to increase tax rates to enhance revenues. The private sector refused to collaborate, and the proposal had to be withdrawn. In July, a new "Tax Package" was announced, with the promise of Q72 million in additional revenues by the end of 1985. While this estimate may prove to be overly optimistic, this "Tax Package" does represent a potential increase in revenues.

The current economic situation represents one of the most serious constraints to the development of education in Guatemala. As there are no reasons to suppose that expenditures on education will increase in the immediate future, either because of economic expansion or the ability of the government to shift priorities, educational policies in the short run will have to be focused on questions of efficiency, both external and internal.

2.2.3 Levels of Employment and Earnings

The evolution of the level of employment is measured in Table 2.1 by the number of workers contributing to the Guatemalan Institute of Social Security (IGSS). Though this series represents only a portion of the labor force in Guatemala, it may be used as one indicator of employment.[1]

The employment level in 1978 increased over that in 1977 by almost 10 per cent; it declined gradually during the next two years and then dropped 22 per cent in 1981, the same year the GDP per capita started its downturn. This sharp decline occurred despite the fact that the figures for the real, absolute level of GDP did not reflect a fall in the volume of production. As the general level of employment is a lagging indicator in relation to variations of economic activity, this apparent inconsistency can only be explained by the inadequacy of available employment data.

The employment figures used in this section represent the number of workers that contributed to social security in a given year. They represent temporary and part-time as well as full-time workers. Thus, the series includes the employment of individuals regardless of the amount of time they were employed in a given year. The overall downward trend coincides with the trend in GDP for the period shown. The earnings figures corresponding to those workers, and shown on the same table, present a different pattern. As a proportion of GDP, earnings show a remarkable degree of stability that suggests employers tend to allocate an amount of funds to pay for labor costs that is an approximately constant proportion of the value of production. This result lends a degree of credibility to the quality of the data, despite their incompleteness. In any case, the earnings share of GDP suffers a relatively sharp decline for the last two years shown. Earnings per worker also follow a relatively steady downward trajectory, marking a decrease for the same two years.

Table 2.2 presents a more ominous trend in terms of employment rates of the labor force. Even though the quality of population figures can be questioned, the proportion of workers contributing to social security is lower in 1983 than it was in 1974. After reaching a peak of 40 per cent in 1977, this rate has declined almost continuously. While the level of this type of employment increased by scarcely 7 per cent, estimates of the economically active population reflect an increase of almost 29 per cent during the same period.

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[1] Estimates of the economically active population in Guatemala are uncertain.

Table 2.2

GUATEMALA: POPULATION AND EMPLOYMENT

(Thousands of Individuals)

Year	POPULATION Total	Economically Active Older than 14	Economically Active Older than 10	Total[1] Employment	EMP/EAP x 100	Workers' Earnings (Million Quetzales)	Earnings/Emp
1974	5,906	3,286	1,802	540	30.0	444	[illegible]
1975	6,082	3,408	1,856	521	28.1	487	[illegible]
1976	6,256	3,533	1,912	578	30.2	568	[illegible]
1977	6,436	3,651	1,970	709	40.0	731	1,031
1978	6,620	3,766	2,024	769	38.0	841	1,094
1979	6,811	3,881	2,080	756	36.3	947	1,253
1980	7,006	4,006	2,138	755	35.3	1,050	1,391
1981	7,202	4,130	2,196	591	26.9	1,077	1,822
1982	7,403	4,258	2,257	609	27.0	1,179	1,936
1983	7,610	4,390	2,319	576	24.8	1,084	1,882

[1] Only includes workers contributing to the Guatemalan Institute of Social Security.

SOURCE: Banco de Guatemala, Boletin Estadistico, July-September 1984, Guatemala.

Participation in social security reflects the most stable form of employment, as the contribution implies a contractual relationship including a benefit not available to workers hired under more precarious circumstances. Assuming that those workers contributing to social security tend to be the most productive and easily employable, the rest of the individuals in the estimate of the economically active population may very well represent the minimum number of combined unemployed and underemployed workers.[1]

The Guatemalan Department of Labor Statistics issues a different set of data which reports employment in the private sector. These figures, which appear in Table 2.9, show an inconsistent pattern of variation during the period from 1978 to 1982. They also show wide variations at the regional or departmental level, suggesting that the quality of the reporting system may not be high. Nevertheless, by analyzing the number of days paid, a pattern more consistent with the one discussed above emerges.

The relevance to educational development of the employment conditions in Guatemala stems from the fact that labor markets constitute the vehicle through which an essential dimension of education's external efficiency--its economic impact--takes place. In an environment of high unemployment, individuals do not find opportunities to apply their skills in a productive way. This prevents the society from accruing the potential benefits of those skills in terms of economic growth that could, eventually enhance the base of resources to be reinvested in education. The reasons for the unemployment may be external to the education system; in this case, the level of external efficiency drops, regardless of the quality of education produced. Or, the quality of education may be such that individuals do not find jobs which demand their particular endowment of skills. In other words, unemployment can be generated by demand-side as well as by supply-side insufficiencies. In the case of the latter, the educational establishment bears a responsibility for the outcome of its production.

2.2.4 Balance of Payments

One major cause of the economic crisis in Guatemala is the contraction in the value of exports. Table 2.3 presents figures showing the rapid increase of exports through 1980, in which their value reached more than US$1.5 billion. This five-fold increase over 1970 represents a remarkable performance. However, exports fell 15 per cent in 1981, which made a decisive contribution to the onset of the current economic

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[1] Minimum because the total of contributors to social security includes those who work less than full time and, therefore, overstates the number of full-time workers.

Table 2.3

GUATEMALA: FOB VALUE OF EXPORTS AND BASIC COMPOSITION

(Millions of U.S. Dollars)

Year	Principal[1] Products	%	Other[2] Products	%	Central[3] America	%	Total	%
1970	169.4	57.02	25.4	8.55	102.3	34.43	297.1	100
1971	167.0	58.21	27.9	9.72	92.0	32.07	286.9	100
1972	205.2	61.09	31.8	9.47	98.9	29.44	335.9	100
1973	263.9	59.71	48.1	10.88	130.0	29.41	442.0	100
1974	343.9	59.07	75.1	12.90	163.2	28.03	582.2	100
1975	405.2	63.22	66.6	10.39	169.1	26.39	640.9	100
1976	486.4	63.97	84.9	11.17	189.1	24.86	760.4	100
1977	839.5	72.36	98.2	8.46	222.5	19.18	1.160.2	100
1978	723.4	66.22	113.9	10.43	255.1	23.35	1,092.4	100
1979	784.6	63.20	150.3	12.11	306.5	24.69	1,241.4	100
1980	853.1	56.13	225.9	14.86	440.8	29.00	1,519.8	100
1981	726.7	56.28	185.7	14.38	378.9	29.34	1,291.3	100
1982	697.9	59.63	135.2	11.55	337.3	28.82	1,170.4	100
1983	660.1	60.47	110.7	10.14	320.9	29.39	1,091.7	100
1984	706.1	62.37	134.7	11.90	291.4	25.73	1,132.2	100

1/ Coffee, cotton, sugar, bananas, beef, cardamom, oil.

2/ Includes non-traditional exports to regions other than Central America.

3/ Approximately the same composition of "Other Products."

SOURCE: Compiled by author using data from Departamento de Estudios Economicos e Investigaciones Agropecuarias e Industriales, Banco de Guatemala.

situation. The decline has continued, by a total of 25 per cent from the peak year of 1980. Looking at the composition of Guatemalan exports according to the breakdown in the table, it is obvious that the decline has affected the three major groups in more or less the same fashion.

The degree of dependence of the Guatemalan economy on foreign trade makes it vulnerable to the vagaries of international economic conditions. It can be argued that that degree of vulnerability is increased by the low level of diversification of Guatemalan exports. Instead, the added vulnerability lies in the inability of the Guatemalan government to adjust the economy to adverse economic conditions, thereby reducing their impact. The world economic crisis of the early 1980s was far-reaching enough to affect even the most competitive exporting countries.

The fall in exports was not followed by a concomitant reduction in imports, due to the government's refusal to devaluate the Quetzal. As the inflow of capital declined because of internal political instability during the same years exports fell, and the prices of imports continued to increase, the lack of adjustment policies only postponed the impact of the crisis and delayed recognition of its severity. In the meantime, the international reserves of Guatemala steadily eroded, while the external debt increased.

As reduction in exports affected the level of economic activity in the country, public spending reached peak levels in 1981, despite the continuing erosion of fiscal revenues. Fortunately, sharp reductions in government spending were implemented in 1982, preventing further increases in the public debt.

At this point, the balance of payments is expected to deteriorate further as the commercial balance, or difference between exports and imports, still shows a deficit; and no major changes in the patterns of trade or inflows of capital can be expected, due to current political instability.

As the level of economic activity is not likely to recover without an upturn in international trade, fiscal revenues can also be expected to remain low despite government efforts to increase them; any significant increase in taxes would merely aggravate the severe recession. Under these conditions, the availability of funds for education and other public programs can be expected to continue to decline.

2.3 Analysis of the Guatemalan Fiscal Capacity

This section examines the general level of government expenditures, its sectoral or institutional distribution, and the detail of expenditures in education. It offers an assessment of the limits of educational expenditures and the possibilities of their evolution in the short and long runs.

2.3.1 The Structure of Revenues and Expenditures[1]

The Guatemalan fiscal revenue system is characterized by its heavy reliance on indirect taxation. Direct taxes, assessed against personal and corporate income, produce only 15 per cent of the central government's revenue. Indirect taxes imposed on goods and services have contributed the largest share. Table 2.4 illustrates the steady decline in fiscal revenues, which are the main source of funds for government expenditures. To demonstrate the precarious situation of Guatemala, Table 2.5 offers a comparison with other Latin American countries of the proportion of fiscal revenues to GDP.

External factors have contributed to this situation, although laxity of fiscal discipline has also played a role. There exist the traditional symptoms of mismanagement: widespread tax avoidance accompanied by the erosion of the tax base, failure to enact or enforce legislation to enhance revenues, and laxity in the administration of the tax collection system. It is estimated that in 1982, personal income taxes averaged 5.8 Quetzales per person, while nominal per-capita income was 1,709 Quetzales. Any attempt to enhance revenues through increases in direct taxation would subject the government to considerable political risk and require the willingness of the Guatemalan people to comply with the tax laws.

Tables 2.6 and 2.7 present institutional expenditures grouped by the recipient agency, and the sectoral expenditures classified by activity. The sectoral distribution of government expenditures since 1976, presented in Table 2.6, follows an irregular pattern. This is attributable to the effects of capital expenditures on certain sectors in years of high investment activity in those sectors. An interesting development is the reduction since 1978 in the portion of expenditures reported for the Administration and General Services sector, which represents the financial share of the central government. Defense and Security, on the other hand, has received a significant increase, reaching as much as 20.6 per cent in 1984. Housing and Urban Development suffered a decline after 1976, while the aggregate of Education, Science and Culture has increased its share slightly.

Any changes in budget shares must be interpreted within the context of a reduced national budget, in nominal terms inclusive of inflation, as well as in real terms. Since 1981, every sector has suffered significant budget cuts caused by the decline in fiscal revenues.

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[1] This review of public finances focuses on the central government of Guatemala. The government-owned enterprises, which represent a portion of the economic activity in many sectors and absorb funds in the form of subsidies, are beyond the scope of this analysis.

Table 2.4

GUATEMALA: COMPOSITION AND GROWTH OF CENTRAL GOVERNMENT REVENUES

ITEM	1978/ 1979	%	1980/ 1981	%	1982	%	Real Growth Rate 1980 1981	Real Growth Rate 1981/ 1982
Direct Taxes	103.1	15.5	109.6	14.7	109.7	15.2	-15.6	-10.3
Indirect Taxes	524.9	79.0	562.7	75.6	523.0	72.6	-7.1	-9.5
Taxes on International Trade	258.7	38.9	221.5	29.8	128.6	17.8	-20.3	-31.9
Imports	113.1	17.0	108.5	14.6	80.5	11.2	-9.3	-28.1
Exports	145.6	21.9	113.0	15.2	48.1	6.6	-30.8	-33.7
Taxes on Dom. Trans.	266.2	40.1	341.2	45.8	394.4	54.7	3.7	1.3
Non-Tax Revenues	36.5	5.5	71.6	9.6	88.0	12.2	22.7	0.8
Petroleum	-	-	20.1	2.7	25.3	3.5	-	-10.5
TOTAL	664.5	100.0	743.9	100.0	720.7	100.0	-4.9	-8.5

SOURCE: Ministry of Finance, Evaluacion Presupuestaria de Ingresos y Egresos del Estado. Ministerio de Finanzas Publicas. Ejercicio Fiscal 1983. Table constructed by author, 1985.

Table 2.5

CURRENT CENTRAL GOVERNMENT REVENUES AND TAX REVENUES AS A SHARE OF NOMINAL GDP FOR SELECTED LATIN AMERICAN COUNTRIES

1980

Country	Tax Revenue % of GDP	Total Current Revenue % of GDP
Guyana[1/]	30.1	34.9
Brazil	25.7	32.1
Chile	12.7	23.7
Nicaragua	19.3	22.1
Honduras	20.6	21.8
Uruguay	16.7	17.8
Costa Rica	16.7	17.4
Colombia	14.1	15.0
Paraguay	10.1	11.1
Haiti	9.4	10.7
Guatemala	8.7	9.4

[1/] 1979 Data.

SOURCE: World Tables, 3rd Edition, Volume 1, 1983, World Bank.

Table 2.6

GUATEMALA: DISTRIBUTION OF CENTRAL GOVERNMENT EXPENDITURES BY SECTOR

(In Millions of Current Quetzales)

	1976	%	1977	%	1978	%	1979	%	1980	%
01 Administration and General Services	55	9.0	63	9.3	42	5.3	47	5.1	59	5.0
02 Defense and Security	66	10.9	83	12.2	87	11.0	98	10.7	115	9.7
03 Finances	117	19.3	63	9.3	131	16.5	136	14.9	154	13.0
04 Housing and Urban Development	82	13.5	37	5.4	36	4.5	25	2.7	18	1.5
05 Mining and Hydro-carbons	--	--	--	--	1	0.1	1	0.1	1	0.08
06 Agriculture	43	7.1	31	4.6	53	6.7	47	5.1	74	6.2
07 Industry and Commerce	4	0.7	4	0.6	10	1.3	18	2.0	9	0.8
08 Tourism	--	--	--	--	1	0.1	1	0.1	3	0.3
09 Transport	42	6.9	46	6.8	53	6.7	81	8.9	132	11.1
10 Communications	6	1.0	6	0.9	6	0.8	7	0.8	9	0.8
11 Energy	44	7.3	97	14.2	99	12.5	142	15.5	155	13.0
12 Public Health and Social Welfare	51	8.4	89	13.0	65	8.2	75	8.2	127	10.7
13 Work and Social Security	21	3.5	122	17.9	114	14.4	133	14.5	186	15.7
14 Education, Science and Culture	75	12.4	40	5.9	94	11.9	104	11.4	144	12.1
TOTAL	606	100.0	681	100.0	792	100.0	915	100.0	1186	100.0

Table 2.6 (cont'd)

GUATEMALA: DISTRIBUTION OF CENTRAL GOVERNMENT EXPENDITURES BY SECTOR

(In Millions of Current Quetzales)

	1981	%	1982	%	1983	%	1984	%	1985 1/	%
01 Administration and General Services	92	6.3	59	4.7	49	4.5	51	7.5	57	7.0
02 Defense and Security	131	8.9	165	13.2	162	14.9	140	20.6	142	17.6
03 Finances	172	11.8	217	17.3	157	14.4	24	3.5	122	15.2
04 Housing and Urban Development	19	1.3	15	1.2	11	1.0	1	0.1	1	0.1
05 Mining and Hydro-carbons	2	0.1	2	0.2	2	0.2	0.9	0.1	1	0.1
06 Agriculture	58	4.0	48	3.8	51	4.7	21	3.0	21	2.6
07 Industry and Commerce	5	0.4	4	0.4	4	0.4	1	0.1		
08 Tourism	2	0.1	1	0.08	2	0.2	0.2	0.03	0.2	0.02
09 Transport	190	13.0	133	10.6	95	8.7	15	2.2	16	2.0
10 Communications	9	0.6	8	0.6	7	0.6	7	1.0	7	0.9
11 Energy	295	20.2	181	14.4	114	10.5	0.4	0.06	0.9	0.1
12 Public Health and Social Welfare	121	8.3	77	6.1	73	6.7	63	9.3	63	7.8
13 Work and Social Security	195	13.4	201	16.0	227	20.9	235	34.6	241	29.9
14 Education, Science and Culture	159	10.9	141	11.3	134	12.3	119	17.6	132	16.4
TOTAL	1459	100.0	1253	100.0	1088	100.0	678.5	100.0	805.1	100.0

1/ Budget appropriations.

SOURCE: Ministry of Finance: Evaluacion Presupuestaria de Ingresos y Egresos del Estado: Ejercicio Fiscal 1979-1983-1985. Cierre Contable y Liquidacion del Presupuesto de Ingresos y Egresos del Estado, 1984.

Table 2.7

GUATEMALA: EVOLUTION OF GOVERNMENT EXPENDITURES IN EDUCATION[1]

(Millions of Current Quetzales)

	GDP	National[2] Budget	Central Government	Ministry[3] of Education	San Carlos University	INTECAP	Education[4] and Culture
1977	5,480.5	1,240.0	687.7	71.6	17.7	2.4	83.1
% of GDP	100.0	22.6	12.5	1.3	0.3	---	1.5
% of National Budget		100.0	55.4	5.8	1.4	0.2	6.7
% of Central Government			100.0	10.4	2.6	0.3	12.1
1978	6,070.5	1,464.8	798.9	80.4	25.5	4.5	94.1
% of GDP	100.0	24.1	13.2	1.3	0.4	0.1	1.5
% of National Budget		100.0	54.5	5.5	1.7	0.3	6.4
% of Central Government			100.0	10.1	3.2	0.6	11.8
1979	6,903.0	1,639.7	921.4	111.2	26.2	8.0	104.9
% of GDP	100.0	23.7	13.3	1.6	0.4	0.1	1.5
% of National Budget		100.0	56.2	6.8	1.6	0.5	6.4
% of Central Government			100.0	12.1	2.8	0.9	11.4

Table 2.7 (cont'd)

GUATEMALA: EVOLUTION OF GOVERNMENT EXPENDITURES IN EDUCATION[1]

(Millions of Current Quetzales)

	GDP	National[2] Budget	Central Government	Ministry[3] of Education	San Carlos University	INTECAP	Education[4] and Culture
1980	7,879.4	2,054.8	1,193.9	141.9	28.8	5.9	144.4
% of GDP	100.0	26.1	15.1	1.8	0.4	0.1	1.8
% of National Budget		100.0	58.1	6.9	1.4	0.3	0.7
% of Central Government			100.0	11.9	2.4	0.5	12.1
198[illegible]	8,607.6	2,526.3	1,465.7	156.2	29.6	7.0	160.0
% of GDP	100.0	29.3	17.0	1.8	0.3	0.1	1.8
% of National Budget		100.0	58.0	6.2	1.2	0.3	6.3
% of Central Government			100.0	10.6	2.0	0.5	10.9
1982	9,717.3	N.A.	1,258.5	156.8	30.6[5]	N.A.	N.A.
% of GDP	100.0		13.2	1.6	0.3		
% of National Budget							
% of Central Government			100.0	12.5	2.4		

Table 2.7 (cont'd)

GUATEMALA: EVOLUTION OF GOVERNMENT EXPENDITURES IN EDUCATION[1]

(Millions of Current Quetzales)

	GDP	National[2] Budget	Central Government	Ministry[3] of Education	San Carlos University	INTECAP	Education[4] and Culture
1983	9,034.9	N.A.	1,097.3	154.0	29.0[5]	N.A.	N.A.
% of GDP	100.0		12.1	1.7	0.3		
% of National Budget							
% of Central Government			100.0	14.0	2.6		
1984	9,773.5	N.A.	946.9	161.9	24.1		137.9
% of GDP	100.0		9.7	1.7	0.25		
% of National Budget							
% of Central Government			100.0	17.1	2.5		

1/ Includes current and capital expenditures.
2/ Includes public enterprises and autonomous agencies.
3/ Includes transfers to autonomous agencies, as San Carlos University.
4/ Sectoral aggregation.
5/ Budget figures taken from Universidad de San Carlos de Guatemala, Memoria General de Labores-1982 and Memoria General de Labores - 1983, Guatemala 1983 and 1984, respectively.

SOURCES: Banco de Guatemala, Boletin Estadistico, July-September 1984, Guatemala, and Ministerio de Finanzas Publicas, Direccion Técnica del Presupuesto, Ejecucion de Ingresos y Egresos del Sector Publico de Guatemala (Gobierno Central y Entidades Descentralizadas) Anos 1977-1981, Guatemala, December 1982; Ministerio de Finanzas Publicas, Direccion de Contabilidad del Estado, Cierre del Ejercicio Contable y Liquidacion del Presupuesto de Ingresos y Egresos del Estado, Ano 1984, Guatemala, April 1985.

2.3.2 Education's Share of Total Expenditures

Available budget figures do not describe educational expenditures in detail. There are some discrepancies between the allocations by educational entity in Table 2.7 and the data in Table 2.6. The most glaring is the figure for the education sector that appears as 40 million Quetzales for 1977 in Table 2.6, while the corresponding figure in Table 2.7 is 83.1. According to Table 2.7, the Ministry of Education increased nominal expenditures until 1981; in 1982 and 1983 the level of expenditure held steady, and it increased slightly in 1984. The Ministry's portion of GDP has shown only a small increase since 1977.

San Carlos University's financial share fluctuated according to changes in the central government's operating budget, as the USAC by law receives 2.5 per cent of that figure. When the new constitution takes effect in late 1985, the national university's share will increase to 5 per cent.

The conclusion to be drawn from this review is that education's share of public income in Guatemala is small, especially when compared with need.

2.4 Manpower Supply and Demand

Supply of a particular skill in a labor market is not represented simply by the number of individuals possessing that skill. It is not a constant number; it varies according to the levels of compensation that the market is willing to pay, determined by the prevailing demand conditions. The greater the level of compensation, the greater will be the supply. When the levels of compensation for a particular skill reach high values relative to other skills, the supply will tend to increase. The degree of responsiveness or elasticity of the supply depends on the difficulty or time required to acquire the particular skill.

It is a mistake to "measure" supply in terms of the numbers of individuals who belong to a certain skill or occupational group. When levels of compensation get relatively high, many individuals from other skill groups try to move into the more attractive supply group. Moreover, supply cannot be measured simply in terms of numbers of individuals willing to work in a given skill at a given wage. It is more accurately gauged by the number of work hours those individuals are willing to sell for that compensation. The relationship between quantity supplied and level of compensation is generally positive and direct; however, when very scarce skills are paid high wages, the relationship can become negative. Further increases in wages may reduce the quantity supplied.

Similar considerations apply to the concept of demand, except that the relationship between demand and wages is a negative one. Employers will tend to hire more individuals from a particular skill group, or buy more hours of their work, when the wages are lower. Frequently, analysts fail to relate the responsiveness or elasticity of labor demand to variations in wages. They tend to deal with supply and demand as if they were two fixed quantities that must be matched. In fact, the two

generally match at a given wage rate in markets that are relatively free to move. If wages are rigid downwards, imbalances may appear as open unemployment or underemployment in a given skill group. Both are expressions of excess supply. The entire supply schedule tends to move with time as population increases and skill development centers produce more trained individuals. The demand schedule expands or contracts according to economic conditions in the short run, and with the level of economic development and growth in the long run.

Decisions on how many individuals are to be trained for each skill group must be based on information about labor market conditions. This does not mean producing manpower forecasts, since they do not incorporate sufficient information on current conditions. The level of uncertainty in labor markets, especially in so volatile an economy as Guatemala's, can render such forecasts useless, if they are produced applying rigid formulas. A more appropriate approach to decision-making in skill development is to follow labor markets on a continuous basis, monitor their variations, and create feedback mechanisms which make it possible to serve employment needs most effectively.

2.4.1 Manpower Demand and Employment in Guatemala

The 1981 Census has not been tabulated to provide information on the occupational and educational structure of Guatemala. The most reliable substitute is the household expenditure survey carried out between 1979 and 1981 and published in 1983 and 1984. Only annual data on number of workers contributing to social security are available, plus information reported to the Department of Labor Statistics on private-sector employment. There are no periodic data on unemployment to permit the monitoring of variations in the demand for labor; nor are there data on wages, which would help to establish the basic conditions under which the labor markets operate.

It has been established that the demand for labor suffered a severe decline in 1981, shown by the decrease in the number of workers contributing to social security. This was caused by the decline in economic activity triggered by the decrease in exports. Nothing is known about the composition of the labor displaced by the contraction in employment, either in terms of educational structure or current means of subsistence. It can be presumed that the unemployed entered the ranks of the so-called underemployed.[1]

The contraction in labor demand is illustrated in Table 2.8, which presents figures for private-sector workers by department. In 1981, employment decreased by slightly more than 10 per cent from 1980. The trend continued in 1982, with a decrease of approximately 12 per cent. No information has been tabulated since 1982.

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[1] "Underemployed" is a term often used to characterize the employment map in Guatemala, even though its definition is vague and little is known about its magnitude. It has been used to describe those who work less than eight hours per week or earn less than the subsistence income.

Table 2.8

GUATEMALA: EMPLOYMENT OF PRIVATE SECTOR WORKERS BY DEPARTMENT

DEPARTMENTS	1978 Number of Workers	1978 %	1979 Number of Workers	1979 %	1980 Number of Workers	1980 %	1981 Number of Workers	1981 %	1982 Number of Workers	1982 %
Guatemala	77,408	33.7	194,468	35.2	164,646	27.4	231,954	43.0	150,052	31.8
El Progreso	2,254	0.4	469	0.08	1,100	0.2	1,001	0.2	1,181	0.2
Sacatepéquez	4,557	0.9	4,666	0.8	3,298	0.5	4,384	0.8	6,913	1.5
Chimaltenango	17,551	3.3	14,995	2.7	15,764	2.6	12,370	2.3	12,919	2.7
Escuintla	61,886	11.8	47,129	8.5	154,351	25.7	100,644	18.7	117,803	24.9
Santa Rosa	60,679	11.5	51,556	9.3	55,951	9.3	43,602	8.0	40,704	8.6
Sololá	3,308	0.6	6,180	1.1	2,784	0.5	3,676	0.7	2,278	0.5
Totonicapan	216	0.04	188	0.03	190	0.03	165	0.03	134	0.03
Quetzaltenango	30,676	5.8	32,240	5.8	38,645	6.4	30,192	5.6	27,423	5.8
Suchitepéquez	58,590	11.1	63,095	12.3	54,795	9.1	36,527	6.8	26,212	5.5
Retalhuleu	23,413	4.5	24,084	4.4	17,867	3.0	10,827	2.0	9,394	2.0
San Marcos	45,349	8.6	63,586	11.5	50,840	8.5	27,046	5.0	28,944	6.1
Huehuetenango	2,663	0.5	2,934	0.5	1,834	0.3	1,235	0.2	2,742	0.6
El Quiché	2,135	0.4	1,749	0.3	1,510	0.3	1,148	0.2	821	0.2
Baja Verapaz	669	0.1	1,004	0.2	805	0.1	525	0.09	1,875	0.4
Alta Verapaz	15,421	2.9	14,090	2.6	10,415	1.7	17,809	3.3	18,985	4.0
El Petén	1,468	0.3	2,321	0.4	2,572	0.4	1,368	0.3	1,486	0.3
Izabal	12,930	2.5	16,862	3.0	19,073	3.2	10,538	2.0	16,637	3.5
Zacapa	2,554	0.5	2,998	0.5	2,176	0.4	1,022	0.2	3,520	0.7
Chiquimula	864	0.2	1,335	0.2	843	0.1	1,396	0.3	900	0.2
Jalapa	369	0.07	500	0.09	498	0.08	386	0.07	443	0.09
Jutiapa	1,223	0.2	1,040	0.2	1,043	0.2	846	0.2	1,150	0.2
NATIONAL TOTAL	525,983	100.0	552,489	100.0	601,000	100.0	538,651	100.0	472,516	100.0

SOURCE: Encuesta de los Centros de Trabajo de la Republica de Guatemala, Anos: 1798-79-80-81 y 1982. Guatemala. Departamento de Estadistica del Trabajo. Ministerio de Trabajo y Prevision Social.

Table 2.9 provides information on number of days paid by private employers, which contributes to an approximation of the actual level of employment. The decrease in employment from 1980 to 1981 appears from this table to be only 5 per cent, contrasted with the 10 per cent reported for number of workers contributing to social security during same period. Moreover, employment measured by days worked does not fall in 1984; rather, it increases by 0.3 per cent. These results are consistent with those derived from an analysis of the number of workers contributing to social security, shown earlier in Table 2.1, where the share of total workers' compensation in the GDP showed a great deal of stability over that period of time. Unfortunately, there is no additional information about the current situation on which to pursue further analysis. Nevertheless, given the substantial deterioration of the share of workers' compensation in the GDP, in the presence of its coincidence in levels of stability with number of days paid, it can be presumed that the latter has suffered a serious decline in the past two years.

To complete an analysis using available information, Table 2.10 was produced by calculating full-time equivalencies over the years from 1978 to 1982. This was done by simply dividing the number of days reported as paid (Table 2.9) by 365, which is shown in the first column of each year, and then dividing the result by the number of workers (Table 2.8), with the final result appearing in the second column, expressed as FTE (Full-Time Equivalent). If all workers were employed full time every day of the year, the index would be equal to one. The greater the length of time a worker is idle, or wo king in jobs without the benefit of contributing to social security, the lower the value of the index will be. Therefore, the index reflects level of employment. It should be noted that the proportion of workers reported as working, shown in Tables 2.1 and 2.8, is already a small proportion of the labor force. The FTE index is very stable throughout the years at the national level, fluctuating between the values of 0.32 and 0.39.

We can speculate about whether these data reflect the Guatemalan economy's capacity to provide a given and relatively rigid amount of employment, at least in its more formal versions.[1] However, the wide variations across departments are not easy to explain. The department of Guatemala, for instance, fluctuates from 0.46 to 0.67 on the FTE index. It is tempting to attribute this variation to statistical reporting inefficiencies; but then the stability at the national level would be unexplained. Other departments, such as Santa Rosa, Quetzaltenango, Zacapa, and Jalapa, show a great deal of stability. The degree of stability does not seem to be related to the size of the index.

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[1] If this is true, the implications for manpower planning must be taken into account. If new jobs are not created, private and social returns to increases in investing in education will decline.

Table 2.9

GUATEMALA: NUMBER OF WORKING DAYS PAID BY PRIVATE EMPLOYERS

(In Thousands)

DEPARTMENTS	1978	%	1979	%	1980	%	1981	%	1982	%
Guatemala	31,972	47.6	32,647	50.0	35,771	50.3	39,868	59.2	37,107	54.9
El Progreso	146	0.2	53	0.08	247	0.3	224	0.3	260	0.4
Sacatepéquez	596	0.9	640	1.0	583	0.8	862	1.3	1,276	1.9
Chimaltenango	1,695	2.5	1,658	2.5	1,627	2.3	1,587	2.4	1,433	2.1
Escuintla	4,678	6.9	4,472	6.9	5,558	7.8	4,980	7.4	5,359	7.9
Santa Rosa	2,116	3.2	1,183	1.8	2,387	3.4	1,728	2.6	1,786	2.6
Solola	502	0.7	745	1.1	541	0.8	441	0.7	378	0.6
Totonicapan	62	0.09	45	0.07	46	0.06	44	0.06	39	0.05
Quetzaltenango	4,738	7.0	5,011	7.7	5,316	7.5	4,123	6.1	4,339	6.4
Suchitepéquez	5,632	8.4	5,742	8.8	4,866	6.9	4,115	6.1	3,807	5.6
Retalhuleu	2,445	3.6	2,135	3.3	2,122	3.0	1,476	2.2	1,346	2.0
San Marcos	5,935	8.8	6,017	9.2	5,303	7.5	3,476	5.2	3,620	5.4
Huehuetenango	575	0.9	556	0.9	308	0.4	180	0.3	250	0.4
El Quiche	292	0.4	277	0.4	226	0.3	187	0.3	133	0.2
Baja Verapaz	113	0.2	133	0.2	131	0.2	85	0.1	227	0.3
Alta Verapaz	1,946	2.9	2,083	3.2	1,521	2.1	1,746	2.6	1,703	2.5
El Petén	233	0.3	390	0.6	412	0.6	256	0.4	294	0.4
Izabal	2,581	3.8	1,325	2.0	3,210	4.5	1,186	1.8	3,155	4.7
Zacapa	408	0.6	485	0.7	302	0.4	167	0.2	568	0.8
Chiquimula	217	0.3	319	0.5	207	0.3	378	0.5	214	0.3
Jalapa	70	0.1	102	0.2	101	0.1	74	0.1	84	0.1
Jutiapa	181	0.3	156	0.3	166	0.2	159	0.2	213	0.3
TOTAL	67,133	100.0	65,174	100.0	70,951	100.0	67,342	100.0	67,591	100.0

SOURCE: Encuesta de los Centros de Trabajo de la Republica de Guatemala. Anos: 1978-79-80-81 y 1982. Departamento de Estadistica del Trabajo, Ministerio de Trabajo y Prevision Social.

Table 2.10

GUATEMALA: FULL-TIME EQUIVALENT EMPLOYMENT

(In Thousands)

DEPARTMENTS	1978	FTE RATE	1979	FTE RATE	1980	FTE RATE	1981	FTE RATE	1982	FTE RATE
Guatemala	87,594	0.49	89,444	0.46	98,004	0.59	109,229	0.47	101,664	0.67
El Progreso	400	0.18	145	0.31	677	0.62	615	0.61	714	0.60
Sacatepéquez	1,634	0.36	1,753	0.38	1,599	0.48	2,363	0.54	3,497	0.51
Chimaltenango	4,644	0.26	4,542	0.30	4,458	0.28	4,349	0.35	3,928	0.30
Escuintla	12,817	0.21	12,252	0.26	15,230	0.10	13,644	0.14	14,683	0.12
Santa Rosa	5,798	0.10	5,013	0.10	6,542	0.12	4,737	0.11	4,896	0.12
Sololá	1,377	0.42	2,041	0.33	1,485	0.53	1,210	0.33	1,036	0.45
Totonicapan	172	0.80	123	0.65	128	0.67	122	0.74	107	0.80
Quetzaltenango	12,983	0.42	13,729	0.42	14,565	0.38	11,297	0.37	11,889	0.43
Suchitepéquez	15,431	0.26	15,731	0.23	13,332	0.24	11,276	0.31	10,433	0.40
Retalhuleu	6,700	0.29	5,849	0.24	5,815	0.32	4,046	0.37	3,689	0.39
San Marcos	16,260	0.36	16,485	0.26	14,530	0.29	9,525	0.35	9,918	0.34
Huehuetenango	1,577	0.59	1,523	0.52	845	0.46	495	0.40	686	0.25
El Quiché	801	0.38	759	0.21	620	0.41	515	0.45	367	0.45
Baja Verapaz	311	0.46	364	0.36	361	0.45	235	0.45	623	0.33
Alta Verapaz	5,333	0.35	5,706	0.40	4,169	0.40	4,786	0.27	4,667	0.25
El Petén	641	0.44	1,068	0.46	1,131	0.44	703	0.51	807	0.54
Izabal	7,072	0.55	3,630	0.22	8,796	0.46	3,250	0.31	8,646	0.52
Zacapa	1,118	0.44	1,328	0.44	830	0.38	459	0.45	1,556	0.44
Chiquimula	596	0.69	874	0.65	568	0.67	1,037	0.74	588	0.65
Jalapa	194	0.53	279	0.56	279	0.56	204	0.53	232	0.52
Jutiapa	498	0.41	427	0.41	455	0.44	438	0.52	585	0.51
TOTAL	183,926	0.35	178,559	0.32	194,386	0.32	184,499	0.34	185,181	0.39

SOURCE: Tables 2.8 and 2.9.

The available statistics provide only a limited view of the labor markets in Guatemala. The data, however, do carry implications for educational development. Economic development and growth depend on the national capacity to create employment. It follows that the development of education will be constrained if employment is declining or even unstable. The rates of educational attainment are affected, and the internal efficiency of the school system suffers. The external efficiency of education also declines. A severe unemployment crisis overwhelms previous advances in educational attainment, and tends to lower the perception of individuals, especially the poor, about the economic value of education.

A stagnant economy is not conducive to educational development; and economic development, with its prerequisites of new investments, is discouraged by a stalled education system.

2.4.2 The Supply of Graduates and Manpower Imbalances

Tables 2.11 and 2.12 show the educational structure of the Guatemalan population, according to levels of schooling. This represents the origin of the supply of manpower in the country. As the figures are classified according to age groups, they permit examination of the educational structure by cohorts. Trends can be identified through relative participation in different levels of schooling over the last 60 years.

For instance, the tables show that the proportion of illiterates has decreased from 61.3 per cent for individuals 65 years of age and older, to 30.2 for the 15-19 age group. The group with zero years of schooling follows a similar trend.

The evolution of the group with incomplete primary education reflects a more erratic performance, as a result of the fact that this group's size is affected by the upward educational mobility of the individuals from the lower ranks. All of the rest of the categories show significant gains, though in varying degrees. Incomplete basic secondary education, for example, shows the most spectacular improvement.

The data, of course, only capture quantities. No systematic information is available on the evolution of the quality of education over the same period. There is no evidence whatsoever that the quality of any level of education in Guatemala has increased, decreased, or remain constant over the years.

There is a close relationship between the quality of education and the supply of manpower. If the quality of the labor supply does not match the quality requirements of the demand for labor, both sides of the labor market lose, and with them, the Guatemalan economy. At the same time, uncertainty about the quality of graduates make employers hesitant to create new jobs, instead disposing them to adopt capital-intensive, labor-saving technologies in their production lines. It is obvious that the process of employment generation is facilitated by a well-trained,

Table 2.11

GUATEMALA: EDUCATIONAL STRUCTURE OF POPULATION, BY AGE GROUP, 1979-1981

	10-14	15-19	20-24	25-30	31-34	35-39	40-44	45-54	55-65	65+
TOTAL POPULATION	983,005	666,291	544,747	442,396	405,253	346,157	299,277	488,721	273,227	206,063
Illiterates	349,136	201,008	215,966	177,212	185,127	178,345	166,976	272,949	159,552	126,335
Literates	633,869	465,283	328,781	265,184	220,126	167,812	132,301	215,772	113,675	79,728
Zero years of schooling	347,111	201,014	215,934	176,642	184,632	178,519	167,154	273,249	159,752	126,560
Primary, less than 6 years	522,996	192,983	150,427	135,208	127,141	102,144	86,960	153,035	79,505	51,491
Primary, 6 years	74,615	112,792	73,676	60,061	45,819	32,215	23,612	34,717	20,693	18,394
Basic, less than 3 years	35,441	35,679	18,002	12,604	7,792	5,700	2,403	3,063	851	439
Basic, 3 years	2,671	18,370	15,790	12,582	6,963	6,442	2,186	4,046	1,870	1,159
Diversified, 1 or 2 years	172	3,922	19,931	9,318	7,658	5,140	4,525	4,679	3,214	1,719
Diversified, more than 2 years	--	420	34,554	22,108	16,665	9,817	8,303	10,728	5,127	4,350
University, less than 4 years	--	--	13,945	6,732	3,224	2,007	1,450	2,028	614	735
University, 4 years or more	--	--	2,314	6,917	4,913	3,868	2,369	2,812	1,457	1,079
Post-Graduate	--	--	176	151	445	304	312	364	145	133

SOURCE: Direccion General de Estadistica, Encuesta Nacional de Ingresos y Gastos Familiares 1979-1981, Volume I (January 1983) and Volume II (November 1984), Guatemala.

Table 2.12

GUATEMALA: EDUCATIONAL STRUCTURE OF POPULATION BY AGE GROUP, 1979-1981
(Percentages)

	% 10-14	% 15-19	% 20-24	% 25-30	% 31-34	% 35-39	% 40-44	% 45-54	% 55-65	% 65 - +
TOTAL POPULATION	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
Illiterates	35.5	30.2	39.6	40.1	45.70	51.50	55.80	55.80	58.40	61.30
Literates	64.5	69.8	60.3	59.9	54.30	48.50	44.20	44.20	41.60	38.70
Zero years of schooling	35.3	30.2	39.6	39.9	45.60	51.60	55.90	55.90	58.50	61.40
Primary, less than 6 years	53.2	29.0	27.6	30.6	31.40	29.50	29.00	31.30	29.10	25.00
Primary, 6 years	7.6	16.9	13.5	13.6	11.30	9.30	7.90	7.10	7.60	8.90
Basic, less than 3 years	3.6	5.3	3.3	2.8	1.90	1.60	0.80	0.60	0.30	0.20
Basic, 3 years	0.3	2.7	2.9	2.8	1.80	1.90	0.70	0.80	0.70	0.60
Diversified, 1 or 2 years	-	0.6	3.6	2.1	1.90	1.50	1.50	0.90	1.20	0.80
Diversified, more than 2 years		-	6.3	5.0	4.11	2.80	2.80	2.20	1.90	2.10
University, less than 4 years		-	2.6	1.5	0.80	0.58	0.50	0.40	0.20	0.40
University, 4 years or more	-	-	0.4	1.6	1.20	1.10	0.80	0.60	0.50	0.50
Post-Graduate	-	-	-	-	0.11	0.09	0.10	0.07	0.05	0.06

SOURCE: Direccion General de Estadistica, Encuesta Nacional de Ingresos y Gastos Familiares 1979-1981, Volume I (January 1983) and Volume II (November 1984), Guatemala.

disciplined, and dedicated labor force. Employment generation usually requires investment, and investments are always carried out under the risk of failing. Improvements in the quality of the labor force can reduce investment uncertainty.

Table 2.13 shows the numbers of graduates from universities, although the information is not complete for the last four years. There is no breakdown of graduates by field of study. The figures show a rapid increase in the number of total graduates, reaching a rate of growth of 43 per cent from 1979 to 1980. The number of graduates from San Carlos University increased by 22 per cent from 1981 to 1982.

These figures offer little insight into the contributions made by these graduates to the labor supply. The recent increases in the number of graduates coincide with the economic crisis in Guatemala, with its severe contraction in the apparent levels of employment; and no information is available regarding the employment of these graduates. While it is important to point out that the universities in Guatemala are not the only source of university-educated manpower, no data are available about immigration of foreign nationals or Guatemalan graduates of foreign universities.

It is impossible to determine whether the educational institutions in Guatemala are producing the right number of graduates per field. Educational decisions are generally made without regard to employment consequences, by individuals as well as by institutions. It is debatable whether educational institutions should be involved in monitoring the demand for skilled labor, and then act accordingly by exercising some control in the number of graduates, or let the individual choose and take the risk. But whichever form is used to make supply meet demand at a socially desirable wage level, there is no way to tell which are the most effective educational institutions in Guatemala.[1/]

It has already been noted that the level of employment improves the external efficiency of education. Accurate labor market information can improve that efficiency even further, as well as enhance the efficiency of the labor markets themselves.

2.5 The Costs of and Returns to Education

This analysis of the costs of education focuses on expenditures per student, and their fluctuation across departments, levels of education, and over time. As no information is available on the costs of private education, the unit-cost analysis will be limited to the public school system.

[1/] This level could be the one that equals all rates of return for the same amount of investment across different fields.

Table 2.13

GUATEMALA: NUMBER OF UNIVERSITY GRADUATES

UNIVERSITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
TOTAL	531	533	708		1,129		1,248	1,529	1,340	1,595	2,283	N/A	N/A	N/A	N/A
Total Private Universities	53	68	161		257		180	144	202	255	426	N/A	N/A	N/A	N/A
Rafael Landivar	50	64	153		220	171	125	77	67	132	265	456	278	433	409
Del Valle		3	2	7	29	35	25	33	27	33	95	82	72	113	116
Mariano Galvez	3	1	6	9	8		15	18	102	81	51	N/A	N/A	N/A	N/A
Francisco Marroquin						8	15	16	6	9	15	N/A	N/A	N/A	N/A
San Carlos	478	465	547	576	872	1,054	1,068	1,385	1,138	1,340	1,857	1,515	1,857	N/A	N/A

SOURCES: Departamento de Registro y Estadistica, Universidad de San Carlos de Guatemala, Boletin Estadistico Universitario No. 16 Alo XVI para el periodo 1970-1975; No. 19 Ano XIX para el periodo 1976-1979, Marzo 1984; No. 20 para 1980. Universidad Rafael Landivar, Memoria de Labores 1981, 1982, 1983 y 1984. Secretaria de la Universidad del Valle de Gua emala, para el periodo 1981-1984.

The financial data and enrollment statistics available in Guatemala are characterized by numerous inconsistencies and omissions; this reduces the analytical options. The inconsistencies in enrollment data emanate from the various points of collection throughout the school year. The figure for students that will be used for the unit-cost analysis corresponds to total number of students promoted plus non-promoted. This figure does not include dropouts; thus it is not actual enrollment, although it will be used as such for the analytical purposes of this section.

The main purpose of this analysis is to observe variations in costs to help determine degrees of relative efficiency. This will also help to identify future financial needs which can be expected to result from population growth and the achievement of educational goals, particularly the establishment of universal primary education. Finally, an evaluation of the returns to education will be offered, based on an analysis of the 1979-81 household expenditure survey.

2.5.1 Expenditures per Student

A summary of expenditures per student is presented in Table 2.14. Expenditures per student will be used here as a proxy for costs, since the available statistics do not allow the inclusion of cost components, such as the depreciation of buildings, that are not reflected in the public expenditure allocation system. As 90.2 per cent of the total expenditures in education correspond to expenditures for personnel,[1] this proxy may not differ greatly from a true measurement of cost. The available data permit a comparison between 1981 and 1982, as well as across departments. Table 2.15 presents the range of variation of the unit costs, by year and department; Tables 2.16 and 2.17 offer the same information in more detail. It is interesting to observe that the rates of change presented in Table 2.15 indicate wide variations for all levels except primary.

2.5.1.1 Bilingual Education. In the bilingual program (Castellanizacion), both the total number of students and the number of students promoted decreased from 1981 to 1982, by 31 and 33 per cent, respectively. On the other hand, the level of expenditures decreased by only 12 per cent in the same period. As a result, unit expenditures increased by 28 per cent for the total number of students, and by 32 per cent for students promoted. The apparent loss in efficiency, measured by unit expenditure, derives from the fact that expenditures do not appear to relate to enrollment or promotion.

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[1] Estimated from the actual 1984 budget, by taking total expenditures for personnel, excluding capital expenditures, and dividing by total expenditures for the Ministry of Education, adjusted by the amount transferred to USAC. There is no information about what portion of personnel expenditures correspond to teachers' salaries.

Table 2.14

GUATEMALA: MEAN EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION, 1981-1982 NATIONAL SUMMARY

(Expenditures in Quetzales)

	1981	1982	Rate of Change %
Bilingual			
Total students	52,458	36,100	-31
Students promoted	37,323	24,967	-33
Students not promoted	15,135	11,133	-26
Total Expenditures	949,167.00	837,625.00	-12
Per student	18.09	23.20	28
Per student promoted	25.43	33.55	32
Pre-Primary			
Total students	20,044	24,714	23
Students promoted	13,908	14,562	5
Students not promoted	6,136	10,152	65
Total Expenditure	1,833,821.00	2,129,502.00	16
Per student	91.49	86.16	- 6
Per student promoted	131.85	146.24	11
Primary			
Total students	679,130	655,553	- 3
Students promoted	517,930	491,364	- 5
Students not promoted	161,200	164,189	2
Total Expenditure	44,161,978.00	43,303,471.00	- 2
Per student	65.03	66.06	2
Per student promoted	85.27	88.13	3
Adult Primary			
Total Students	12,096	10,271	-15
Students promoted	9,343	7,822	-16
Students not promoted	2,753	2,449	-11
Total expenditure	865,669.00	965,801.00	12
Per student	71.57	94.03	31
Per student promoted	92.65	123.47	33

Table 2.14 (cont'd)

GUATEMALA: MEAN EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION, 1981-1982
NATIONAL SUMMARY

(Expenditures in Quetzales)

	1981	1982	Rate of Change %
Basic			
Total Students	56,178	45,742	-18
Students promoted	20,870	15,806	-24
Students not promoted	35,308	29,936	-15
Total expenditure	8,258,757.00	7,800,113.00	-5
Per student	147.01	170.52	16
Per student promoted	395.72	493.49	25
Diversified			
Total Students	30,645	26,863	-12
Students promoted	15,652	13,109	-16
Students not promoted	14,993	13,754	- 8
Total expenditure	5,549,808.00	4,625,847.00	-17
Per student	181.10	172.20	- 5
Per student promoted	354.58	352.88	- 0.5

SOURCE: Resultados Finales de Evaluacion y Presupuesto Ejecutado. Niveles Preprimario, Primario y Medio. Ciclo Escolar 1981, 1982. USIPE, Ministerio de Educacion, Guatemala.

Tables 2.15, 2.16, and 2.17 present the departmental distribution of expenditures per student. The unit expenditures vary a great deal across departments for total student enrollment, ranging from Q5.90 to Q137.48 in 1981. The corresponding range of variation for 1982 is from Q6.80 to Q36.23. The pattern of variation is as unstable for expenditures per promoted student. For 1981, it moves between Q9.12 and Q202.94, while for 1982 it ranges from Q10.20 to Q52.55. The departments representing the upper and lower limits of variation for expenditures per total students enrolled, tend to be the same as the ones representing those limits for expenditures per student promoted, but they may be different depending on the proportion of students promoted on the total.

These marked variations can be interpreted as evidence of inefficiency at the central administration level, which is unable to respond quickly enough to supply teachers to those areas most in need--those with the lowest expenditures per student--or to move teachers out of areas where demand for their services has declined.

2.5.1.2 Pre-Primary Education. The range of variation between 1981 and 1982 for pre-primary education unit expenditures is not as wide as for the bilingual programs. The national means in Table 2.14 show a decrease of 6 per cent in unit expenditure for all students, and an increase of 11 per cent for promoted students. In bilingual education, enrollment decreased more rapidly than expenditures, producing large increases in expenditures per student. In pre-primary, the opposite happened; the level of expenditures grew at a lower rate than enrollment, resulting in a decrease in expenditure per student enrolled. As the number of promoted students in 1982 increased by only 5 per cent, the unit expenditure increased by some 11 per cent.

There is less variation by department in unit expenditures for pre-primary than for bilingual education. In 1981, the lowest was Q48.82 (Peten) for total enrollment, and the highest, Q115.15 (Guatemala). For promoted students, the corresponding figures are Q61.54 (Peten) and Q163.08 (Zacapa). The range for total enrollment in 1982 was Q52.10 (Jutiapa) to Q103.11 (Huehuetenango); and for promoted students, Q79.25 (Peten) and Q185.75 (Guatemala). In both 1981 and 1982, the distribution of expenditures in education favored the capital over the most isolated department in the country.

2.5.1.3 Primary Education. Table 2.14 shows a high degree of stability in all the expenditure indicators over the two-year period There is also less variation across departments, as presented in Tables 2.16 and 2.17, although they remain significant enough to merit an investigation of their causes.

The fact that the primary enrollment diminishes from 1981 to 1982 suggests that the unit expenditure indices may be somewhat distorted, due to the exceptional circumstances created by the climate of violence during those years. Still, the relatively small range of variation between years makes it possible to cast projections into the future, as is done later in this section.

Table 2.15

GUATEMALA: MEAN AND EXTREME VALUES OF EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION, 1981-1982
NATIONAL SUMMARY

(In Quetzales)

	1981			1982			Rate of
	Mean	Low	High	Mean	Low	High	Change
Bilingual							
Total	18.09	5.90 (Izab)	137.48 (Such)	23.20	6.80 (B.V.)	36.23 (Chim.)	28.0
Promoted	25.43	9.12 (Izab)	202.[illegible]4 (Such)	33.55	10.20 (B.V.)	52.55 (Hue.)	32.0
Pre Primary							
Total	91.49	48.82 (Pet.)	115.15 (Guat)	86.16	52.10 (Jut.)	103.11 (Hue.)	- 6.0
Promoted	131.85	61.54 (Pet.)	165.01 (Guat)	146.24	85.35 (Jut.)	185.75 (Guat)	11.0
Primary							
Total	65.03	45.42 (Tot.)	136.92 (Prog)	66.06	49.78 (Tot.)	79.18 (Guat)	2.0
Promoted	85.27	60.88 (Tot.)	178.14 (Prog)	88.13	66.01 (Tot.)	100.11 (Such)	3.0
Adult Primary							
Total	71.57	11.65 (Izab)	99.20 (Esc.)	94.03	31.41 (Izab)	149.05 (Prog)	31.0
Promoted	92.65	12.92 (Izab)	128.81 (Esc.)	123.47	34.48 (Izab)	283.20 (Prog)	33.0
Basic							
Total	147.01	75.74 (Saca)	340.55 (S.R.)	170.52	46.27 (Sol.)	397.47 (Pet.)	16.0
Promoted	395.72	171.68 (A.V.)	1,026.10 (S.R.)	493.49	186.49 (Tot.)	830.[illegible] (Chim)	25.0
Diversified							
Total	181.10	66.05 (Quiche)	795.04 (A.V.)	172.20	42.83 (Tot.)	347.34 (Such)	- 5.0
Promoted	354.58	116.50 (Jut.)	944.64 (A.V.)	352.88	115.36 (Tot.)	669.93 (Such)	- 0.5

Izab = Izabal
B.V. = Baja Verapaz
Guat = Guatemala
Prog = El Progreso
Sol. = Solola
Such = Suchitepéquez
Hue. = Huehuetenango
Jut. = Jutiapa
Esc. = Escuintla
S.R. = Santa Rosa
Chim = Chimaltenango
Pet. = El Petén
Tot. = Totonicapan
Saca = Sacatepéquez
A.V. = Alta Verapaz

Table 2.16

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Guatemala						
Total students	1,407	10,095	152,908	7,122	27,120	
Students promoted	1,083	7,045	126,799	5,577	9,461	7,898
Students not promoted	324	3,050	26,109	1,545	17,659	8,219
Total Expenditures	13,815.00	1,162,499.00	11,774,063.00	594,903.00	3,173,451.00	2,618,208.00
Per student	9.82	115.15	77.00	83.53	117.02	166.36
Per student promoted	12.76	165.01	92.86	106.68	335.42	331.50
Sacatepéquez						
Total students	237	912	13,607	143	1,319	951
Students promoted	212	705	10,966	117	401	463
Students not promoted	25	207	2,641	26	918	488
Total Expenditures	3,492.00	46,388.00	959,218.00	4,882.00	99,905.00	133,781.00
Per student	14.73	50.86	70.50	34.14	75.74	140.67
Per student promoted	16.47	65.80	87.47	41.73	249.14	288.94
Chimaltenango						
Total students	3,445	338	26,555	160	1,094	463
Students promoted	2,459	289	19,928	116	361	245
Students not promoted	986	49	6,627	44	733	218
Total Expenditures	99,045.00	32,019.00	1,513,468.00	7,542.00	179,397.00	51,832.00
Per student	28.75	94.73	57.00	47.14	163.98	111.95
Per student promoted	40.28	110.79	75.95	65.02	496.94	211.56

Table 2.16 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Solola						
Total students	6,554	211	15,804	69	210	127
Students promoted	4,688	126	10,998	57	63	34
Students not promoted	1,866	85	4,806	12	147	93
Total Expenditures	94,023.00	19,356.00	1,096,850.00	4,122.00	44,518.00	17,673.00
Per student	14.35	91.73	69.40	59.74	212.00	139.16
Per student promoted	20.06	153.62	99.73	72.32	706.63	519.79
Totonicapan						
Total students	6,244	326	19,451	162	644	326
Students promoted	4,746	230	14,513	145	156	149
Students not promoted	1,498	96	4,938	17	488	177
Total Expenditures	63,082.00	24,875.00	883,539.00	12,336.00	110,611.00	59,340.00
Per student	10.10	76.30	45.42	76.15	171.75	182.02
Per student promoted	13.29	108.15	60.88	85.08	709.04	398.25
Quetzaltenango						
Total students	3,802	1,231	42,978	780	3,972	2,556
Students promoted	2,900	793	31,678	495	1,014	1,170
Students not promoted	902	438	11,300	285	2,958	1,386
Total Expenditures	45,869.00	74,446.00	2,761,725.00	24,038.00	779,407.00	402,584.00
Per student	12.06	60.48	64.25	30.82	196.23	157.50
Per student promoted	15.82	93.88	87.18	48.56	768.65	344.09

Table 2.16 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Suchitepéquez						
Total students	124	529	24,237	197	1,161	767
Students promoted	84	376	17,378	184	725	470
Students not promoted	40	153	6,859	13	436	297
Total Expenditures	17,047.00	41,148.00	2,082,946.00	6,186.00	146,208.00	388,202.00
Per student	137.48	77.78	85.94	31.40	125.93	506.13
Per student promoted	202.94	109.44	119.86	33.62	201.67	825.96
San Marcos						
Total students	2,902	886	51,622	400	1,697	1,079
Students promoted	2,312	583	37,145	342	693	420
Students not promoted	590	303	14,477	58	1,004	659
Total Expenditures	39,348.00	53,753.00	2,916,282.00	18,973.00	357,546.00	263,978.00
Per student	13.55	60.67	56.49	47.43	210.69	244.65
Per student promoted	17.02	92.20	78.50	55.48	515.93	628.58
Huehuetenango						
Total students	9,710	655	37,903	476	1,086	632
Students promoted	6,874	505	27,942	357	325	267
Students not promoted	2,836	150	9,961	119	761	365
Total Expenditures	227,262.00	65,640.00	2,562,790.00	38,219.00	220,447.00	78,672.00
Per student	23.40	100.21	67.61	80.30	202.99	124.48
Per student promoted	33.06	129.98	91.72	107.05	678.30	294.65

Table 2.16 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Quiché						
Total students	5,240	443	25,361	117	811	479
Students promoted	3,978	233	18,391	97	323	182
Students not promoted	1,262	210	6,970	20	488	297
Total Expenditures	156,646.00	23,676.00	1,634,689.00	7,526.00	256,627.00	31,638.00
Per student	29.89	53.44	64.45	64.32	316.43	66.05
Per student promoted	39.38	101.60	88.89	79.59	794.51	173.84
Baja Verapaz						
Total students	639	284	14,016	44	586	372
Students promoted	500	138	9,955	31	237	226
Students not promoted	139	146	4,061	13	349	146
Total Expenditures	37,118.00	17,352.00	745,941.00	2,016.00	86,845.00	77,100.00
Per student	58.08	61.09	53.22	45.82	148.20	207.85
Per student promoted	74.24	125.74	74.93	65.03	366.43	341.15
Alta Verapaz						
Total students	11,252	601	20,082	342	878	663
Students promoted	6,867	360	13,930	258	640	558
Students not promoted	4,385	241	6,152	84	238	105
Total Expenditures	141,062.00	39,954.00	1,194,406.00	5,082.00	109,873.00	527,111.00
Per student	12.54	66.48	59.48	14.85	125.14	795.04
Per student promoted	20.54	110.98	85.74	19.70	171.68	944.64

Table 2.16 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Petén						
Total students	296	605	16,858	76	791	361
Students promoted	228	480	12,520	40	290	162
Students not promoted	68	125	4,338	36	501	199
Total Expenditures	7,782.00	29,539.00	890,285.00	4,230.00	134,574.00	63,631.00
Per student	26.29	48.82	52.81	55.65	170.13	176.26
Per student promoted	34.13	61.54	71.10	105.75	464.04	392.78
Izabal						
Total students	606	416	23,110	173	1,758	440
Students promoted	392	281	17,007	156	901	233
Students not promoted	214	135	6,103	17	857	207
Total Expenditures	3,576.00	26,492.00	1,290,940.00	2,016.00	275,118.00	45,803.00
Per student	5.90	63.68	55.86	11.65	156.50	104.09
Per student promoted	9.12	94.28	75.90	12.92	305.35	196.58
El Progreso						
Total students		251	13,739	82	865	61
Students promoted		207	10,560	55	502	44
Students not promoted		44	3,179	27	363	17
Total Expenditures		14,766.00	1,881,207.00	4,704.00	151,740.00	21,186.00
Per student		58.83	136.92	57.36	175.42	347.31
Per student promoted		71.33	178.14	85.53	302.27	481.50

Table 2.16 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS
BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Escuintla						
Total students		532	37,634	744	2,743	891
Students promoted		460	28,462	573	1,205	550
Students not promoted		72	9,172	171	1 538	341
Total Expenditures		42,438.00	2,005,787.00	73,809.00	364,275.00	100,877.00
Per student		79.77	53.30	99.20	132.80	113.22
Per student promoted		92.25	70.47	128.81	302.30	183.41
Santa Rosa						
Total students		376	29,586	97	925	205
Students promoted		267	22,251	77	307	84
Students not promoted		109	7,335	20	618	121
Total Expenditures		26,956.00	1,622,620.00	4,816.00	315,014.00	25,903.00
Per student		71.69	54.84	49.65	340.55	126.31
Per student promoted		100.95	72.92	62.55	1,026.10	308.36
Retalhuleu						
Total students		594	18,600	125	1,837	765
Students promoted		353	14,260	76	541	435
Students not promoted		241	4,340	49	1,296	330
Total Expenditures		31,610.00	1,030,681.00	9,072.00	258,934.00	173,529.00
Per student		53.22	55.41	72.58	140.95	226.84
Per student promoted		89.55	78.28	119.36	478.62	398.92

Table 2.16 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Zacapa						
Total students		188	17,020	120	1,515	190
Students promoted		115	13,114	97	569	109
Students not promoted		73	[illegible],906	23	946	81
Total Expenditures		18,755.00	1,068,347.00	5,132.00	258,864.00	44,305.00
Per student		99.76	62.77	42.77	170.87	233.18
Per student promoted		163.08	81.47	52.90	454.95	406.47
Chiquimula						
Total students		571	21,954	284	2,148	1,454
Students promoted		362	17,099	167	873	853
Students not promoted		209	4,855	117	1,275	601
Total Expenditures		42,159.00	1,355,309.00	8,493.00	410,127.00	224,353.00
Per student		73.83	61.73	29.90	190.93	154.30
Per student promoted		116.46	79.26	50.85	469.79	263.01
Jalapa						
Total students			16,957	172	869	1,174
Students promoted			12,439	139	262	659
Students not promoted			4,518	33	607	515
Total Expenditures		31,508.00	917,941.00	15,924.00	181,923.00	148,725.00
Per student			54.13	92.58	209.35	126.68
Per student promoted			73.86	114.56	694.36	225.68

Table 2.16 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1981

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Jutiapa						
Total students			39,148	211	2,149	572
Students promoted			30,595	187	1,021	441
Students not promoted			8,553	24	1,128	131
Total Expenditures		54,988.00	1,972,944.00	11,648.00	343,353.00	51,377.00
Per student			50.40	55.20	159.77	89.82
Per student promoted			64.49	62.29	336.29	116.50

SOURCE: Ministry of Education, Unidad Sectorial de Planificacion e Investigacion Educativa, 1983.

Table 2.17

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS
BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Guatemala						
Total students	1,368	12,273	155,664	5,814	25,219	14,023
Students promoted	1,048	6,718	130,547	4,407	8,000	6,788
Students not promoted	320	5,555	25,117	1,407	17,219	7,235
Total Expenditures	28,425.00	1,247,881.00	12,325,599.00	654,695.00	3,643,631.00	2,570,944.00
Per student	20.77	101.68	79.18	112,60.00	144.47	183.33
Per student promoted	27.12	185.75	94.42	148.55	445.45	378.75
Sacatepequez						
Total students	232	830	13,594	104	1,172	529
Students promoted	181	693	10,999	83	365	259
Students not promoted	51	137	2,595	21	807	270
Total Expenditures	5,060.00	60,944.00	983,494.00	7,980.00	105,314.00	87,290.00
Per student	21.81	73.43	72.35	76.73	89.85	165.00
Per student promoted	27.95	87.94	89.42	96.14	288.53	337.02
Chimaltenango						
Total students	2,037	382	21,861	143	884	452
Students promoted	1,503	320	16,409	106	313	109
Students not promoted	534	62	5,452	37	571	243
Total Expenditures	73,816.00	34,990.00	1,260,727.00	10,103.00	260,071.00	51,832.00
Per student	36.23	91.60	57.67	70.65	294.20	114.67
Per student promoted	49.11	109.34	76.83	95.31	830.90	475.52

Table 2.17 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Solola						
Total students	5,234	217	15,887	73	1,049	331
Students promoted	3,694	122	11,061	54	74	56
Students not promoted	1,540	95	4,826	19	975	275
Total Expenditures	122,559.00	19,480.00	1,031,569.00	4,704.00	48,535.00	15,449.00
Per student	23.42	89.77	64.93	64.43	46.27	47.67
Per student promoted	33.18	159.67	93.26	87.11	665.88	275.88
Totonicapan						
Total students	5,216	441	19,855	18	542	264
Students promoted	3,963	298	14,972	15	210	98
Students not promoted	1,253	143	4,883	3	332	166
Total Expenditures	97,139.00	32,280.00	988,384.00	2,300.00	39,162.00	11,306.00
Per student	18.62	73.20	49.78	127.78	72.25	42.83
Per student promoted	24.51	108.32	66.01	153.33	186.49	115.36
Quetzaltenango						
Total students	3,455	1,597	43,066	797	3,475	3,177
Students promoted	2,737	1,122	33,054	650	1,074	1656
Students not promoted	718	475	10,012	147	2,401	1,521
Total Expenditures	67,437.00	109,645.00	3,252,505.00	37,453.00	703,216.00	454,021.00
Per student	19.52	68.66	75.52	47.00	202.36	142.90
Per student promoted	46.64	97.72	98.40	57.62	654.76	274.16

Table 2.17 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Suchitepequez						
Total students	98	594	23,226	149	679	704
Students promoted	79	313	17,014	123	259	365
Students not promoted	19	281	6,212	26	420	339
Total Expenditures	2,902.00	51,585.00	1,703,389.00	8,359.00	151,603.00	244,524.00
Per student	29.61	86.84	73.34	56.10	223.27	347.34
Per student promoted	36.73	164.80	100.11	67.95	585.33	669.93
San Marcos						
Total students	2,314	887	49,891	312	1,707	358
Students promoted	1,816	499	36,637	269	669	169
Students not promoted	498	388	13,254	43	1,038	189
Total Expenditures	47,361.00	59,443.00	2,931,040.00	26,281.00	428,249.00	89,086.00
Per student	20.47	67.02	58.74	84.23	250.88	248.84
Per student promoted	26.07	119.12	80.00	97.70	640.13	527.14
Huehuetenango						
Total students	3,086	748	26,686	351	924	513
Students promoted	2,126	489	19,689	280	319	278
Students not promoted	960	259	6,697	71	605	235
Total Expenditures	111,738.00	77,128.00	1,857,941.00	39,823.00	253,243.00	80,042.00
Per student	36.20	103.11	69.62	113.45	274.07	156.03
Per student promoted	52.55	157.73	94.36	142.25	793.86	287.92

Table 2.17 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Quiché						
Total students	3,887	364	18,704	128	584	256
Students promoted	2,591	223	13,045	106	234	169
Students not promoted	1,296	141	5,659	22	350	87
Total Expenditures	108,612.00	28,848.00	1,146,743.00	11,808.00	176,528.00	83,495.00
Per student	27.94	79.25	61.31	92.25	302.27	326.15
Per student promoted	41.91	129.36	87.90	111.40	754.39	494.05
Baja Verapaz						
Total students	593	267	14,296	43	251	
Students promoted	395	135	9,979	31	95	
Students not promoted	198	132	4,317	12	156	
Total Expenditures	4,032.00	23,080.00	780,240.00	2,352.00	39,942.00	
Per student	6.80	86.44	54.58	54.70	159.13	
Per student promoted	10.20	170.96	78.18	75.87	420.44	
Alta Verapaz						
Total students	7,961	535	20,530	442	836	484
Students promoted	4,439	299	13,709	334	255	194
Students not promoted	3,522	236	6,821	108	581	290
Total Expenditures	159,496.00	41,760.00	1,220,540.00	23,500.00	137,522.00	97,305.00
Per student	20.03	78.07	59.45	53.17	164.50	201.04
Per student promoted	35.93	139.66	89.03	70.35	539.30	501.57

Table 2.17 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Petén						
Total students	354	663	16,812	95	351	419
Students promoted	235	442	12,812	68	231	129
Students not promoted	119	221	4,000	27	120	290
Total Expenditures	4,080.00	35,032.00	901,723.00	7,056.00	139,511.00	54,436.00
Per student	11.52	52.84	53.64	74.27	397.47	129.92
Per student promoted	17.36	79.25	70.38	103.76	603.94	421.98
Izabal						
Total students	265	404	22,686	146	875	467
Students promoted	160	261	17,028	133	419	316
Students not promoted	105	143	5,658	13	456	151
Total Expenditures	4,968.00	29,153.00	1,198,932.00	4,536.00	166,357.00	52,859.00
Per student	[illegible]	72.16	52.85	31.41	190.12	113.18
Per student promoted	[illegible]	111.69	70.40	34.48	397.03	167.27
El Progreso						
Total students		347	14,254	38	1,093	76
Students promoted		195	10,940	20	673	53
Students not promoted		152	3,314	18	420	23
Total Expenditures		19,986.00	921,787.00	5,664.00	168,849.00	21,186.00
Per student		57.60	64.67	149.05	154.48	278.76
Per student promoted		102.49	84.25	283.20	258.89	399.73

Table 2.17 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Escuintla						
Total students		898	37,192	641	1,144	758
Students promoted		509	28,405	478	573	392
Students not promoted		389	8,787	163	571	366
Total Expenditures		49,516.00	2,150,289.00	43,097.00	305,922.00	116,626.00
Per student		55.14	57.82	67.23	267.41	153.86
Per student promoted		97.28	75.70	90.16	535.70	297.52
Santa Rosa						
Total students		405	29,018	66	1,484	201
Students promoted		254	22,139	32	280	86
Students not promoted		151	6,879	34	1,204	115
Total Expenditures		26,346.00	1,734,226.00	7,457.00	185,651.00	30,476.00
Per student		65.05	59.76	112.98	125.10	151.62
Per student promoted		103.72	78.33	233.03	663.04	354.37
Retalhuleu						
Total students		617	18,768	162	1,285	517
Students promoted		312	14,430	120	389	242
Students not promoted		305	4,338	42	896	275
Total Expenditures		35,041.00	1,152,336.00	10,100.00	260,019.00	91,112.00
Per student		56.80	61.40	62.35	202.35	176.23
Per student promoted		112.31	79.85	84.16	668.42	376.50

Table 2.17 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Zacapa						
Total students		287	16,750	108	1,076	642
Students promoted		139	12,781	79	620	100
Students not promoted		148	3,969	29	456	542
Total Expenditures		23,490.00	1,182,425.00	8,988.00	268,661.00	42,842.00
Per student		81.85	70.60	83.22	249.70	66.73
Per student promoted		168.99	92.51	113.77	433.34	428.42
Chiquimula						
Total students		703	20,607	290	1,112	1,027
Students promoted		390	16,195	149	754	602
Students not promoted		313	4,412	141	358	425
Total Expenditures		47,289.00	1,333,434.00	14,556.00	318,127.00	229,167.00
Per student		67.27	64.71	50.19	286.09	223.14
Per student promoted		121.25	82.34	97.69	421.91	380.67
Jalapa						
Total students		408	16,609	175	640	1,085
Students promote[illegible]		312	12,722	140	222	644
Students not pr[illegible] ted		96	3,887	35	418	441
Total Expenditures		32,456.00	1,009,199.00	20,995.00		144,409.00
Per student		79.55	60.76	119.97		133.09
Per student promoted		104.02	79.32	149.96		224.23

Table 2.17 (cont'd)

GUATEMALA: EXPENDITURES PER STUDENT IN PUBLIC SCHOOLS BY LEVEL OF EDUCATION AND DEPARTMENT - 1982

(In Quetzales and Number of Students)

DEPARTMENT	Bilingual	Pre-Primary	Primary	Adult Primary	"Basicos"	"Diversificado"
Jutiapa						
Total students		847	39,597	176	744	580
Students promoted		517	31,227	145	586	304
Students not promoted		330	8,370	31	158	276
Total Expenditures		44,129.00	2,236,949.00	13,944.00		57,440.00
Per student		52.10	56.49	79.23		99.03
Per student promoted		85.35	71.63	96.16		188.94

SOURCE: Ministry of Education, Unidad Sectorial de Planificacion e Investigacion Educativa, 1983.

2.5.1.4 Secondary Education. The data for expenditures at this level are presented in Tables 2.16 and 2.17, according to each of the two levels of secondary education. The failure rate is higher for the basic cycle; thus, the range between unit expenditures for total enrollment and those for promoted students is wider than for the diversified cycle.

The evolution of unit expenditures between 1981 and 1982 differs from one cycle to the other. Unit expenditures for the basic cycle increased by 16 per cent for total enrollment and by 25 per cent for promoted students. This resulted from a decrease in enrollment proportionally greater than the decrease in expenditures, while the success rate of students showed very little variation, from 37 to 34 per cent over the period. Meanwhile, unit expenditures for the diversified cycle diminished for total enrollment by 5 per cent and remained almost constant for students promoted, as the proportional contraction in total enrollment between both years was close to the reduction of expenditures.

There is considerable variation of unit expenditure by department, especially in terms of promoted students. The unit expenditures vary in 1981 from Q75.74 (Sacatepequez) to Q316.43 (Quiché). The corresponding figures for promoted students are Q171.68 (Alta Verapaz) and Q1,026.10 (Santa Rosa). The variation for 1982 total enrollment ranges from Q46.27 (Solola) to Q397.47 (Petén); and for promoted students from Q186.49 (Totonicapan) to Q830.90 (Chimaltenango).

The diversified cycle shows mean unit costs very similar to those for the basic cycle. Nevertheless, the range of variation is much wider for the total number of students in 1981, but within the same order of magnitude as that for basic. This instability of variation could be a result of the relative sizes of both cycles. The fundamental difference between the unit costs of the two cycles is that while they increase for the basic cycle from 1981 to 1982, the opposite occurs for the diversified cycle. This apparently resulted from a proportional decline in expenditures in 1982, rather than from a decrease in the number of students.

These wide variations illustrate the risks of projecting financial needs. Most imporant for planning purposes is what unit cost figure should be used to project future needs. The answer depends on the formulation of standards of efficiency and quality, based on what is attainable. Reliable information is indispensable in this process.

2.5.2 Vocational and Technical Education

Unit cost data for this type of education are scarce. Those which are available reflect average unit costs across different programs that are higher than the corresponding figures for the basic and diversified cycles. As illustrated in Table 7.13, the average cost per student enrolled in public vocational programs was Q234 in 1983. This compares with average costs per student enrolled in the basic and diversified secondary cycles in 1981 of Q147.01 and Q181.10; in 1982, the costs were Q170.52 and Q172.20, respectively. Thus the unit cost per

enrolled vocational student in 1983 was 29 per cent higher than the unit cost per diversified student enrolled in 1981, and 36 per cent higher than the diversified unit cost in 1982. By comparing 1983 unit costs of vocational education with the 1981 and 1982 costs of diversified, some distortion occurs; but given the moderate inflation rate of those years, the deviations are still acceptable.

As the figures for vocational education are available for only one year, nothing can be said about their stability over time. Significant variations do appear across different programs within the same year. These range from more than Q670 for the Bachillerato Industrial program, to Q10 for computer training. Most of the programs in 1983 had unit costs which ranged from Q150 to Q300. It is reported that 90 per cent of the total expenditures correspond to personnel, leaving little for supplies, an important item in most vocational programs.

Projections of future financial needs in vocational education cannot be based on the currently available unit-cost data. It is unfortunate that the vocational and technical programs, as well as the other education programs in Guatemala, do not construct some standardization of costs, against which actual unit costs could be measured. Standard unit costs can be a powerful administrative planning tool.

2.5.3 Family Expenditures in Education

The results of the household expenditure survey of 1979-1981, shown in Table 2.18, indicate that total family expenditures on education amounted to Q40.2 million: on the average, 1.2 per cent of total family budget. This amount is equivalent to 25 per cent of public expenditure for education in 1981. As would be expected, the proportion of family expenditures for education increases with the level of family income. The table shows a range of contributions from 0.09 per cent for the lowest income bracket, to 4.3 per cent for the highest. An unexplained variation in the proportion occurs for the second highest income category, perhaps because of sampling error.

Simple estimates of the income elasticity of education expenditures can be produced based on the figures in Table 2.18. They suggest that poor families would increase the share for education from the family budget if income were to rise. This is erroneous, however, since income elasticities reflect the unconstrained expression of individual or family preferences for given goods and services as income increases. This is not the case here, because families' expenditures in education depend on the ability of their children to remain in school. A more useful elasticity estimate would be the one produced for families with children attending school, which would allow a better approximation of the family propensity to spend on education. Unfortunately, the survey did not produce the information necessary to apply this estimate.

Table 2.19 shows the distribution of expenditures and income for rural families. In this case, the percentage of contribution to education is lower in each income category.

Table 2.18

GUATEMALA: HOUSEHOLD EXPENDITURES IN EDUCATION, BY LEVEL OF INCOME, 1979-1981
NATIONAL TOTALS

Family Income (Quetzales per Annum)	Number of Housholds	Total Income (000's)	Total Expen-ditures (000's)	Total Expenditures in Education (000's)	% Education of Total Expenditures	Expenditures in Reading (000's)	% Reading of Total Expenditures	Expenditures in Radio, TV, Record., Etc. (000's)	% Expendi-tures in Radio, Etc. of Total Exp.
0- 1,200	351,529	304,098	306,620	286	0.09	80	0.03	390	0.13
1,201- 2,400	512,120	878,605	842,057	2,164	0.26	516	0.06	1,444	0.17
2,401- 4,800	302,219	1,018,518	917,730	6,922	0.75	1,673	0.18	4,689	0.51
4,801- 7,200	83,154	483,486	419,388	6,067	1.45	1,428	0.34	2,025	0.48
7,201-12,000	54,985	505,837	409,143	8,648	2.11	1,789	0.43	2,699	0.66
12,001-18,000	18,127	261,626	203,666	6,543	3.21	1,459	0.71	1,317	0.65
18,001-36,000	9,785	239,267	167,132	6,872	4.11	886	0.53	1,889	1.13
36,001-60,000	1,729	79,242	45,573	1,370	3.01	231	0.51	122	0.27
60,001 and more	1,249	302,471	31,187	1,342	4.30	159	0.51	127	0.41
TOTAL	1,334,894	4,073,151	3,342,496	40,216	1.20	8,222	0.25	14,703	0.44

SOURCE: Direccion Nacional de Estadistica, Encuesta Nacional de Ingresos y Gastos Familiares, 1979-81, Volumen I (January 1983) and Volume II (November 1984), Guatemala.

Table 2.19

GUATEMALA: HOUSEHOLD EXPENDITURES IN EDUCATION, BY LEVEL OF INCOME, 1979-1981
RURAL AREAS

Family Income (Quetzales per Annum)	Number of Housholds	Total Income (000's)	Total Expen-ditures (000's)	Total Expenditures in Education (000's)	% Education of Total Expenditures	Expenditures in Reading (000's)	% Reading of Total Expenditures	Expenditures in Radio, TV, Record., Etc. (000's)	% Expendi-tures in Radio, Etc. of Total Exp.
0- 1,200	303,943	261,673	258,673	159	0.06	59	0.02	360	0.14
1,201- 2,400	380,090	637,719	601,224	1,133	0.19	273	0.04	725	0.12
2,401- 4,800	143,444	465,650	408,276	1,967	0.48	355	0.09	2,153	0.53
4,801- 7,200	17,561	96,466	79,291	674	0.85	72	0.10	457	0.58
7,201-12,000	10,062	91,998	63,709	1,010	1.58	103	0.16	1,192	1.87
12,001-18,000	231	3,201	2,960	---	---	7	0.24	---	---
18,001-36,000	439	8,160	1,298	52	4.01	---	---	---	---
36,001-60,000	---	---	---	---	---	---	---	---	---
60,001 and more	---	---	---	---	---	---	---	---	---
TOTAL	855,770	1,546,868	1,415,435	4,995	0.35	879	0.06	4,887	0.34

SOURCE: Direccion Nacional de Estadistics, Encuesta Nacional de Ingresos y Gastos Familiaries, 1979-1981, Volumen I (January 1983) and Volume II (November 1984), Guatemala.

Having no children in school is not the only constraint to spending for education; another, of course, is income. The distribution of income in Guatemala, implicit in figures shown in Tables 2.18 and 2.19, is such that the 12.6 per cent of families in the highest income groups receive almost 46 per cent of total income, and contribute nearly 77 per cent of all private expenditures for education. The two lowest income groups, representing 65 per cent of all families in the country, receive only 29 per cent of the income, and spend only 6 per cent of total private expenditures. The figures may even underestimate the degree of inequal distribution of income, for two reasons: (a) it is not certain to what extent indigenous families, many of whom live in remote areas, are well represented in the sample: and (b) individuals tend to under-report income in sample surveys, and the under-reporting is greater, the higher the level of income.

The families in the two lowest income groups receive an annual mean income of Q1,369. To compare that income to the amount of money spent in education by the families contributing the highest proportion, it is necessary only to divide the corresponding amount (Q1.3 million) by the number of families to obtain the figure of Q1,074 per annum. The result is that the average expenditure for education in a year by the richest family is 7 per cent of the total annual average income of the poorest family. The average annual expenditure in education for those families is Q2.84. This implies that the typical rich family spends on education as much as 379 times what the typical family of the two lowest income groups spent. This difference is not a function of motivation, but of ability to pay; it suggests that complete privatization of education would result in no education for the poor majority.

The income necessary to bridge the educational expenditure gap between the least privileged families and the most, reaches the sum of Q2.2 billion at 1981 prices. This is equivalent to 25 per cent of the total GDP for one year. This contrasts with the 2.3 per cent spent in education by all private and public sources in 1981. In other words, to equalize expenditures on education across families by raising levels of expenditure by the poor, Guatemala would have to spend as a nation 10 times more than it spends now.

2.5.4 The Rates of Return to Education

The empirical content of this section is based on the findings of a research project conducted by Andras Uthoff for the International Labor Organization (PREALC) in 1983.[1] The research was based on the data generated by the household expenditure survey of 1979-1981, some results of which are contained in Tables 2.18 and 2.19.

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[1] Published under the title Criterios para la Planificacion de los Recursos Humanos, Consejo Nacional de Planificacion Economica, Secretaria General, Guatemala, 1984.

Table 2.20 presents some interesting results. As expected, the completion of each level of formal education increases income level. The rate of increase from level to level is higher in marginal urban areas than in the larger metropolitan ones for men and women alike, once the primary level is completed. The benefits are proportionately smaller for women than for men, and in rural areas when compared to urban areas. The difference between the two types of urban areas could be explained in terms of individual preference for living in large urban centers, with a trading of certain amount of monetary benefits for non-monetary ones. However, there is no evidence available to confirm or deny this hypothesis.

Table 2.20

DIRECT INCREMENTAL MONETARY BENEFITS FOR EDUCATION

(In Quetzales per Year)

		MEN			WOMEN		
	Country Total	Urban Center	Urban Other	Rural	Urban Center	Urban Other	Rural
Primary 1-3	361	478	455	294	277	253	184
Primary 3-6	357	39	429	272	262	250	188
Incomplete Primary	226	.66	264	163	160	159	120
Primary Total	944	1,183	1,148	729	699	662	492
Basic	887	1,042	1,055	642	644	660	512
Diversified Cycle	1,433	1,539	1,605	949	978	1,068	853
University	4,607	4,361	4,747	2,690	2,893	3,431	2,861

SOURCE: Criterios para la Planificacion de los Recursos Humanos. (Table published originallly by PREALC in 1982.)

The benefit flows reported in Table 2.21 show that benefits are higher in marginal areas than in urban centers, for education beyond the primary level. Benefits are lower for females than for males. Opportunity costs to rural and urban men and women for all levels of education are shown in Table 5.8 in Chapter 5.[1]

Finally, the rates of return to education are reported in Table 2.22.[2] Their relative values are generally consistent with the figures presented in the two previous tables, indicating that investment

[1] Opportunity costs are measured as foregone earnings while in school.

[2] The concept here of internal rates of return is not related to internal efficiency, but to external.

Table 2.21

COST-BENEFIT FLOWS IN RELATION TO FORMAL EDUCATION[1]

(Quetzales per Year)

	Primary						
	C_1	C_2	C_3	C_4	C_5	C_6	Benefits
Men	499	551	610	678	756	849	1,016
Urban Center	553	611	678	753	839	937	1,089
Urban Other	461	511	567	632	708	794	1,074
Rural	482	531	586	649	720	802	683
Women	400	414	461	515	580	655	661
Urban Center	448	496	551	613	686	769	655
Urban Other	390	341	377	419	469	527	619
Rural	362	404	455	514	585	669	462

	Basic			
	C_1	C_2	C_3	Benefits
Men	1,057	1,172	1,305	1,060
Urban Center	1,160	1,172	1,305	952
Urban Other	1,004	1,118	1,250	971
Rural	1,006	1,111	1,232	591
Women	1,091	792	1,004	780
Urban Center	975	707	879	592
Urban Other	1,085	787	997	607
Rural	1,212	881	1,136	471

	Diversified			
	C_1	C_2	C_3	Benefits
Men	1,545	1,717	1,915	1,713
Urban Center	1,686	1,874	2,088	1,416
Urban Other	1,490	1,664	1,864	1,477
Rural	1,458	1,514	1,792	873
Women	1,272	1,437	1,596	1,166
Urban Center	1,445	1,613	1,806	900
Urban Other	1,081	1,211	1,363	983
Rural	1,291	1,487	1,619	783

Table 2.21 (cont'd)

COST-BENEFIT FLOWS IN RELATION TO FORMAL EDUCATION

(Quetzales per Year)

	University					
	C_1	C_2	C_3	C_4	C_5	Benefits
Men						
Urban Center	2,897	3,175	3,491	3,851	4,260	4,014
Women						
Urban Center	2,593	2,847	3,140	3,477	3,864	3,031

1/ "C" = Total cost for the corresponding school year. Benefits correspond to differences in weighted income for employment probability and life probability.

SOURCE: SEGEPLAN, Criterios para la Planificacion de los Recursos Humanos, Guatemala, 1984.

in complete primary education generates the highest returns and is a better social investment than most physical infrastructure projects. The decrease in the rate of return to university education is to be expected, as the costs are significantly higher and the length of the stream of benefits, smaller. Nevertheless, as the rate is applied to a much larger human capital investment, the income flows are substantially higher than for any other level of education.

Internal rates of return to investment in education are useful to assess the external efficiency of the education system. However, they do not constitute all there is to know about what are the most beneficial forms of investment. If applied to specific training programs, for which there are no data in Guatemala, the rates can only indicate which are the scarce skills, not how many individuals should be trained in each field.

The results of Table 2.22 have rather limited value for planning purposes, due to their high level of aggregation. They seem to reflect labor demand conditions in the places where the individuals that fell into the sample live. But they may also be influenced from the supply side, if the quality of education in the less privileged regions is low, relative to other regions. It does not make sense to attribute the variations in the rates to demand or supply factors. The fact is, given all the indications of wide variations in the quality of education in Guatemala, this degree of quality is a factor to be reckoned with. It interacts with demand characteristics in a way that has not yet been fully acknowledged.

Table 2.22

INTERNAL RATES OF RETURN ON FORMAL EDUCATION INVESTMENTS

(Annual Return on Investment in Schooling)

	Men	Women	Total
Primary 1-3			20.1
Urban Center	19.6	15.0	-.-
Urban Other	22.4	17.2	-.-
Rural	15.3	12.4	-.-
Primary 4-5			25.2
Urban Center	22.5	17.5	-.-
Urban Other	26.0	23.0	-.-
Rural	17.1	14.1	-.-
Primary Complete			30.1
Urban Center	28.0	21.4	-.-
Urban Other	33.0	30.2	-.-
Rural	20.0	18.8	0.0
Primary	18.1	16.8	18.1
Urban Center	17.0	13.6	-.-
Urban Other	19.1	17.2	-.-
Rural	13.4	11.4	-.-
Basic	24.1	21.4	22.0
Urban Center	20.5	19.1	-.-
Urban Other	23.4	17.7	-.-
Rural	15.3	12.8	-.-
Diversified Cycle	26.2	22.2	25.0
Urban Center	20.8	16.0	-.-
Urban Other	23.8	22.1	-.-
Rural	15.5	15.5	-.-
University	16.7	14.5	19.0
Urban Center	16.7	14.5	-.-

SOURCE: SEGEPLAN, Criterios para la Planificacion de los Recursos Humanos, 1984.

The rates show that there is benefit to the individual from investment in education. It is not clear, however, whether that investment contributes to the economic development of the society. Obviously, the individual benefits are related, more or less closely, to the social benefits that education produces, but positive rates of return may result even if calculated in periods of severe recession when educated persons may be unemployed. The position to be avoided is that positive and even high rates of return indicate education in any form is good for the economy, and that funds can be indiscriminately allocated without close scrutiny. It is true that Guatemala will benefit from increasing the share of expenditures to education, especially in the marginal areas; but given the scarcity of funds, more selective educational decisions will be required of the authorities.

Guatemala is a small country in a highly competitive world. It has the choice of developing itself by participating more decisively in the world economy, or remaining marginal and dependent on the rest of the world to buy its products at good prices. This is one of the basic challenges that the national education system must be prepared to meet.

2.6 The Institutional Determinants of Efficiency in Education

This section is an assessment of the decision-making processes regarding educational planning and the formulation of economic policy. Major emphasis is placed on the determinants of external and internal efficiency of education. The thrust of this discussion is directed towards a number of issues that carry a great deal of relevance to Guatemala, including the notion that educational development does not take place automatically as a result of allocation of resources, generally measured in terms of financial transfers.

The external efficiency of an educational system depends on demand factors as well as on supply factors. The demand side has to do with the economic conditions which determine whether the skills generated are those needed by the economy. In this regard, the ability of an education system to follow demand trends is an important variable in the determination of its external efficiency. The demand for skills is subject to unforeseeable changes and this uncertainty affects the external efficiency of education to a greater or lesser degree according to the level of specialization of the skill-development system.

For an economy such as Guatemala's, this poses a special challenge: to compete successfully in foreign markets requires a high degree of specialization. To overcome this dilemma, education and training must be directed to the development of sound general skills, so that the labor force is able to adapt to possible changes. By general skill development is meant a multifaceted education, built around mastery of basic science, mathematics, verbal, and technological skills, that will enable the student to learn new skills more quickly. If the education system is overly rigid, employers will be inclined to hire employees on the basis of their credentials and discouraged from providing retraining, on-the-job training, or workplace skill development. Governments come to believe

that educational curricula can be fixed without regular, periodic revision. And individuals can convince themselves that a given diploma will automatically result in attractive employment. The more rigid the educational activity, the lower the external efficiency of education, in the long run. This is a case of demand-supply interaction. Demand factors affect the external efficiency of an education system; the supply side's ability to adapt impacts efficiency as well.

External efficiency depends to some extent on internal efficiency. There are many ways in which this interdependence manifests itself. For instance, low internal efficiency, reflected in high repetition rates for students at any level of formal education, increases the costs of education, which will affect the rates of return. Ineffective educational administration can negatively affect some measures of internal efficiency and, ultimately, the quality of the education.

The administration of the public education system in Guatemala is not now facing these crucial issues. The results of ineffective administration are reflected in many ways, from the regrettable state of maintenance in many schools, to high levels of desertion. The majority of the points made in the 1978 Education Sector Assessment, which cites the failures of the system, are as valid today as then. This situation cannot be attributed simply to lack of resources, but also to lack of appropriate action on the part of the government authorities.

The education sector in Guatemala is suffering today from the effects of a diminishing financial base. The education establishment has shown only passive acceptance of the crisis, which merely promotes further deterioration. Educational planning per se does not now exist in Guatemala. The office created for that purpose is flooded with time-consuming tasks of a purely bureaucratic nature. The statistical system is antiquated and has fallen behind in its reporting; and even though the office does have competent personnel, there is a general lack of purpose. The responsibility for this situation lies with the central authorities who seem unable or unwilling to recognize the magnitude of the problem. The highest priority for action should be placed on the institutional transformation of the public administration system, without relying on new increases in budget appropriations.

2.7 Summary Conclusions and Policy Options

2.7.1 Summary Conclusions

2.7.1.1 Fiscal Capacity Analysis. The current economic crisis in Guatemala has severely constrained the country's capacity to generate fiscal revenues. But even before the economic recession, there was a significant erosion of the tax base, caused by the government's laxity in enforcing tax laws and the general inadequacy of the tax administration system. As a result, Guatemala has one of the lowest rates of fiscal revenues to GDP. In April 1985, the government decided to adopt emergency measures to correct the crisis, by offering to institute the first so-called "Tax Package"; but political reactions, coming especially from the private sector, forced the government to abandon the plan. A

"National Dialogue" was then organized, involving representatives from business, labor, and official groups, under the coordination of the Banco de Guatemala. In July, a new "Tax Package" was announced, with the proviso that any additional revenues raised as a result of its implementation would be used only to reduce the deficit, and not to increase spending. As a result, the national budget burden may be reduced by up to Q72 million.

The current economic crisis was triggered by a severe contraction in the value of Guatemala exports. This happened at a time when the prices of imports were rising, causing a significant deterioration in the country's terms of trade. As the government refused to adjust the economy by changing the rate of exchange of the Quetzal to the U.S. dollar, there was a continuous erosion of Guatemala's financial position.

But economic factors were not the only causes of the crisis. The climate of political violence in the country has hurt tourism and the inflows of foreign capital, while provoking a severe flight of domestic capital to foreign banks. As it appears from today's perspective, it is not likely that the situation will improve in the short or medium term. It will take a large turnaround in the exports, possibly accompanied by the relaxation of the political climate. Without the latter, improvements in the export market might not produce increases in export revenues if exporters keep part of them abroad. This seems to be particularly valid in the light of the government's current foreign-exchange policy.

Therefore, everything points in the direction of further reductions in public expenditures, a process already underway. At the same time, reallocation of budget funds can be expected to put additional pressure on education's share as the internal security of the country continues to decline. The implication for education is obvious: it is necessary to do more with less. Since there are so many ways to increase efficiency in the education sector, this must be the highest policy priority.

2.7.1.2 Manpower Analysis. The most salient characteristic of labor markets in Guatemala is the lack of statistical information. Little is known about unemployment, underemployment, wages, and productivity.

The available information does indicate that there has been a serious decline in employment in the past few years, as well as in the share of GDP that goes to pay for the labor sector. Apparently, there is a great deal of instability in labor markets, a phenomenon that is suggested by regional figures on certain forms of employment.

The lack of data does not permit the identification and study of manpower imbalances in Guatemala. Some skill-development centers have tracked their students, however; and these generally state that their graduates were able to find jobs. The majority of centers know little or nothing about the fate of their graduates. There is not even a minimal feedback mechanism, which would make possible more accurate decisions on how many individuals should be trained, and in what fields.

As is true of practically everything else in the Guatemala market economy, the labor demand and the level of employment will not recover until a recuperation in exports occurs. If the climate of violence does not subside as well, investment will not take place and the limits of possible employment generation will be reduced.

2.7.1.3 Unit Expenditures and Rates of Return. There are wide variations in public expenditures per student at the levels of bilingual, pre-primary, primary, and secondary education. These are over time as well as across departments. They are considerably narrower for primary schooling than for the other levels, however.

It is not possible to explain why certain departments receive funds per student that are several times greater than those allocated to other departments. These variations do indicate an erratic allocation system, however. It may result from the departments' ability to compaign for funds, or be a reflection of higher quality at the local-school level.

If the variations in expenditures per student are indicative of varying levels of internal efficiency, the implication is that there are opportunities to improve the school system in Guatemala. This is encouraging, given the current need to provide increased educational services with a decreasing financial base. At the same time, it makes projections of future financial needs more difficult, since any projection would have to be based on some assumption of improvements in efficiency.

The estimates of internal rates of return to education available for Guatemala show the obvious results: the individual benefits from education. However, these estimates, tied as they are to general levels of education, do not help to signal the existence of imbalances in particular fields.

The fact that the private rates of return to education are high is no guarantee that education is performing well in Guatemala, according to achievement of development goals. There is no evidence, for instance, that education is a good social investment from the point of view of its impact on the balance of payments. In order to determine this, it would be necessary to calculate rates of return on the imported cost component of education, and the stream of net contributions the individual makes to the balance of payments.

2.7.1.4 Trends and Future Needs. Two factors determine the future of the Guatemalan education system. One is human will, expressed through government decisions. The other, determined by the population growth, is more indirect. In projecting needs, assumptions about each of these factors must be made.

It will be difficult to meet the future financial needs of the Guatemalan education system, given the current climate of decreasing public expenditures. To merely maintain the system at the current level of efficiency with the same degree of access, budget allocations would

have to be increased by an annual rate of 2.7 per cent, which is the population growth rate.

2.7.1.5 The Major Obstacles to Educational Development in Guatemala. The figures presented in this Assessment show, in many different ways, that there is much room for improvement in the Guatemalan education system. One constraint to improvement is the state of the national economy, compounded by financial and political uncertainty. This over-arching situation exacerbates loss of public faith in the system of public administration of education in Guatemala. More and better planning tools should be developed and placed in the hands of properly trained, competent public officials. The response to the current economic crisis should not be one of paralysis and the shutting down of the education system. Rather, it should be characterized by sound decision-making and realistic reviews of educational priorities.

2.7.2 Policy Options

Given the need to do more with less, particularly in the short term, any outside assistance to education in Guatemala should be grounded in a set of firmly established conditions precedent, so that the government will be encouraged to develop and adhere to sound planning processes and implementation practices. Given the govenment's willingness to undertake some reforms, the policy priorities should be the following:

1) Decentralize the public administration of primary and secondary education. Give the departments more power in the administration of their educational needs. Experiment with the organization of community groups to supervise the administration of education at the local level.

2) Reinforce the Ministry of Education by implementing structural reform of that entity.

3) With participation of individuals from other sectors and different political factions, promote forums on the state of education in Guatemala, to create a national consensus regarding education strategies.

4) Promote excellence in teaching and research at Guatemalan universities. The innumerable issues that affect Guatemalan society will have to be addressed by the best minds in the country.

5) Improve the government's statistical information system. No sound public policy regarding employment generation, increases in productivity, or training can be formulated or monitored without accurate, timely data and the feedback that information flows make possible.

6) Assist the new administration in the area of public administration, including budgeting, tax administration, institutional reform and development, and upgrading the qualifications of government workers.

CHAPTER 3

PRE-PRIMARY AND PRIMARY EDUCATION

The problems of the primary education system in Guatemala are great, although progress toward improvement has been made. This is especially evident in the rural areas. Counted among the most important resources available to the system are those dedicated educators in the schools and in the Ministry, who work against what in other countries might be considered insuperable obstacles.

During site visits, the Assessment team found many examples of excellent teaching, despite few resources and inhospitable surroundings.

* A teacher in a one-room school who kept meticulous records on his students demonstrated extensive knowledge about the home conditions of each youngster. He asked the children to tell about their typical breakfast and walk to school, and their meal and study-time after returning home.

* A principal in a one-room school told of the messy building to which she had been assigned, years earlier. Now that same building, repaired, painted, and clean, was filled with homemade teaching materials. She had organized the Padres de Familia and had established a good working relationship with the supervisor.

* In an urban school, in a desperately poor area, another principal has organized a local network for donated clothing. Her school, clean and well organized, was filled with quiet, busy, and happy students. She spoke of the firmness and love which teachers must have, and she showed it to the children who came in to share our conversation.

* A volunteer group of teachers in the Mezquital worked without pay, with people who have no money, to plan their curriculum. Their impromptu presentation to visitors was led by a community leader and held in the biggest shack, which served as the main part of the school. The "principal," the volunteer the others had so designated, mentioned that they could not use that meeting place often, because of the funerals held there for children who died of typhoid.

People who teach for so little, and with so little, represent the means through which Guatemala can improve its system of primary education. The interventions recommended in this chapter have the purpose of helping the capable professionals in the system to improve their schools. With better training and more resources, Guatemala's primary system can be upgraded to better serve students, as well as the country's social and economic development goals.

3.1 Status of Primary Education

It is now publicly acknowledged in Guatemala that few had access to primary school before 1945. The result of this recognition has been a constant preoccupation with lack of sufficient resources to support the facilities, teachers, and materials necessary to provide an education for all the nation's children who, according to the constitution, have the right to expect it. This theme of recognition of need, followed by attempts to provide universal education, followed by periods of discouragement, is not uncommon in developing countries.

Factors in Guatemala which make it difficult to increase access to public schools by more people, especially the rural poor, include a high population growth rate, insufficient material and human resources, a large number of populated areas remote from transportation routes, fluctuations in government policies varying from great support to seeming neglect of educational expansion, and excessive centralization of decision-making. Others include the extended period of violence, which has drained resources and attention from education, and the natural trauma of earthquakes. To these can be added another theme, that of constant tension and competition for resources and influence between the fast-growing metropolitan area and the more traditional rural areas in which the indigenous people are concentrated. Until 1975, the rural areas offered no competition for resources for developing primary education. By the decade of the 1970s, however, government policy emphasized the expansion of rural primary education while the growth of its urban counterpart slowed.

There may be a policy trade-off between the needs of the urban and rural areas, balancing the growth of primary and secondary education. The rural areas have obtained very few public secondary-education facilities. The only higher education facilities in the country are in the metropolitan areas, so in a real sense the country owes the rural areas more growth in primary education. Unfortunately, this may be occurring at the expense of marginal urban populations, where the need is as great.

Until 1944, very little was done to educate rural children. In 1946, there were 998 rural public schools with nearly 36,000 pupils in attendance. In the same year, the second census counted 331,000 children of school age in the rural areas. About 22,000 more children attended private plantation schools, many of which had neither teachers nor buildings; they were, at best, places where a woman occasionally took care of some children. By 1954 the number of children attending rural public schools rose to 67,000, which was not a significant increase given the growth of the population. One of the obstacles that had to be overcome after the end of the Ubico period was the fact that rural schools had been reduced to a two-year curriculum. After the October Revolution in 1945, the Ministry of Education had to start virtually from scratch to establish a viable rural education system.

The urban primary school situation was not good but was incomparably better than the rural. In 1944, urban public primary schools enrolled 66,000 students. By 1954 that figure had risen to 102,000. More important than the growth in numbers in the post-1945 period, however, was the development of a new primary-school curriculum which promoted civic and social consciousness, as well as the use of modern methods and teaching materials.

The Constitution of 1965 declares that primary education is obligatory for all within specified age limits. It further guarantees that the education provided by the state is free. Those promises, unfortunately, remain unfulfilled. Access to education is far from universal; and primary education provided by the state remains quite expensive, even prohibitively so, for many poor families. The Ley Organica de Educacion, enacted in 1965, declared that education should become an instrument of community development, and that it should work alongside other sectors of the country to promote cultural, economic, and social progress. The same law requires instruction at all levels in the national language, except for the teaching of foreign languages. It further states that languages of indigenous groups can be used in instructing those groups. Legislative Decree No. 73-76, published in 1978, simply says that education and cultural diffusion will be in the national language and indigenous languages.

Private education is recognized as a choice which can be exercised at all levels. All private schools must conform to the national plans and programs for education, and they are subject to inspection by supervisors who insure compliance with the laws. In fact, the greatest burden on urban supervisors is the inspection of private schools. Relationships between public and private education sectors are so harmonious that many Ministry officials work part time in private schools. The private schools are especially significant in the capital, where they enroll large numbers and have a good reputation. Private education in rural areas is not held in such high esteem, and it has declined to the point where it really is not a significant force.

The growth of the rural public school since 1965 has been more dramatic than the growth of the urban public school. From 1965 to 1974, enrollment in the first grade of rural public schools grew much more rapidly than that in the first grade of the urban public school. Enrollment in the ruban schools' first grade increased from 61,000 in 1965 to 72,000 in 1974, while in the rural schools, enrollment expanded from 69,000 to 119,000 during the same period.

Total enrollment in public rural primary schools was less than in the public urban primary schools until 1975. In that year, 273,000 students were enrolled in rural public schools and 269,000 in urban public schools. The number of rural children of school age enrolled in all schools rose from 32.4 per cent in 1969 to 41.5 per cent in 1978, while the corresponding number of urban children enrolled rose from 75.9 per cent in 1969 to 77.7 per cent in 1978.

These figures reflect the emphasis placed upon the rural public school system by the Guatemalan government in the 1970s. This was an appropriate response to the fact that the largest proportion of unserved youth in the county was in rural areas, especially in the departments of El Quiche, Solola, Totonicapan, Huehuetenango, Alta Verapaz, and Baja Verapaz. Those departments have the greatest proportions of indigenous populations. A corresponding equity problem, and one related to the lack of access to schooling of indigenous rural populations, has been the low participation of females in primary schools, especially in the first grade.

3.2 Goals and Strategies

The Education Sector Plan of the Plan Nacional de Desarrollo, 1984-86 states the general objective of elevating the educational level of the population and promoting a more effective relationship between education and the processes of national development. Specific objectives identified are the following:

1) Increasing participation of those groups which have not had access to educational services, so that education can serve as an instrument to improve their lives.

2) Expanding access to education and improving its quality, so that it can better serve the needs of the people.

3) Improving educational administration to increase the effectiveness of the education system and to encourage more efficient use of resources.

Priority during this period is given to rural primary education and to primary education for marginal urban children.

A specific target is to increase attendance in pre-primary schools by 26 per cent, from 61,000 in public and private schools in 1984, to 77,000 in 1986. The goal for bilingual education (Castellanizacion), is an increase from 76,000 in public schools in 1984, to 100,000 in 1986. Attendance in public primary schools is to rise from 871,000 in 1984 to 978,000 in 1986, an increase of 12.3 per cent. An increase of about 12 per cent for 1986 over the 160,000 currently enrolled in private primary schools has been predicted.

The national plan for the education sector provides more detail on policy initiatives. The program in administrative development calls for:

1) Redefining and restructuring the administrative system of the Ministry of Education to improve its operating capacity and its internal and external efficiency and effectiveness.

2) Restructuring the Central Coordinating Unit for education sector projects, so that externally funded programs do not suffer from delays and cost changes.

3) Preparing documents for the Regionalization and Supervision Projects.

4) Preparing a financial proposal for implementing the Regionalization and Supervision Projects.

The activities of the program for pre-primary education include:

1) Preparing documents for implementation of the Intensive Literacy Training Project and the Pre-Primary Program in Rural Areas.

2) Evaluating the literacy campaign so that future efforts in that area will have a data base that is both adequate and relevant.

3) Obtaining technical cooperation for improving the quality of the Intensive Literacy Training Project.

4) Preparing proposals for internal and external financing for implementation of the Rural Project in Pre-Primary Education.

The activities of the primary education program include:

1) Preparing studies for the Education of Migrant Groups Project.

2) Starting the Project for Development of Primary Education in the Marginal Urban Areas (EDUPRIMUR), which has been approved by the World Bank and the government of Guatemala.

3) Fulfilling the conditions of the loan which finances the Rural Primary Education Project (PRODEPRIR).

4) Preparing proposals for internal and external financing of the Projects for Education of Migrant Groups, Indigenous Education, and Curriculum Development.

5) Obtaining technical assistance for the Education of Migrant Groups and Indigenous Education Projects.

AID first offered assistance to the primary education system in Guatemala during the early 1960s. A brief review follows of the AID programs which were designed to assist the Guatemalan government in realizing its policy objectives for formal primary education.

* Rural Primary Education Project (PEMEP). School construction and qualitative improvements were the objectives of this $8.6 million effort. Project outputs included $2.36 million in publications for primary schools, 2 new normal schools, 27 regional schools, and 265 urban and rural classrooms. The loan expired in 1976.

* Butler Building Construction Project. This was part of the 1976 earthquake relief grant of $25 million. Over 300 steel buildings were erected to serve as schools.

* Rural Primary Education Project II. AID provided a loan of $7 million in late 1975, which was to serve as a follow-up to the first PEMEP project. The target areas were the Western Highlands and the Eastern regions. Project outputs included new and expanded classrooms, dormitory units, and teacher residences; over 800,000 primary textbooks; and 670,000 adult literacy textbooks. The first and second PEMEP programs emphasized problem-solving methods rather than rote memorization techniques for classroom instruction.

* Primary School Reconstruction Project. This was intended to help rebuild some of the physical plant destroyed by the earthquake, and to continue expansion of qualitative reforms initiated under the two previous loans. Although the loan agreement for $5.2 million in AID funds was signed in 1977, the project did not start until 1982. In addition to the repair of physical facilities, 33,000 textbooks, 6,000 teachers' guides, and 13,000 bilingual pre-school primers were printed.

* Bilingual Education Project. In 1979, AID made a grant of $1.9 million to the government of Guatemala for the development of prototypes of didactic materials for pre-school and first grade. Second-grade materials were to be produced by the end of 1984. This project stirred great interest and apparently has been a stimulus to national primary-education policy. The current plans are to expand the project from 40 experimental sites to 400 schools. It is one of the more successful projects, in that it has been institutionalized within the Ministry and is consistent with national education policy directives.

* Educational Administration Project. AID grant funds totalling $915,000 were allocated in 1980 to a project for improving the system of education administration in Guatemala. All supervisors were provided with at least one in-service training experience during the project. Eighteen employees of the Ministry participated in a two-year master's degree program, which was established at the Universidad del Valle. Two people also received master's degrees at the University of New Mexico. This program was important to the establishment of an in-service training unit in the Ministry of Education, as well as to the initiation of a master's degree program at the Universidad del Valle.

In summary, AID's assistance has been directed primarily to the development of models for qualitative reform of primary education.

The use of problem-solving techniques in the classroom to replace rote memorization was noticeable in the few target schools at the time of the Seelye study.[1] He reported that the results of the bilingual education project on student achievement were favorable; that is, children in the bilingual schools where contextual instruction was offered in their native Mayan language learned the prescribed national curriculum better than indigenous children who were taught only in Spanish. While the Seelye study noted positive results in achievement, the research report he cited judged that training of supervisors and curriculum development teams needed to be improved. A related study noted by Seelye found that the effectiveness of a bilingual promoter with a sixth-grade education in a rural indigenous classroom was equal to that of a monolingual teacher with twice as much education.

In the cases of education administration, bilingual education, and the qualitative improvement of rural primary teaching, effects of AID assistance on national policy are evident. Whether national policy about the education of indigenous, rural people would have changed without encouragement from AID is difficult to assess; but it is clear that national policy regarding primary education has moved in the directions that AID has been emphasizing for over a decade. Models have been put in place which offer promise for extending qualitative improvements. The Ministry must now decide to what extent its long-range plans will include nationalization of these reforms.

Several officials of the Ministry of Education in their discussion of their own ministry's efforts have criticized administration on three points:

1) Evaluation of the AID-supported programs has not been sufficiently extensive, nor have findings been disseminated widely enough to encourage broader implementation.

2) Administrative follow-up has not been effective in securing wide implementation of the concepts tested or used in the projects.

c) The projects have been too short-lived to have any lasting effect on practices in other schools, and have been too isolated from each other to combine into any powerful strategy for change.

These criticisms do not reflect doubts about the value of the projects so much as the disappointment about their limited impact on primary education. Perhaps a long-range plan for implementation should be included in all experimental projects. Implementation is much more

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[1] Seelye, H. Ned, Evaluation of USAID-Assisted Educational Sector Programs in Guatemala, 1969-1983: Final Report. Agency for International Development, pp. 29-31.

difficult than experimentation, because of the massive resistance structured into bureaucracies. And yet, many strategies for ensuring spread of practice or institutionalization have been identified, as a result of extensive research in this area. Both AID and the government of Guatemala should examine feasible implementation strategies, as part of a long-range planning process.

A partial list of other projects intended to improve primary education, financed in part by external funds from other agencies, is presented in Table 3.1. The direction taken by development assistance to primary education is significant. These projects have been intended to implement policy objectives stated by the government of Guatemala.

Table 3.1

EXTERNAL FUNDS TO BE USED IN 1984-1986

(In Thousands of Quetzales)

Concept	Amount
1. Curriculum Development and National Training	50.0
2. Education for Migratory Groups	60.0
3. Indigenous Education	12,000.0
4. Assistance to the Education Sector (UNDP/UNESCO)	945.0
5. Development of Rural Primary Education (PRODEPRIR)	28,000.0
6. Development of Primary Education for Marginal Urban Areas (EDUPRIMUR)	19,458.0
7. Escuelas Pre-Primaria (CONACE)	210.6
8. Pre-Primary Education in the Rural Areas	4,506.8
9. Pre-Primary School Construction	100.0

SOURCE: Inventario Nacional de Programas y Proyectos Vinculados a Los Objetivos del Proyecto Principal de Educacion: Primera Fase: Sector Oficial. USIPE, SEGEPLAN, UNESCO, Guatemala, 1984.

3.3 Structure of the Pre-Primary and Primary Education System

Chart 3.2 presents the three levels of the public pre-primary and primary education system.

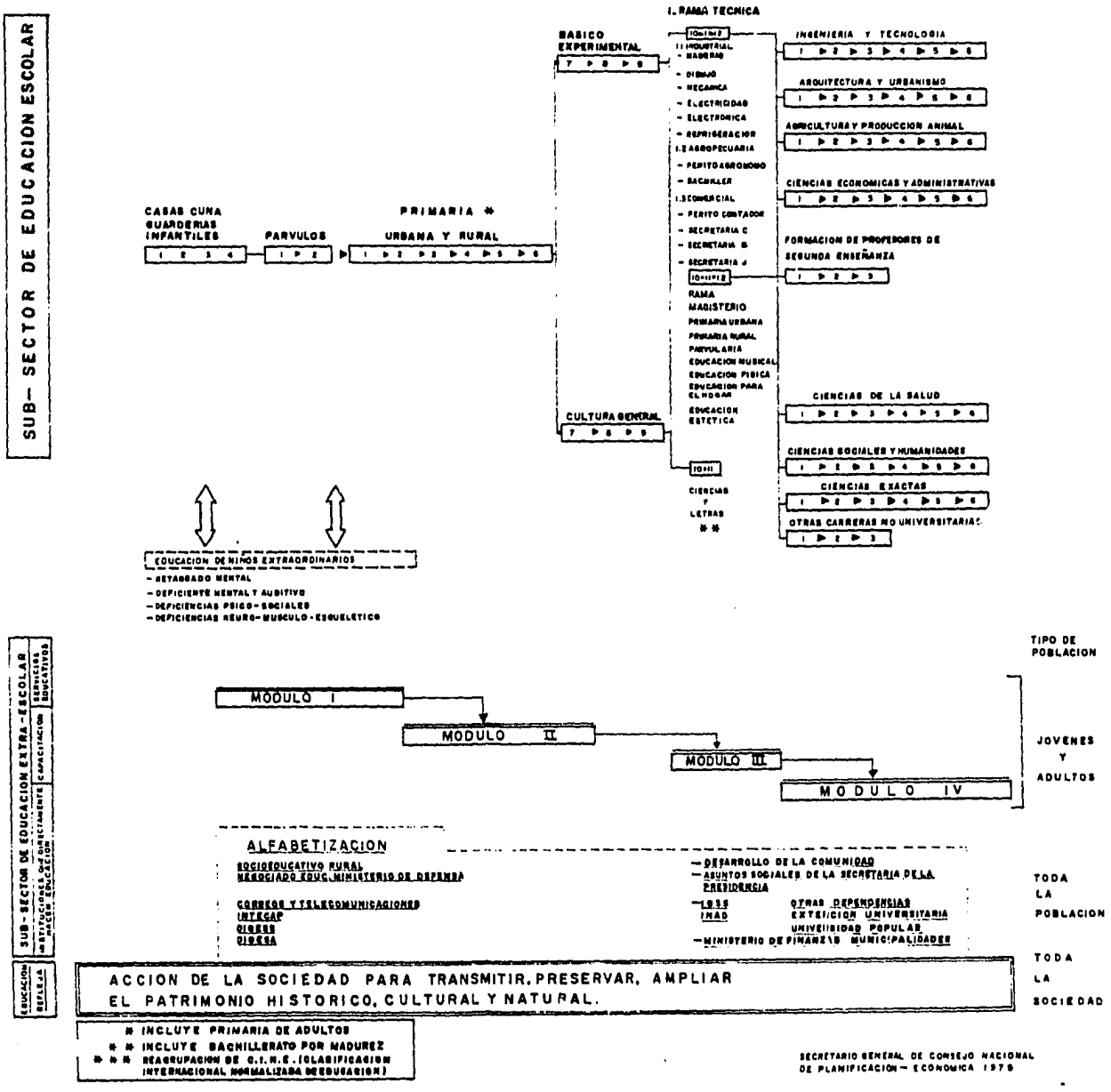
CHART 3.2

EDUCATIONAL SYSTEM STRUCTURE

GUATEMALA PLAN NACIONAL DE DESARROLLO SECTOR EDUCACION 79—82

EDADES TEORICAS	1 2 3 4 5 6	7 8 9 10 11 12	13 14 15 16 17 18	19 20 21 22 23 24 25
NIVEL EDUCATIVO	EDUCACION INICIAL	EDUCACION PRIMARIA	EDUCACION MEDIA	EDUCACION SUPERIOR * **
CICLOS	MATERNO INFANTIL / PRE PRIMARIA		BASICO / DIVERSIFICADO	PREGRADO / POST-GRADO

GUATEMALA NATIONAL DEVELOPMENT PLAN EDUCATIONAL SECTOR
1979—1982



3.3.1 Pre-Primary Programs

The first level of the system includes nurseries or day-care centers (Escuelas Cuna), which are designed for children up to five years of age.

A five-year-old is eligible to enter kindergarten (Escuela para Parvulos), which is a two-year program. An alternative available to rural indigenous children in ten departments is a program which has been called Castellanizacion, but which is now referred to as bilingual-bicultural education. This program helps the indigenous child to learn Spanish, as well as to become literate in his own language. By the fourth grade, the indigenous child is expected to be able to study in Spanish.

3.3.1.1 Nurseries and Day-Care Centers. The responsibility for supervising day-care centers and nurseries rests with the Secretariat of Social Welfare, which also runs centers for abandoned children, for those under 18 who are in legal difficulties, and for others who are in state custody. Many private day-care centers exist; all are subject to inspection by the Secretariat.

Children up to 7 years of age, whose mothers are in difficult eonomic circumstances and must work, can be cared for 12 hours per day in these institutions. The centers feed children four times each day and provide instruction and experiences which prepare them for school.

3.3.1.2 Kindergarten and Bilingual-Bicultural Program. At age five, a child is eligible for the first year of kindergarten, although some enter when they are as young as three. The child is expected to attend for two years, so that he or she enters the first grade at seven.

In a limited number of schools across ten departments, indigenous children can begin school in their own language. A child who begins instruction in one of the Mayan languages continues in this program through the third grade, as the child is expected to receive instruction in Spanish in grade four. The program does provide for instruction in both languages through grade six, however. The objectives of pre-primary schools, whether bilingual or not, include the following.

1) Stimulate and exercise the child's psycho-motor skills and perceptive-sensory processes.

2) Protect and strengthen the health of the child through educational activities.

3) Develop the language of the child in different forms of expression.

4) Provide the child with a basic level of education which permits him to succeed in primary school.

5) Develop the child's creativity.

6) Cultivate the ethical and civic values which contribute to the child's development.

7) Relate the school's activities to the home and community.

8) Strengthen feelings of security and confidence in the child.

While these are not necessarily listed in order of importance, data on failure rates, especially in the bilingual program, lead to the impression that the fourth objective is held by teachers to be most important.

3.3.2 Primary Schools

Slightly more than half of the children who enter the first grade of primary school do so at the age of seven. Relatively few enter at six; the others, at eight, nine, or ten years of age. The primary school consists of six grades, so that a child who enters at age seven and completes the sixth grade without failing is twelve or thirteen years old upon completion of primary school.

All schools in Guatemala are in session from January through October. Many migrant families take their children out of school to follow work opportunities during a portion of the school year.

A complete primary school is one which has all six grades. An imcomplete school, usually a rural school, can have as few as two, although it is most common for an incomplete primary school to have four grades. A unitary school has only one teacher in charge of all grades; these are located almost exclusively in rural areas.

All six grades include instruction in Spanish, mathematics, science, social studies, education for the home, argriculture, and industrial arts. This order of subjects is the same as that in the curriculum guides; and it seems to reflect their relative importance.

The teachers' guides, one per grade, all have the same format and organization. In the absence of official textbooks, these guides are excellent resources for teachers. They are structured so that the teacher can easily relate activities and evidence of achievement to instructional or learning objectives. All the guides were printed in 1983; they are easy to read and well organized. Instructions are clear and convey the impression of choice to the teacher.

The guides stress that the teacher can select from the learning objectives presented in each content area. These are listed in a column on the left of each page. The middle column presents a number of suggested activities, which in some cases are appropriate to rural schools and in other cases, more to schools in urban areas where many resources are available. The third column on each page presents ways in which the teacher can test for the attainment of the objective. These examples run heavily to recall of facts in social studies and sciences, and proofs of operations in mathematics.

The guides are designed to be useful, to substitute for textbooks, and to recognize that the Guatemalan teacher alone is the main resource for the child's learning. It is assumed that the teacher will have to find learning materials, or make them.

3.4 Administration and Supervision

The administrative procedures of the Guatemalan Ministry of Education are highly centralized. Decision-making takes place almost exclusively at the upper levels. In each department, supervisors represent the Ministry and exercise a great deal of authority over others in the region.

3.4.1 The Ministry of Education

The detailed organization chart of the Ministry of Education, contained in Appendix IV, depicts that portion of the Ministry which operates primary and pre-primary education. The person in charge of formal education is the Director-General of Formal Education (Educacion Escolar). The Director-General reports to the Vice-Minister of Education, who in turn reports to the Minister.

The next level consists of eight officers who report to the Director-General. Under each of these directorates are departments or programs. Those which pertain to or provide services to primary education are summarized below.

1) The Directorate of Urban Primary and Pre-Primary Education has responsibility for the department of Guatemala, the capital. All supervisors for primary education in the capital report to this directorate.

2) The Directorate of Student Welfare and Special Education includes the Department of Academic and Vocational Guidance, which provides some services to primary schools through in-service training of teachers and by sending specialists such as psychologists to schools These services are available only in the capital. An important program for primary schools carried out by this directorate is the program for feeding children, through the distribution of Incaparina.

3) The Directorate of Rural Social Education oversees the operations of several important departments.

   a) The Department of Rural Family Education provides in-service training to rural teachers, concerning the relationship of school to the home.

   b) The Department of Rural Primary Education is the operating agency for rural primary schools.

   c) The Department of Materials Production prepares teaching materials for rural schools.

d) PAIN is a program to assist pre-school children and their mothers in marginal urban and rural areas, supported by UNICEF.

e) PRONEBI has responsibility for the bilingual program which operates at the pre-primary and primary levels in areas where there are high concentrations of indigenous people. Special supervisors are attached to PRONEBI.

4) The Directorate of Aesthetic Education provides supervision and in-service training in the fine arts to teachers in the capital.

5) The Directorate of General Supervision provides supervision to areas outside the capital. In each department, there is at least one supervisor, who is responsible for servicing primary and secondary schools, both public and private. In larger departments, there is a head supervisor with supervisors of districts within the department. All of these are responsible for both primary and secondary education.

6) The Directorate of Physical Education and Health supervises physical education in the primary schools. The supervisors attached to this office are responsible for activities in the capital city.

7) Other offices under the Director-General of Formal Education include the following:

a) A center for audio-visual production in the capital, which is responsible for preparing materials and distributing them to schools. Eight sub-centers are distributed throughout the country to perform this function in the regional areas.

b) NEPADE, which is not shown on the organization chart, succeeded the Farmers' School. These centers for development have a nucleo with satellite schools to offer a complete primary school in isolated rural areas. The nucleo provides grades four to six, and the satellite schools offer grades one to three.

c) NUFED, a program based on the family cluster concept, is supported by an agreement with the French Government. Students spend a week in one of six centers, followed by a week in their own communities applying what they have learned. The centers accommodate both primary and secondary students.

3.4.2 School Administrators

The Director-General of Formal Education nominates all school principals, although all principals and supervisors must be appointed by the Minister of Edcuation. Principals in urban schools are responsible to the supervisors in their districts. In rural areas, there

is a departmental supervisor, to whom the principals in that region report. It is not necessary for a supervisor to go through a principal, however, to contact or work directly with a teacher.

In order to become a principal, one must have completed at least five years of service. A minium of ten years is required to become a supervisor. No other prerequisites or standards for quality of work exist under the law. The number of principals and supervisors in 1983 is presented in Table 3.3.

Table 3.3

NUMBER OF PUBLIC AND PRIVATE SCHOOL PRINCIPALS IN URBAN AND RURAL SCHOOLS

1983

	Urban		Rural	
	Public	Private	Public	Private
Principals who have no teaching responsibilities	589	356	83	19
Principals who are also teachers	245	185	5,138	747
TOTAL	834	541	5,221	766

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Nearly all full-time principals were located in urban areas, while nearly all principals who also taught were in rural areas. Most rural schools are unitary schools, so most principals in rural areas are simply teachers in one-room, multi-grade schools.

3.4.3 School Supervisors

A total of 181 supervisors was reported in July 1983, as shown in Table 3.4. In the rural areas, the district supervisors are expected to visit schools, which requires a day or more of travel by special-terrain vehicle, by horse, or by foot. The funds available for gasoline, assuming a supervisor has access to a vehicle and can reach the school, place severe limits on the amount of travel possible. There is often little or no contact between supervsiors and teachers in the rural areas.

Table 3.4

NUMBER OF SUPERVISORS IN RURAL AND URBAN AREAS

1983

URBAN			RURAL	
District[1] Supervisors	Pre-Primary Supervisors	Primary Supervisors	Departmental Supervisors	District or nucleo Supervisors
14	8	25	20	114
TOTAL:		47		134

[1] Includes 7 auxiliary supervisors.

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

3.4.4 Status of Administration and Supervision

The Manual de Supervision Educativa describes the educational administration and supervisory system in Guatemala as having "rigid organization and uniform adherence to administrative processes." Cited are the "need to improve teacher preparation" and the "importance of considering community participation in the education process."[1]

Teachers frequently comment that they do not expect help from the Ministry, because it takes a year or more for supplies or assistance to arrive after they have been requested through the appropriate channels. That is one symptom of administrative breakdown. Another is the lack of reliable data. The information which comes through channels to the Ministry is handled very efficiently by USIPE, but the systems for collecting the data are not as efficient or effective. The result is conflicting figures on numbers of students enrolled, buildings, class sections, and teachers. A margin of error is present in any reporting system, but that found in Guatemalan education exceeds any level of acceptability. The data reporting system simply lacks reliability.

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[1] Manual de Supervision Educativa, Ministerio de Educacion, USIPE, Programa de Formacion Permanente de Maestros, Guatemala, Diciembre de 1981.

The Ministry has decided that "regionalization" is to be a major policy objective. Presumably, the involvement of more members of the community in the identification of school needs is an allied objective. Regionalization and participation require delegation of responsibility to many more administrators than is possible in a centralized system. Regionalization can fail if people at the lower levels of the system, specifically supervisors and principals, do not have the proper disposition or training to make decisions, or authority to put these decisions into action.

Regionalization is unavoidable now, simply because of the size and complexity of Guatemalan society; the educational system is too large to be controlled by a centralized authority. Systems which expand, with units in widely dispersed areas, must deconcentrate responsibility. Without such a deconcentration, systems break down and become administratively incapable of handling even routine matters.

A challenge to the administrative system is the broad application of innovations developed through successful experimental projects. Monitoring of experiments is necessary, as is a data-based program evaluation system. Neither requires elegant preparation of personnel or extensive resources. But the Ministry cannot study experiments without building some kind of simple evaluation of programs into the administrative system.

Related to rigidity in channels of administration and lack of follow up of experiments, is a lack of adaptability in the Ministry's administration of schools. An example is the reluctance to revise the school calendar to reflect the needs in different parts of the country. Other Latin American countries have flexible calendars which vary with climactic conditions. There is a need to experiment with this idea in Guatemala, because migrant workers take their children out of school at various times as they move elsewhere in search of work. Absenteeism in certain areas then becomes a very serious problem. Given more strength of decision-making at the departmental or community level, experiments with the school calendar and with curriculum reform may occur. Delegating responsibility for decisions about the school calendar is an excellent place to begin the process of regionalization.

Regionalization without preparation of administrative personnel will only result in a downward distribution of incapacity to operate. Key to the success of regionalization is training of administrative personnel. Such training must take place on a wide scale, to ensure that enough people are able to make sound decisions based upon data, through their knowledge of administrative processes. There is a technology of professional administration, and an attitudinal approach to it. Both are much more efficiently distributed to administrators through training than through trial-and-error approaches. In-service training of administrators and professional preparation of future administrators are both essential. The effort to train administrators has begun with the establishment of USIPE, and the programs for preparing administrators are excellent. They need to be expanded soon.

Well-trained administrators and supervisors can have a very significant impact on the quality of teaching. Without the involvement

and support of administrators and supervisors, no curriculum improvement or teaching reform will be successful.

One administrator in the Ministry called supervision "the dorsal spine of the educational system." Research certainly supports this statement. Many improvements in the Guatemalan education system are possible with a trained core of administrators and supervisors. By the same token, they are impossible without it.

3.5 Primary School Program

3.5.1 Curriculum and Materials

While students are examined in all areas of the curriculum, the greatest importance is given to the teaching of Spanish and mathematics. Because primary-school teachers are free to select from the list of objectives in the curriculum guide, it is impossible to expect that they will bring students to a particular skill level within a specified period of time. In fact, there are no standard learning objectives identified for each grade-level completed, so that the teacher establishes the criteria for grade-level mastery. This may be one reason why failure rates are so high in the primary grades.

Because each teacher is the judge of what content is to be covered and what skills are to be mastered within given periods of time, it is difficult for supervsiors to make judgments about teacher performance or suggestions for improvement. This cycle of weak supervision and administration can only have a negative impact on the system. Principals often do not know and cannot influence teachers' selection of learning objectives. Supervisors cannot make realistic evaluations of principals or teachers, and the officials of the Ministry cannot expect high levels of performance from students. The high rates of failure indicate only that large numbers of students are failing to do what teachers want. For purposes of public policy, until the productivity of schools can be reliably observed, it cannot be improved. It is ironic that in such a centralized system, the Ministry has no real control over content or expectations of performance.

Another cause for concern is the fact that few pupils have textbooks. In the many rural schools where there is no bilingual education program, textbooks are unknown. In the majority of urban and rural classrooms, the teacher selects a textbook and hopes that some of the children can afford to buy it. The privately produced textbooks which students use must be purchased. Many teachers are reluctant to require students to buy textbooks, simply because an outlay of Q1.5 represents half a day's minimum wage for the parent. Official textbooks would be free.

Since there have been no official textbooks since the 1970s, there are no official standards against which to judge the textbooks selected by teachers and purchased by children. They vary in terms of format, attractiveness, and usefulness. All are paperbacks and seldom last more than a year. They cost between Q1 and Q2.

The teacher selects the learning objective, writes the content on the blackboard, and expects the students to copy it and perform exercises in their notebooks. The notebook is the real textbook, the one resource all children have and use. Hence, teachers spend a good deal of time examining student notebooks. Because of the economic situation, a teacher does not expect a child to buy more than two per year.

Many rural schools have no blackboards or furniture. Teachers must dictate to students, then check to make sure that each student is copying the dictation correctly. Obviously, this is a slow process, laden with opportunities for error. Many students do not have pencils, pens, or paper, and audio-visual equipment is virtually unheard of in most urban and rural primary schools. Teachers and parents respond to this shortage of materials by purchasing didactic materials out of their own meager incomes, to the extent they are able. Hence, families and teachers subsidize primary education in Guatemala to a considerable degree.

The methods used by most teachers are limited to memorization, practice, and repetition. The new pupil-evaluation regulations call for examination of mental processes other than memorization, but to move from memorization to application or comprehension would require retraining of teachers and supervisors. That is a necessary task for the future, but one which will require heroic efforts and considerable expenditures.

Because many classrooms have several grades and large numbers of students, many teachers use the Lancasterian system, in which older students monitor and, in some cases, teach younger children. In unitary classrooms, teachers tend to focus on two grade levels, perhaps first and third. Students at other grade levels simply repeat what was learned earlier, or struggle with the material from the next level. While teachers may become creative under these circumstances, setting any expectations for pupils to achieve certain skills by certain grade levels is nearly impossible. Because the unitary school with several grades assigned to one teacher is such a widespread phenomenon, the internal efficiency of the primary system is seriously affected.

Some experimental projects have offered great possibilities for qualitative improvement. One is PEMEP, which emphasized mental behavior of a higher order than memorization. Another is the bilingual education program, now almost a decade old, which provides an array of sequenced and tested learning materials for use in classrooms with children who speak one of the many indigenous dialects. An important component of the program is the role of the bilingual promoter who serves as an aide in the classroom. These para-professionals were found to be as effective as certified teachers in bilingual classrooms. Still another innovative experiment is the NUFED program, in which periods of learning are alternated with periods of practice in the home community, using a nucleo system.

3.5.2 Examination System

The norms for the evaluation of educational achievement, published by the Ministry of Education in 1978, lay down specific

guidelines for teachers.[1] Some of these include the following.

1) Students in the pre-schools are to be promoted according to their chronological and psycho-social age.

2) Students in the bilingual programs are to be promoted when, in the judgment of the teacher, they can communicate orally in Spanish.

3) Students in first and second grades will be promoted when they have reached 60 per cent of the instructional objectives stated for mathematics, reading, and writing.

4) Promotion of students in the third to sixth grades requires that the student pass at least 60 per cent of the objectives in three subjects, and that the student has not failed either Spanish or mathematics.

5) Students who fail subjects during one year have a chance to take examinations again during the next school year, in order to pass to the next grade.[2]

The law allows each school to use an examination which is judged by the teacher to be fair and valid. The establishment of 60 per cent as a passing mark has resulted in the use of examinations which rely almost entirely upon memorization and recitation of facts. Teachers frequently construct a 100 point test with very difficult items, and administer it within a timed period, commonly less than an hour.

The Sectoral Unit for Educational Planning and Research (USIPE) is the entity within the Ministry of Education which is responsible for designing official registers and forms on which examination results and final grades are entered. It is also charged with orienting teachers in evaluation methods. While USIPE has an enlightened and able staff, the group is small; and their responsibilities are too many to allow them to improve evaluation practices to any great degree.

The norms of 1978 emphasized summative rather than process evaluation. Commonly, teachers give students examinations between three and nine times per year, and then average the results in order to arrive at a final grade. Frequent, shorter examinations are more effective, according to research, because they allow quicker feedback to the student, and constitute a more reliable means of pupil appraisal.

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[1] In 1985 a new regulation is in effect in ten departments; this new set of rules will go into effect for the entire country in 1986.

[2] This process of "recuperation" is very detailed and complicated, with much procedural detail describing the pupils' rights to another chance (Normas de Evaluacion, pp.8-9).

These norms make no allowance for students who have problems with reading, vision, or nutrition. Nor do they address the most fundamental concept of fairness and validity in testing, which is that any test should only cover the content and skills actually presented.

This system of evaluation is created by a law which focuses on how to make promotion difficult and how to give a second chance to those who have been failed. It may be perceived as encouraging failure rather than success. The data on promotion rates certainly corroborate such a view.

The new regulations call for parents to be informed of test results and identifies the teacher as the one who must inform them, as well as students and the school principal, of results. They also require the school principal to supervise the process of evaluation. The system of 100 maximum points is retained, but has been modified to include a possible 20 points for affective learning and 20 points for psycho-motor skills, leaving 60 points for cognitive learning. The inclusion of non-cognitive tasks was well intended, but it complicates an already difficult system. Few professionals anywhere, even those with graduate training, can elaborate non-cognitive items effectively.

3.5.3 Teachers

The Director-General of Personnel is responsible for the selection of teachers, who then must be appointed by the Minister of Education. In order to progress through the pay scale, each teacher must be evaluated by the Personnel Evaluation Commission (Junta Calificadora de Personal).

The number of pre-primary teachers is presented in Table 3.5, according to their level of preparation. Only 60 of over 2,000 are teaching without a degree or diploma. Of this total, 52 are in private schools, so only 8 are underqualified in the public system. The law in Guatemala prohibits the public-school system from hiring any more unqualified teachers. The private schools can still employ unqualified teachers, but this practice, as the table shows, is not common.

Table 3.6 presents the number of primary-school teachers in public and private schools in urban and rural areas, according to preparation. It would appear from this table that unqualified teachers are more common in primary than in pre-primary schools. However, three factors must be pointed out. First, those who are unqualified amount to less than 15 per cent of the total. Second, more than half of the unqualified teachers are in private schools. Over 80 per cent of the unqualified private-school teachers are in private rural schools, many of which are finca schools.

The third fact to be kept in mind is that all of the unqualified public-school teachers have been allowed to remain in their positions because of a "grandfather" clause in the law which requires all teacher-candidates to be certified. Unqualified teachers in the system when the law took effect had the option of being professionalized through in-service training; but some did not take advantage of that opportunity. Those unqualified teachers who did become professionalized in that manner are included in the "in-serve training" category. These teachers, as

Table 3.5

CLASSIFICATION OF TEACHING PERSONNEL IN THE PRE-SCHOOLS ACCORDING TO AREA AND SECTOR, 1983

DEGREE	URBAN			RURAL			TOTAL REPUBLIC		
	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	TOTAL
Pre-primary Education Degree	600	706	1,306	25	25	50	625	731	1,356
Other "Normal" Degrees	224	301	525	23	9	32	247	310	557
Other Degrees, Diplomas, and Certifications	10	44	54	6	3	9	16	47	63
Without Degree or Diploma	8	49	57	0	3	3	8	52	60
	842	1,100	1,942	54	40	94	896	1,140	2,036

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Table 3.C

PRIMARY-SCHOOL TEACHING PERSONNEL CLASSIFIED ACCORDING TO AREA AND SECTOR, 1983

DEGREE	URBAN			RURAL			TOTAL REPUBLIC		
	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	TOTAL
Primary Normal School Degree	7,921	3,055	10,976	10,658	551	11,209	18,579	3,606	22,185
Other Normal School Degrees	832	608	1,440	76	25	101	908	633	1,541
In-service Training	189	35	224	707	134	841	896	169	1,065
Higher Level Degrees	9	17	26	25	5	30	34	22	56
Other Secondary Level Degrees	4	30	34	14	13	27	18	43	61
Other Degrees and Diplomas	2	16	18	0	3	3	2	19	21
Without Degree or Diploma	55	89	144	370	419	789	425	508	933
	9,012	3,850	12,862	11,850	1,150	13,000	20,862	5,000	25,862

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

well as the ones without a degree or diploma, do not receive full compensation on their pay-scale step.

The basic pay scale begins at Q140 per month for a teacher on the "A" step. After five years, he or she can move up to the "B" step and earn 20 per cent more. The highest step is "F" and pays Q280 per month. From this step, a teacher can retire.

3.5.4 Facilities and Equipment

Many Guatemalan school buildings are of poor quality. Some, such as the recently constructed Mezquital I in Guatemala City, appear to be in good repair; however, even that plant could have been improved with better drainage and more concrete surfacing of the playing area. Many rural schools are one-room affairs with little or no furniture, no blackboards, no sanitation facilities, no water, and absolutely no equipment. A comprehensive commentary on school facilities is offered in Chapter 4.

Table 3.7 shows the mean number of students per teacher, by type of school. These numbers do not capture the range in numbers of children per classroom. The only constraint is the size of the room and the number of chairs. In rural areas, as many as 100 children are enrolled in some unitary schools. The high absentee rate makes it possible for the teacher to take care of the number of children who actually attend, sometimes as few as a third of the number enrolled.

Table 3.7

MEAN NUMBER OF STUDENTS PER TEACHER
IN TYPES OF SCHOOLS IN URBAN AND RURAL AREAS,
AND PERCENTAGE OF INCOMPLETE SCHOOLS

	Pre-Primary	Primary	
	S/T	S/T	%IS
All Schools	29	36	46.4
Public	39	38	45.1
Private	22	26	52.8
Urban	29	32	10.2
Public	39	36	5.0
Private	22	23	18.4
Rural	35	40	54.3
Public	40	40	54.3
Private	28	34	76.2

S/T = Students per teacher
%IS = % Incomplete Schools

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Guatemala's classrooms are overcrowded, and cannot possibly accommodate more children. If more are to be enrolled, other strategies will have to be employed. In the rural areas, double shifts will have to be used, with three grades in the morning and three in the afternoon. Another possibility is to have satellite or feeder schools enroll children in grades one to three, and the central school enroll students in grades four to six. This nucleo arrangement has been tested in Guatemala for many years, but there is evidence that it is not highly favored by teachers.

Table 3.7 shows more students per teacher in public than in private schools, and more students per teacher in rural public than in urban public schools. A mean of 40 students per teacher indicates a nearly impossible situation, if a child is to get any attention at all. The number of students in many rural classrooms simply encourages custodial care rather than a good climate for learning.

3.6 Enrollments in the Primary System

Tables 3.8 and 3.9 present rural public and private school enrollments from 1976 through 1984. Rural public school enrollment grew at a much faster rate than enrollment in rural private schools during these nine years. Dramatic increases in grades four to six were registered in the rural public schools.

Tables 3.10 and 3.11 show enrollments during the period from 1976 to 1984, in urban public and private schools. Since 1975, when the enrollment in rural public schools exceeded enrollment in urban public schools, the gap has steadily widened; in 1984, enrollments in rural public schools were 54.6 per cent higher than in urban public schools.

Urban private schools have increased their enrollments at a more rapid rate than urban public schools. The urban private enrollment rose by nearly two-thirds in the nine years, with the first and fourth grades registering about a 75 per cent increase.

Table 3.12 displays the percentage of total primary enrollments in each of the four types of schools. The rural public schools accounted for more than 50 per cent of the total primary enrollment in 1984, compared to its 44 per cent share in 1976.

Table 3.13 presents the average annual rate of growth of each of the four types of schools from 1976 to 1984. Rural public and urban private schools had higher total annual growth rates than did the other two types.

The participation of children in the primary-school system has risen from 45 per cent of the age group in 1970 to nearly 60 per cent in 1984. There is some doubt about the actual number of new entrants into the first grade each year. According to USIPE estimates, the number of entrants into the first grade in all schools exceeded the estimated total

Table 3.8

PRIMARY SCHOOL ENROLLMENTS BY GRADE
1976-1984

Rural Public Schools

Grade	1	2	3	4	5	6	Total
1976	127,480	63,977	42,111	23,861	15,233	10,873	283,535
1977	138,363	65,723	46,550	26,268	16,822	11,860	305,586
1978	149,118	70,773	49,044	30,001	19,374	13,536	331,846
1979	159,132	75,081	52,146	31,709	21,299	15,280	354,657
1980	169,599	83,652	56,548	34,801	23,426	17,491	385,517
1981	196,613	93,648	63,544	38,453	25,682	18,706	446,646
1982	174,117	93,051	62,270	38,295	25,917	19,432	413,082
1983	204,685	103,038	71,663	44,060	29,564	21,826	474,836
1984	212,626	115,590	75,939	49,156	33,232	24,319	511,062
Rounded off % of Growth	67%	83%	79%	113%	120%	140%	81%

SOURCE: Datos sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983, and Estadisticas Educacionales 1984, Estadistica Inicial, USIPE, 1984.

Table 3.9

PRIMARY SCHOOL ENROLLMENTS BY GRADE
1976-1984

Rural Private Schools

Grade	1	2	3	4	5	6	Total
1976	16,496	7.006	3,773	1,732	1,031	634	30,732
1977	16,481	6,834	4,056	1,773	1,189	764	31,079
1978	16,214	6,689	3,969	1,983	1,275	957	31,097
1979	17,024	7,102	4,485	2,275	1,478	1,105	33,469
1980	16,771	6,740	4,177	2,057	1,193	859	31,797
1981	20,661	7,962	4,977	2,580	1,776	1,310	39,266
1982	18,963	8,835	5,014	2,902	1,757	1,364	38,835
1983	18,703	8,957	5,445	2,949	1,899	1,340	39,293
1984	18,311	8,603	5,374	3,101	2,067	1,670	39,126
Rounded off % of Growth	12.5%	23%	43%	82%	100%	158%	30%

SOURCE: Datos sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983, and Estadisticas Educacionales 1984, Estadistica Inicial, USIPE, 1984.

Table 3.10

PRIMARY SCHOOL ENROLLMENTS BY GRADE
1976-1984

Urban Public Schools

Grade	1	2	3	4	5	6	Total
1976	71,672	51,545	43,515	38,532	33,742	29,692	268.788
1977	79,268	50,378	46,991	38,363	34,310	29,642	278,952
1978	80,377	53,503	46,683	40,996	34,240	30,285	286,084
1979	80,633	53,902	47,652	40,845	35,909	30,185	287,126
1980	84,361	56,760	49,762	42,954	37,195	32,874	304,906
1981	87,883	58,109	51,689	44,035	38,073	32,971	312,760
1982	82,736	59,828	51,876	44,829	38,092	33,230	310,591
1983	87,483	61,431	55,482	46,897	40,421	34,663	326,377
1984	88,950	64,173	56,558	49,193	41,677	36,637	337,188
Rounded off % of Growth	24%	25%	30%	39%	24%	24%	26%

SOURCE: Estadisticas Educacionales 1984, Estadistica Inicial, USIPE, 1984.

Table 3.11

PRIMARY SCHOOL ENROLLMENTS BY GRADE
1976-1984

Urban Private Schools

Grade	1	2	3	4	5	6	Total
1976	12,910	10,478	9,343	8,689	7,814	7,585	56,819
1977	16,129	11,465	10,934	9,566	8,675	7,870	64,639
1978	17,510	12,933	11,296	10,473	9,193	8,409	69,814
1979	19,923	15,392	13,011	11,258	10,065	8.920	78,569
1980	20,112	15,811	13,695	12,301	10,560	9,705	82,184
1981	20,481	16,396	14,671	12,967	11,447	10,063	86,028
1982	20,051	16,101	14,624	13,038	11,442	10,352	85,608
1983	20,359	16,712	15,270	13,781	12,375	11,127	89,624
1984	21,369	17,235	15,465	14,106	12,866	11,471	92,512
Rounded off % of Growth	75%	70%	67%	75%	71%	57%	64%

SOURCE: Estadisticas Educacionales 1984, Estadistica Inicial, USIPE, 1984.

Table 3.12

SHARES OF PRIMARY ENROLLMENTS
1976-1984

Year	Urban Public	Rural Public	Urban Private	Rural Private	Total
1976	42.0%	44.3%	8.9%	4.8%	639,873
1977	41.0%	44.9%	9.5%	4.6%	680,256
1978	39.8%	46.2%	9.7%	4.3%	718,821
1979	38.3%	46.9%	10.4%	4.4%	755,821
1980	37.9%	47.9%	10.2%	4.0%	804,404
1981	35.4%	50.5%	9.7%	4.4%	884,700
1982	36.6%	48.7%	10.0%	4.6%	847,756
1983	35.1%	51.1%	9.6%	4.2%	930,130
1984	34.4%	52.1%	9.4%	4.0%	980,887
	All Urban	All Public			
1976	50.9%	86.3%			
1977	50.5%	85.9%			
1978	49.5%	86.0%			
1979	48.7%	85.6%			
1980	48.1%	85.8%			
1981	45.1%	85.9%			
1982	46.6%	85.3%			
1983	44.7%	86.5%			
1984	43.8%	86.5%			

SOURCE: Constructed by author from Tables 3.8 through 3.11.

Table 3.13

ANNUAL RATE OF GROWTH
OF PRIMARY SCHOOL ENROLLMENTS

1976-1984

Grade	1	2	3	4	5	6	Total
Total							.055
Urban Public	.027	.027	.033	.031	.026	.027	.028
Rural Public	.066	.078	.077	.095	.103	.106	.076
Urban Private	.065	.064	.065	.063	.064	.053	.063
Rural Private	.013	.025	.045	.076	.094	.120	.032

SOURCE: Constructed by author from Tables 3.8 through 3.11.

Table 3.14

ENROLLMENTS AS A PROPORTION OF SCHOOL-AGE POPULATION

	All Children 7 Years Old	New[1] Entrants 1st Grade	All Children 7-14 Years (000's)	Total Enrollment Grades 1-6 (000's)	Percent Age Group in School
1970	157,512	N/A	1,121	506	45.1%
1971	161,450	N/A	1,149	531	46.2%
1972	165,486	N/A	1,178	556	47.2%
1973	169,623	N/A	1,208	571	47.3%
1974	173,864	N/A	1,238	601	48.5%
1975	178,375	N/A	1,285	627	48.8%
1976	183,548	171,248	1,320	640	48.5%
1977	188,871	186,499	1,355	680	50.2%
1978	194,348	195,739	1,392	719	51.7%
1979	199,984	207,743	1,430	756	52.9%
1980	206,248	216,887	1,466	803	54.8%
1981	212,229	238,986	1,507	875	58.1%
1982	218,383	218,274	1,549	848	54.7%
1983	224,717	243,987	1,593	930	58.4%
1984	N/A	N/A	1,637	980	59.9%
TOTAL 1976-83	1,628,328	1,679,873			

[1] According to USIPE; the repeaters are most likely under-estimated and new entrants are over-estimated.

SOURCE: Population estimates from Guatemala: Estimaciones y Proyecciones de Poblacion 1950-2025, CELADE, 1985, and enrollment data from Datos Sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983.

number of seven-year-old children. It is mathematically and demographically impossible for more than the entire 7-14 age cohort to have entered school, which is what the figures in the first two columns of Table 3.14 suggest for the years 1976 through 1983. More likely is that USIPE unwittingly counts first-grade repeaters among the new entrants, as it is hard to keep track of repeaters, particularly in rural areas.

Enrollment in 1983 is presented in Table 3.15. The bilingual program enrolled 73,000 students. Nearly 60,000 were enrolled in pre-primary schools, and 930,000 in primary schools.

The 60,000 pre-primary students were concentrated in urban areas, according to Table 3.16. These schools are intended for children who are five and six years old, but over 11,000 three- and four-year-olds were enrolled in them. Very likely these schools function as nurseries for children of those ages.

The distribution of primary school enrollments for 1983, by age and grades is presented in Table 3.17. About 38 per cent of the first-grade students were six and seven years old. Less than one-third of the children in the second grade were seven- or eight-year-olds. The large pile-up of children in first grade is evidence of high failure rates at this level. Apparently, repetition of first grade is considered better than promotion by many teachers and administrators. The sharp decline in school attendance at age thirteen could be explained by the fact that children start late and repeat, and reach fourth grade at the age of twelve or thirteen. If they have access only to an incomplete rural school, there is no grade into which they can progress.

The distribution of primary-school enrollment by age and grade is presented in Table 3.18 for urban children, and in Table 3.19 for rural children. These tables show that more children are over-age by grade level in rural schools, the result of later starts and more repetition. These tables can also be used to argue that the great majority of children who start school remain until age thirteen, despite being failed.

The distribution of public primary schools according to number of teachers is presented in Table 3.20. A large proportion of these schools were one-teacher schools, with nearly all of them located in rural areas. Most of the incomplete primary schools are in the rural areas, as well.

The number of primary students by section, according to public or primate sector and by grade, is shown in Table 3.21. Apparently, there are fewer students per class in rural areas than in urban areas. But a previous table indicated that the number of students per teacher in rural areas is greater than in urban areas. This table is simply offered to show how misleading data can be. It does not reveal the number of students per teacher because most rural schools are unitary, or multi-grade schools, in which a teacher may have 34 first-grade students, 22

Table 3.15

NUMBER OF STUDENTS, TEACHERS, AND SCHOOLS BY LEVEL
1983

	Students	Teachers	Schools
A. Bilingual Schools			
Total	73,642	1,810	1,689
Public	70,207	1,701	1,591
Private	3,435	109	98
Urban	8,449	154	96
Public	7,547	129	82
Private	902	25	14
Rural	65,193	1,656	1,593
Public	62,660	1,572	1,509
Private	2,533	84	84
B. Pre-Primary			
Total	59,978	2,039	842
Public	34,865	899	389
Private	25,113	1,140	453
Urban	56,651	1,943	766
Public	32,644	843	340
Private	24,007	1,100	426
Rural	3,327	96	112
Public	2,221	56	77
Private	1,106	40	35
C. Adult Primary			
Total	23,177	602	144
Public	19,456	439	101
Private	3,721	163	43
Urban	22,306	565	130
Public	19,006	425	94
Private	3,300	140	36
Rural	871	37	14
Public	450	14	7
Private	421	23	7

Table 3.15 (cont'd)

NUMBER OF STUDENTS, TEACHERS, AND SCHOOLS BY LEVEL
1983

D. Primary

	Students	Teachers	Schools
Total	930,130	25,862	7,488
Public	801,213	20,862	6,194
Private	128,917	5,000	1,294
Urban	416,001	12,862	1,347
Public	326,377	9,012	822
Private	89,624	3,850	525
Rural	514,129	13,000	6,141
Public	474,836	11,850	5,372
Private	39,293	1,150	769

SOURCE: Proyecto de Regionalizacion y Suspension Educativas, Datos Estadisticos Educativos: 1983, USIPE-SEGEPLAN-UNESCO, 1984.

Table 3.16

ENROLLMENT OF PRE-SCHOOL STUDENTS
ACCORDING TO AREA, AGE AND SEX
1983

	URBAN			RURAL			TOTAL REPUBLIC		
	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	T
3 years	72	2,542	2,614	15	46	61	87	2,588	2
4 years	5,197	5,370	10,567	128	200	328	5,325	5,570	10
5 years	12,943	8,220	21,163	722	361	1,083	13,665	8,581	22
6 years	14,033	7,174	21,207	1,169	415	1,584	15,202	7,589	22
7 years	361	701	1,062	132	84	216	493	785	1
	32,606	24,007	56,613	2,166	1,106	3,272	34,772	25,113	59

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Table 3.17

PRIMARY ENROLLMENTS, BY AGE AND GRADE

1983

AGE	1st	2nd	3rd	4th	5th	6th	TOTAL	% of Age Cohort
6	22,042	-	-	-	-	-	22,042	9.3
7	104,793	15,651	-	-	-	-	120,444	52.9
8	72,793	47,052	13,929	-	-	-	133,774	60.9
9	48,603	39,580	35,742	11,240	-	-	135,165	63.9
10	36,675	33,841	32,867	27,790	9,119	-	140,292	68.9
11	20,896	22,901	25,738	23,935	22,229	7,549	123,248	62.8
12	14,647	17,338	20,903	21,430	21,391	19,809	115,518	61.1
13	6,791	8,497	11,232	13,425	15,903	17,093	72,941	39.9
14	2,827	3,647	4,999	6,548	9,393	12,599	40,013	22.6
15+	1,163	1,631	2,450	3,319	6,224	11,906	26,693	
TOTAL	331,230	190,138	147,860	107,687	84,259	68,956	930,130	

SOURCE: Tabulations of 1983 educational statistics by USIPE, 1985; population figures from Proyecciones Regionales de Poblacion 1980-2000, SEGEPLAN, 1985.

Table 3.18

DISTRIBUTION OF URBAN PRIMARY ENROLLMENTS
BY AGE AND GRADE
1983

Age/Grade	1st	2nd	3rd	4th	5th	6th	Total	Proportion of Total
6	.122	--	--	--	--	--	13,088	.031
7	.425	.146	--	--	--	--	57,143	.137
8	.213	.354	.147	--	--	--	60,970	.147
9	.111	.212	.328	.144	--	--	60,419	.146
10	.068	.137	.221	.319	.137	--	60,155	.145
11	.034	.076	.142	.220	.313	.137	55,723	.134
12	.020	.046	.094	.163	.247	.328	50,357	.121
13	.007	.019	.043	.093	.161	.242	30,541	.073
14	.003	.006	.017	.041	.089	.156	16,375	.040
15+	.001	.003	.008	.020	.054	.137	11,230	.027
Proportion of Total	.259	.188	.170	.146	.127	.110	416,001	
% Over-Age[1]	45.3	50.0	52.5	53.7	55.0	53.5		

[1] Assumes normal age for 1st grade is 6 and 7 years; for 2nd grade, 7 and 8 years; etc.

SOURCE: Tabulation of 1983 statistics by USIPE.

Table 3.19

DISTRIBUTION OF RURAL PRIMARY ENROLLMENTS
BY AGE AND GRADE
1983

Age/Grade	1st	2nd	3rd	4th	5th	6th	Total	Proportion of Total
6	.040	--	--	--	--	--	8,954	.017
7	.264	.038	--	--	--	--	63,301	.123
8	.223	.173	.046	--	--	--	72,804	.142
9	.164	.205	.163	.053	--	--	74,746	.145
10	.132	.207	.223	.180	.060	--	80,137	.156
11	.077	.152	.204	.225	.181	.055	67,525	.131
12	.056	.122	.184	.245	.266	.207	65,161	.127
13	.027	.062	.106	.166	.236	.260	42,400	.082
14	.011	.028	.049	.086	.149	.235	23,638	.046
15+	.005	.013	.025	.045	.107	.243	15,463	.030
Proportion of Total	.434	.218	.150	.091	.061	.045	514,129	
% Over-Age[1/]	69.6	78.9	79.1	76.7	75.9	73.8		

1/ Assumes normal age for 1st grade is 6 and 7 years; for 2nd grade, 7 and 8 years; etc.

SOURCE: Tabulation of 1983 statistics by USIPE.

Table 3.20

DISTRIBUTION OF PUBLIC PRIMARY SCHOOLS
ACCORDING TO NUMBER OF TEACHERS
1983

	Number of Teachers							% of TOTAL
	1	2	3	4	5	6	7	
All Schools:								
1st. Grade	153	6	-	-	-	-	-	2.6
2nd. Grade	272	28	3	1	-	-	-	5.0
3rd. Grade	649	124	22	2	-	-	-	13.0
4th. Grade	505	201	31	13	3	1	2	12.3
5th. Grade	372	233	83	23	7	3	4	11.8
6th. Grade	584	749	525	299	169	139	916	55.2
% of Total	41.4	21.9	10.8	5.5	2.9	2.3	15.1	6,122.0
Urban:								
1st. Grade	3	-	-	-	-	-	-	0.4
2nd. Grade	4	2	-	1	-	-	-	0.9
3rd. Grade	2	2	2	-	-	-	-	0.7
4th. Grade	-	2	1	4	3	-	2	1.5
5th. Grade	-	2	-	2	3	2	3	1.5
6th. Grade	-	2	10	12	21	30	704	95.1
% of Total	1.0	1.2	1.6	2.3	3.3	3.9	86.6	819.0
Rural:								
1st. Grade	150	6	-	-	-	-	-	2.9
2nd. Grade	268	26	3	-	-	-	-	5.6
3rd. Grade	647	122	20	2	-	-	-	14.9
4th. Grade	505	199	30	9	-	1	-	14.0
5th. Grade	372	231	83	21	4	1	1	13.4
6th. Grade	584	747	515	287	148	109	212	49.1
% of Total	47.6	25.1	12.3	6.0	2.9	2.1	4.0	5,303.0

SOURCE: Proyecto de Regionalizacion y Supervision Educativa, Datos Estadisticos Educativos: 1983, USIPE-SEGEPLAN-UNESCO, 1984.

Table 3.21

SECTION SIZE IN PRIMARY SCHOOLS
1983

Grade	Urban Public	Urban Private	Rural Public	Rural Private
1st	43.9	30.3	33.9	49.3
2nd	40.5	28.1	21.7	35.0
3rd	40.1	26.2	14.5	35.2
4th	37.9	25.6	10.9	51.5
5th	36.5	25.0	9.2	62.3
6th	34.1	23.6	8.3	68.5

SOURCE: Tabulations of 1983 statistics by USIPE.

second-grade students, and 15 third-grade students, all in one class. Sections may be small, but class sizes are large.

3.7 Flow of Students in the Primary System

Official transition and repetition rates by grade, for all primary schools from 1977 to 1983, are presented in Table 3.22. This table shows the high repetition rate in first grade, which in fact was higher in 1983 than in 1977, and may still be under-estimated. As more students entered the first grade, teachers reacted by failing more children rather than promoting them. Repetition rates in the upper grades are stable, so teachers in these grades failed children in 1983 as frequently as they did in 1977. This does not necessarily imply that there was no improvement in quality, only that teachers continued to apply an arbitrary policy with respect to proportions who fail.

Transition rates from the first grade increased somewhat from 1976 to 1982, as they did in the third, fifth, and sixth grades. From 1977 to 1983, the repetition rate increased in the second grade, which is jammed with over-age students.

The transition rates by grade in urban public, urban private, and rural public schools from 1977 to 1983 are presented in Table 3.23. It can be concluded from this table that there has been improvement in the flow of students through the rural public schools, more so than in the other schools, especially in grades three to five. Urban public schools have improved marginally since 1977 in the proportion of children moving on to the next grades. In the urban private schools, there seems to have been a sizeable decrease in efficiency, especially in the first, second, and third grades.

Table 3.22

OFFICIAL TRANSITION AND REPETITION RATES[1/]
IN ALL PRIMARY SCHOOLS
1977-1983

	Total Enrollment	1st r	1st t	2nd r	2nd t	3rd r	3rd t	4th r	4th t	5th r	5th t	6th r	6th t	Graduates
1976	228,558		0.51		0.73		0.71		0.79		0.85		0.91	43,244
1977	250,241	0.37	0.50	0.15	0.73	0.13	0.71	0.09	0.80	0.06	0.86	0.02	0.93	46,817
1978	263,219	0.35	0.51	0.16	0.73	0.13	0.72	0.09	0.78	0.06	0.85	0.02	0.93	49,522
1979	276,712	0.35	0.51	0.15	0.73	0.13	0.73	0.09	0.80	0.05	0.87	0.02	0.94	52,211
1980	290,843	0.36	0.52	0.14	0.74	0.13	0.73	0.08	0.79	0.05	0.85	0.02	0.93	56,475
1981	325,638	0.40	0.48	0.17	0.68	0.13	0.68	0.09	0.75	0.06	0.82	0.03	0.94	58,971
1982	295,867	0.33	0.55	0.15	0.74	0.12	0.74	0.08	0.81	0.05	0.88	0.02	0.94	60,438
1983	331,230	0.40		0.17		0.12		0.09		0.06		0.02		
1984	341,456													
Growth Rate	5.2%/Annum													5.8%

1/ r = Repetition Ratio = Repeates grade g, year t + 1/New Enrollments

t = Transition Ratio = New enrollments g + 1, t + 1/Total Enrollments

SOURCE: Datos sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983.

Table 3.23

OFFICIAL TRANSITION RATES IN PRIMARY SCHOOLS

1977-1983

Year/	Urban Public						Urban Private						Rural Public					
Grade	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1977	.61	.80	.80	.83	.86	.92	.84	.99	.98	.96	.99	.92	.44	.65	.58	.67	.77	.89
1978	.59	.81	.79	.84	.87	.94	.76	.93	.92	.93	.95	.92	.44	.66	.60	.71	.79	.92
1979	.59	.79	.79	.83	.87	.94	.84	.96	.96	.93	.96	.97	.44	.65	.60	.68	.78	.90
1980	.61	.82	.82	.86	.90	.94	.75	.85	.91	.91	.95	.95	.45	.66	.62	.71	.80	.93
1981	.59	.80	.80	.83	.86	.92	.77	.88	.91	.91	.94	.91	.47	.67	.63	.70	.78	.93
1982	.59	.79	.79	.82	.86	.94	.75	.86	.86	.86	.89	.92	.41	.59	.56	.64	.75	.94
1983	.64	.82	.82	.84	.89	.94	.79	.91	.91	.92	.96	.95	.50	.68	.66	.74	.83	.92

SOURCE: Datos sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983.

With enrollments in urban private schools growing at a rate faster than those of the urban public schools, perhaps more children of a lower socio-economic class are attending private schools. Teachers in urban private schools may be perceiving their roles now more as guardians of standards, while previously, with a different group of students, they saw their role mainly as one of helping children to meet the criteria for obtaining skills in each grade and thereby moving on to the next.

The flow of students, shown in Table 3.24, allows the internal efficiency of the primary-school system to be seen in clear focus. A cohort of 1,000 students entering the first grade of primary school in 1977 is traced through the sixth grade in the urban public, urban private, and rural public schools. In the first grade, each new cohort in the urban public and rural private schools was augmented by a large number of children who were repeating that grade. The efficiency of the urban private schools was the highest, with 687 completing sixth grade. That is not a very high completion rate, however, when compared with private primary schools or even urban public schools in other Latin American countries. The output of 541 from urban public schools is low, but still higher than the output from rural public schools. Between first and second grades there was a great decrease in rural public-school students, compared to a less dramatic decline in the urban public schools.

Another method of assessing efficiency is presented in Table 3.25. Data from 1966 to 1971 are compared with data from 1977 to 1982. The table shows the number of instructional years which must be funded to produce fourth-grade and sixth-grade graduates, in urban public, urban private, and rural public schools. The years required to produce a fourth-grade graduate in the rural schools declined from 17.9 in 1966-71, to 12.1 in 1977-82. The figures for sixth-grade graduates in rural areas seem to reflect a dramatic increase in efficiency; however, these are misleading, since the majority of rural primary students do not have access to complete schools. The number of instructional years required to produce fourth and sixth-grade graduates in urban public schools decreased between the two periods, while the change in urban private schools was negligible.

3.7.1 Promotion and Non-Promotion

Table 3.26 presents data on promotion for pre-primary and primary schools, by grade and rural and urban sector, in 1981.

Most surprising are the sizeable percentages of non-promotion in bilingual and pre-primary schools. At these levels, according to the curricular guides from the Ministry of Education, emphasis is on psycho-motor skills and attitudes, rather than on cognitive skills. But in practice the process may be the same as in the primary grades: the teachers administer as difficult an examination as possible, in order to convince themselves that the children have had a valuable learning experience. Non-promotion at this level makes no sense whatsoever, given any enlightened view about pre-primary education. It can be argued, in fact, that holding children back from the first grade is very likely to

Table 3.24

ESTIMATED AGGREGATE FLOWS: COHORT ENTERING PRIMARY SCHOOL IN 1977 [1/]

1977-1983	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
A. Urban Public System						
Transition Ratio	0.59	0.79	0.82	0.83	0.86	(0.94)
Repetition Ratio	0.34	0.15	0.14	0.11	0.06	0.02
Transitions (1000)	791	719	672	619	564	
Repetition	340	119	100	74	37	11
Enrollments	1340	910	819	746	656	575
						(541)
B. Urban Private System						
Transition Ratio	0.76	0.96	0.91	0.91	0.89	(0.95)
Repetition Ratio	0.11	0.06	0.05	0.04	0.02	0.02
Transitions (1000)	844	859	821	777	706	
Repetition	110	51	43	33	16	17
Enrollments	1110	895	902	854	793	723
						(687)
C. Rural Public System						
Transition Ratio	0.44	0.65	0.62	0.70	0.75	(0.92)
Repetition Ratio	0.41	0.16	0.14	0.08	0.05	0.02
Transitions (1000)	620	467	330	249	196	
Repetition	410	99	65	26	12	4
Enrollments	1410	719	532	356	261	200
						(184)

[1/] Transition Ratio = New enrollments grade g + 1 year t + 1/Total enrollments grade g, year t.
Repetition Ratio = Repeaters g, t + 1/New enrollments g, t.

NOTE: USIPE calculates repetition rate as Repeaters g, t + 1/Total enrollments g, t.

SOURCE: Datos sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983.

Table 3.25

EFFICIENCY MEASURES AT PRIMARY SCHOOLS[1/]
1966-1971 AND 1977-1982

Type of School	Instruction Years Necessary to Prepare an Average Student from Indicated Grade Levels: In Grades 1-4 Number of 4th Grade Graduates 66-71	In Grades 1-4 Number of 4th Grade Graduates 77-82	In Grades 1-6 Number of 6th Grade Graduates 66-71	In Grades 1-6 Number of 6th Grade Graduates 77-82	Efficiency to 4th Grade 66-71	Efficiency to 4th Grade 77-82	Efficiency to 6th Grade 66-71	Efficiency to 6th Grade 77-82
Urban Public	7.4	6.2	13.5	9.3	54.5%	64.9%	29.6%	42.9%
Urban Private	4.7	4.8	7.6	7.7	86.0%	82.6%	52.7%	52.1%
Rural Public	17.9	12.1	52.9	18.9	22.4%	33.0%	7.6%	21.2%

1/ Efficiency = Number of Instruction Years, assuming no failure or dropout, x 100/Actual Number of Instruction Years

SOURCE: 1966-71: Guatemala Education Sector Assessment, 1978; 1977-82: Datos Sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983.

Table 3.26

STUDENTS PROMOTED AND NOT PROMOTED
1981

BILINGUAL SCHOOLS

	Total	Promoted	Not Promoted	% Not Promoted
Rural	46,957	33,074	13,883	(29.6)
Urban	5,501	4,249	1,252	(22.8)
Total	52,458	37,323	15,135	(28.9)

PRE-PRIMARY SCHOOLS

	Total	Promoted	Not Promoted	% Not Promoted
Public	20,850	14,569	6,281	(30.1)
Private	14,157	10,454	3,703	(26.2)
Total	35,007	25,023	9,984	(28.5)

PRIMARY PUBLIC SCHOOLS

FIRST GRADE

	Total	Promoted	Not Promoted	% Not Promoted
Urban	77,146	52,520	24,626	(31.9)
Rural	165,525	99,614	65,911	(39.8)
Total	242,671	152,134	90,537	(37.3)

Table 3.26 (cont'd)

SECOND GRADE

	Total	Promoted	Not Promoted	% Not Promoted
Urban	54,719	44,745	9,974	(18.2)
Rural	84,141	65,449	19,692	(23.4)
Total	139,860	110,194	29,666	(21.2)

THIRD GRADE

	Total	Promoted	Not Promoted	% Not Promoted
Urban	49,075	40,715	8,360	(17.0)
Rural	57,907	45,724	12,183	(21.0)
Total	106,982	86,439	20,543	(19.2)

FOURTH GRADE

	Total	Promoted	Not Promoted	% Not Promoted
Urban	42,219	35,901	6,318	(15.0)
Rural	35,819	30,804	5,015	(14.0)
Total	78,035	66,705	11,330	(14.5)

FIFTH GRADE

	Total	Promoted	Not Promoted	% Not Promoted
Urban	36,855	32,778	4,077	(11.1)
Rural	23,991	21,185	2,806	(11.7)
Total	60,846	53,963	6,883	(11.3)

SIXTH GRADE

	Total	Promoted	Not Promoted	% Not Promoted
Urban	32,445	31,010	1,435	(4.4)
Rural	18,321	17,515	806	(4.4)
Total	50,766	48,525	2,241	(4.4)

SOURCE: Tabulations by USIPE, 1985.

Table 3.27

GUATEMALA, TRANSITION RATES OF THE PRIMARY AND SECONDARY LEVELS

1979-1984

YEAR	PROMOTED (A) PRIMARY, 6th GRADE, CHILDREN YEAR t	PROMOTED (B) PRIMARY, 4th STAGE, ADULTS YEAR t	TOTAL (A+B) PROMOTED FROM PRIMARY LEVEL YEAR t	ENROLLED IN 1ST YEAR BASIC YEAR t + 1	% WHO CONTINUE	PROMOTED FROM 3rd GRADE BASIC	ENROLLED IN 4TH GRADE DIVERSIFIED, YEAR t + 1	% WHO CONTINUE
1979	52,208	3,095	55,303	46,731	89.1	---	24,903	
1980	56,475	3,461	59,936	49,165	82.0	---	26,460	
1981	58,973	3,689	62,662	46,544	74.3	14,664	25,517	174.01
1982	60,438	3,000	63,438	52,411	82.6	12,526	27,559	200.01
1983	64,090	3,505	67,595	54,621	80.8	13,319	27,947	209.83
1984	69,321	3,837	73,158	---	---	14,782	---	---

SOURCE: Datos sobre Promocion, Repitencia y Desercion 1977-1982, USIPE, 1983, and Estadisticas Educacionales 1984, Estadistica Indicial, 1984, USIPE, 1984.

depress the average learning skills of the classes into which those children would otherwise move. Children with pre-primary education experiences are far more likely than most others without such a background to do well in the first grade.

The highest non-promotion rate is in the first grade. Educational research in the U.S. shows that retention of primary-school children does not help their achievement at higher levels: there was no difference in achievement or long-range retention between children who had been promoted to the next grade with no interruption, and those who had been retained. Non-promotion from first grade seems particularly pointless, in view of this body of research.

According to Table 3.26, the rate of non-promotion from the sixth grade is lower than all others at the primary level. Table 3.27 shows the rates of transition from the sixth grade and from the fourth stage of the adult primary school, into the first grade of the basic cycle. Almost 90 per cent of those who graduated from both types of primary school in 1979, entered the basic cycle in 1980. This rate declined to 75 per cent of the 1981 cohort.

The drop in the rate of students continuing on is the result of two factors. The first is the increased number of promoted students from the sixth grade of primary school, and the second is the fact that there has been little increase in the number of places in the basic cycle. The number of students promoted from the sixth grade increased by about 23 per cent between 1979 and 1983; the number enrolled in the first basic-cycle year increased by only 17 per cent.

3.7.2 Achievement Data

Extensive information about achievement has been collected by USIPE. Table 3.28 displays means of achievement in Spanish on a standardized test for very large samples of students across all levels of the primary education system.

The schools showing the highest achievement scores are urban private complete and urban and marginal private incomplete schools. Public complete schools show better achievement means than public incomplete schools. Urban schools and marginal schools have higher achievement than the corresponding school types in rural areas. The one exception to the pattern is the performance of rural public over rural private schools.

Achievement in mathematics is presented in Table 3.29. Table 3.30 presents a summary of Tables 3.28 and 3.29. The same patterns are evident: urban and marginal private are high, with urban complete schools showing achievement levels higher than those for rural complete. Rural private is again at the lower level.

3.7.3 Equity Data

The data in this section treat the question of how equitable the primary education system in Guatemala is, with respect to gender.

Table 3.28

ACHIEVEMENT OF PRIMARY STUDENTS IN SPANISH, GRADES 3-6
1982

Area[1]	Sector	Class	Students	Mean Achievement
Urban	Public	Complete	89,833	68.2006
Rural	Public	Complete	26,398	65.2476
Marginal	Public	Complete	27,969	68.9597
Total	Public	Complete	144,200	67.5440
Urban	Private	Complete	30,409	75.2028
Rural	Private	Complete	7,485	65.9532
Marginal	Private	Complete	4,970	70.9565
Total	Private	Complete	42,864	70.9979
Urban	Total	Complete	120,242	71.7017
Rural	Total	Complete	33,883	65.6004
Marginal	Total	Complete	32,939	69.9581
Total	Total	Complete	187,064	69.0867
Urban	Public	Incomplete	4,041	66.2146
Rural	Public	Incomplete	11,131	64.1719
Marginal	Public	Incomplete	1,260	67.4413
Total	Public	Incomplete	16,432	66.3755
Urban	Private	Incomplete	3,626	74.1205
Rural	Private	Incomplete	5,351	61.1736
Marginal	Private	Incomplete	410	75.1000
Total	Private	Incomplete	9,387	70,2274
Urban	Total	Incomplete	7,667	70.1675
Rural	Total	Incomplete	16,482	62.6727
Marginal	Total	Incomplete	1,670	71.2706
Total	Total	Incomplete	25,819	68.0370
Urban	Public	Total	93,874	67.2076
Rural	Public	Total	37,529	64.7097
Marginal	Public	Total	29,229	68.2005
Total	Public	Total	160,632	66.9597
Urban	Private	Total	34,035	74.6617
Rural	Private	Total	12,836	63.5634
Marginal	Private	Total	5,380	73.0283
Total	Private	Total	52,251	70.6126
Urban	Total	Total	127,909	70.9346
Rural	Total	Total	50,365	64.1366
Marginal	Total	Total	34,609	70.6144
Total	Total	Total	212,883	68.5619

1/ Marginal schools are those in non-urbanized areas of Guatemala City.

SOURCE: Data collected by USIPE, 1983.

Table 3.29

ACHIEVEMENT OF PRIMARY STUDENTS IN MATHEMATICS
GRADES 3-6, 1982

Area[1]	Sector	Class	Students	Mean Achievement
Urban	Public	Complete	89,833	68.2041
Rural	Public	Complete	26,398	65.3616
Marginal	Public	Complete	27,969	69.0661
Total	Public	Complete	144,200	67.4693
Urban	Private	Complete	30,409	74.5527
Rural	Private	Complete	7,485	67.3623
Marginal	Private	Complete	4,970	71.0787
Total	Private	Complete	42,864	70.7042
Urban	Total	Complete	120,242	71.3784
Rural	Total	Complete	33,883	66.3620
Marginal	Total	Complete	32,939	70.0724
Total	Total	Complete	187,064	69.2709
Urban	Public	Incomplete	4,041	66.5152
Rural	Public	Incomplete	11,131	64.1938
Marginal	Public	Incomplete	1,260	68.4175
Total	Public	Incomplete	16,432	65.9426
Urban	Private	Incomplete	3,626	74.0698
Rural	Private	Incomplete	5,351	61.4977
Marginal	Private	Incomplete	410	75.1146
Total	Private	Incomplete	9,387	70.1314
Urban	Total	Incomplete	7,667	70.2925
Rural	Total	Incomplete	16,482	62.8457
Marginal	Total	Incomplete	1,670	71.7660
Total	Total	Incomplete	25,819	68.3014
Urban	Public	Total	93,874	67.3597
Rural	Public	Total	37,529	64.7777
Marginal	Public	Total	29,229	68.7418
Total	Public	Total	160,632	66.7059
Urban	Private	Total	34,035	74.3112
Rural	Private	Total	12,836	64.4300
Marginal	Private	Total	5,380	73.0967
Total	Private	Total	52,251	70.4178
Urban	Total	Total	127,909	70.8354
Rural	Total	Total	50,365	64.6038
Marginal	Total	Total	34,609	70.9192
Total	Total	Total	212,883	68.7862

1/ Marginal schools are those in non-urbanized areas of Guatemala City.

SOURCE: Data collected by USIPE, 1983.

Table 3.30

MEAN SCORES OF STUDENTS GRADE 3-6 ON MATHEMATICS AND SPANISH ACHIEVEMENT TESTS ACCORDING TO SCHOOL CHARACTERISTICS[1/]

1982

Characteristics	Mean	
	Mathematics	Spanish
Complete	69.3	69.1
Incomplete	68.3	68.0
Private	70.6	70.4
Public	67.0	66.7
Urban	70.8	70.9
Rural	64.6	64.1
Public, Urban, Complete	68.2	68.2
Public, Rural, Incomplete	64.2	65.2
Private, Urban, Complete	74.6	75.2
Private, Rural, Incomplete	61.5	66.0

1/ Based on a total sample of 212,883 cases. All of the differences reported are statistically significant.

SOURCE: Tabulations by USIPE, 1985.

The distribution of primary-school enrollments by gender in 1983 is presented in Table 3.31. Significantly higher percentages of males, especially in the older age groups, were enrolled. Table 3.32 shows the ratio of female to male enrollments, by grade in urban and rural areas. The proportion of girls enrolled in rural areas is especially low. Rates of return, presented earlier, show that family investment in schooling for boys returns higher rates than that for girls. There may be a higher opportunity cost for girls as well, in terms of foregone household labor. It is also likely that non-economic factors play a major role in the decision of families, particularly those in rural areas, to keep girls working at home. Table 3.33 shows the ratio of female to male students by department and urban and rural schools. In only two departments, in urban schools, did female enrollment exceed male enrollment.

3.8 Costs of Primary Education

A detailed treatment of the costs of public education in Guatemala is presented in Chapter 2 of this Assessment. Figures cited in this section are drawn from that chapter, particularly the per-pupil expenditures set forth in Tables 2.14, 2.15, 2.16, and 2.17. The national mean expended on a pre-primary pupil who was promoted in 1981 was Q132. Bilingual education showed an expenditure of only Q25 per pupil promoted, while the expenditure per primary pupil promoted was Q85.

Public expenditures for both pre-primary and primary education vary widely by regional department. Expenditures per primary student promoted in 1981 were as low as Q61 in Totonicapan and Q64 in Jutiapa. In Suchitepequez, the per-pupil expenditure was Q120; and in El Progreso, it was Q178, which was at the high end of the scale. Such departmental variations do not necessarily imply waste in places where expenditures are highest; but they do point out considerable diversity within a highly centralized system of control. The implication is that the central control does not work well.[1/]

[1/] Those who administer an education system must be trained to budget and use resources according to some kind of rational plan. So far the capability to do this is not present at the regional level in Guatemala. In a centralized system, the only authority to plan and administer funding rests with a very few people in the Ministry's headquarters. It is wasteful to restrict this authority in such a manner. The more responsibility for planning and administering funding is delegated to lower levels, the more efficient the use of funds becomes. This is a basic principle of budget administration.

Table 3.31

PRIMARY ENROLLMENTS BY AGE AND SEX
1983

Age	Percent of Age Cohort Enrolled Male	Female
6	9.2	9.5
7	54.3	50.9
8	63.4	58.3
9	66.7	60.6
10	73.1	65.0
11	67.0	58.3
12	68.2	53.8
13	46.2	33.3
14	26.7	18.4

SOURCE: USIPE, Ministerio de Educacion, Guatemala, 1983.

Table 3.32

RATIO OF FEMALE TO MALE PRIMARY ENROLLMENTS BY GRADE
1983

	1st	2nd	3rd	4th	5th	6th	Total
Urban							
Enrollment	107,842	78,143	70,752	60,678	52,796	45,790	416,001
Ratio	.91	.91	.90	.88	.89	.90	.90
Rural							
Enrollment	223,808	111,995	77,108	47,009	31,463	23,166	514,129
Ratio	.83	.79	.74	.68	.68	.67	.78
TOTAL							
Enrollment	331,230	190,138	147,860	107,687	84,259	68,956	930,130
Ratio	.86	.84	.81	.79	.80	.82	.83

SOURCE: Constructed by author using 1983 USIPE data.

Table 3.33

RATIO OF FEMALE TO MALE
PRIMARY ENROLLMENTS BY DEPARTMENTS

1983

Department	Urban	Rural	Total Enrollment Urban	Total Enrollment Rural
Capital City	0.99	-	136,284	-
Guatemala, Municipios	0.90	0.83	46,588	52,577
El Progreso	0.92	0.86	4,857	11,742
Sacatepéquez	0.78	0.80	14,416	4,743
Chimaltenango	0.79	0.79	15,848	16,897
Escuintla	0.90	0.85	21,074	34,276
Santa Rosa	0.90	0.85	9,179	26,519
Solola	0.77	0.74	7,980	12,642
Totonicapan	0.82	0.69	5,978	17,161
Quezaltenango	0.88	0.78	27,054	34,312
Suchitepéquez	0.84	0.74	15,883	19,331
Retalhuleu	0.86	0.77	9,482	15,596
San Marcos	0.82	0.75	15,440	53,185
Huehuetenango	0.73	0.65	14,506	33,642
Quiché	0.77	0.67	7,932	25,527
Baja Verapaz	0.83	0.70	5,082	12,859
Alta Verapaz	0.74	0.55	10,727	20,010
Petén	0.85	0.83	6,113	17,833
Izabal	0.94	0.89	8,184	26,162
Zacapa	1.06	0.91	2,990	3,763
Chiquimula	1.02	0.85	8,391	17,180
Jalapa	0.92	0.79	6,780	12,209
Jutiapa	0.94	0.86	10,625	35,980
TOTAL	0.90	0.78	416,001	514,129

SOURCE: Constructed by author using 1983 USIPE data.

Public expenditures only meet a portion of the actual cost of education per pupil. Parents provide a large proportion of the cost of education in Guatemala. Family costs are perhaps as high as Q30 per pupil, when all student expenses are taken into account. Another private subsidy to public education is the cost of instructional materials borne by the teachers. Every classroom visited during this Assessment displayed materials which teachers had purchased. If these materials were not provided privately, many classrooms would have none at all. In some cases, the parents' association contributes materials. Very few had been furnished by the Ministry.

3.9 Constraints

The constraints to improvement of the Guatemalan pre-primary and primary systems which are included here are divided into three categories: economic, social, and institutional.

3.9.1 Economic Constraints

The effects of Guatemala's economic situation on the national education system are discussed at length in Chapter 2 of this Assessment. The ongoing economic crisis has had a devastating effect on schools, teachers, and children. This has been exacerbated by the political uncertainties and violence which characterized the early 1980s.

The economic crisis has resulted in a serious reduction of "real" expenditures for education, as well as a shift of the costs of education to families of pupils and to teachers. Teachers have been without a pay raise for several years; at the same time they must pay for teaching materials.

3.9.2 Social Constraints

The ethnic diversity of Guatemala has enriched its culture; but over the years, this same diversity has led to tension between Ladino and indigenous groups. Historically, conflicts have been resolved in favor of the Ladino population, denying indigenous people participation in the mainstream of social, political, and economic activity.

Another tension has been the competition for resources between theurban and rural areas, which dates back to the sixteenth century, into Spanish colonial history. The rural areas were not expected to be serviced by central government and church functions under the Laws of the Indies; rather, they were expected to be autonomous and self-supporting. In Guatemala, until recently, the urban areas had the first and greatest call on resources.

The Guatemalan government has now resolved that indigenous rural populations, as well as marginal urban groups, will be offered more opportunities for education in the foreseeable future. This will help address the imbalances which have long existed, but it will not result in any dramatic increase in the economic position of the disadvantaged. Such

improvements can only be realized over a long period of time; but the process which has begun must not be terminated out of impatience or any apparent lack of quick results.

A negative aspect of the government's decision to emphasize rural educational opportunities has been the concomitant de-emphasis of educational opportunities in the urban areas. Marginal urban people are one of the national development policy targets, however. They will share in new externally-financed school construction. Meanwhile, large numbers of people in the capital are choosing private education, which itself is beginning to manifest many of the problems previously associated only with public schools.

3.9.3 Institutional Constraints

These constraints have been treated in section 3.4 in connection with the quality of the administrative functions of the Ministry of Education. They include excessive centralization of decision-making, accompanied by little initiative at lower levels; excessive rigidity in interpreting rules; and inefficiency of administration due to power concentrated in the capital rather than delegated to regional areas.

Accompanying the phenomenon of centralization is the very limited participation in education by community members and employees. This has resulted in a curriculum which is too formal. Professionals have not consulted with lay groups concerning what should be taught. Another outcome has been the arbitrary methods of pupil evaluation, characterized by the assignment of failing grades to large numbers of students. Valid curricula and content cannot be established by arbitrary fiat.

People who hire and work with graduates of schools, and parents who help their children decide on occupations, must have some means of communicating with educators on what schools should be teaching. Without that process, schools teach subjects that have little relevance to life. The government has stated clearly that education must contribute to economic and social development. The process of development requires the exchange of information and resources between society and schools.

3.10 Recommendations

Two sets of recommendations are proposed in this section: those to be undertaken in the short term, between 1985 and 1989, and others which are long term, targetted to 1990 and beyond. Short-term recommendations are limited to what is economically feasible. They are aimed at alleviating serious qualitative shortcomings and preparing the system for larger scale, more fundamental reforms. All are in accord with national policy priorities currently in effect. The long-term recommendations are larger in scale, more costly, and more fundamental; they carry more implications for institutional change.

3.10.1 Short-Term Recommendations

These recommendations are offered for action during the period between 1985 and 1989.

1) The Ministry should carry out a study of the experiments to date in curriculum and school organization of pre-primary and primary education. Some of these have been financed by external assistance, and others were designed and funded in Guatemala. This study should focus on research into the intended and unintended effects of these programs. The cooperation of capable university professors in Guatemala and the assistance of specialists from other countries, combined into a multi-disciplinary team, would be necessary. The objective of the study is to determine which kinds of experiments are most promising for application to the system over the next decade, especially after 1988. There must be a willingness to use the findings in formulating planning and implementation strategies for the future.

   The assistance of USAID will be necessary to carry out this plan. It is anticipated that $500,000 would be needed to finance a 12 to 18-month effort. It is vitally important that the contractor be independent, and of top quality. Questions that should be answered are: To what extent is the bilingual education project one which can be applied to large numbers of indigenous people? Is the nucleo concept a viable one for extending complete schools to the whole country? What implications for other areas of the country have the teacher volunteer efforts in the Mezquital area of Guatemala City? Is NEPADE a concept which should be expanded to large numbers of schools? Which concepts from PEMEM need to be applied more widely?

   This study should be the first step in the formulation of a comprehensive national plan for primary education, which should be undertaken on a large scale in 1989.

2) A study is recommended to investigate the reasons for, and dynamics of, the non-promotion of children and their desertion from school. A one-year study with the backing of USAID, costing $250,000, would be sufficient to identify key variables in the examination system, promotion practices, teacher and administrator behaviors related to non-promotion and dropout, and interpretation of policies that contribute to desertion. The findings of this study should shape policy and practice for the period after 1988. The inefficiency of the school system is so marked, and the hypotheses for inefficiency so frequently discussed and seemingly so obvious, that such a study ought to be easily conceptualized and designed. It can build upon the work already done in Guatemala; for example, on the migrant worker problem. As in the first study recommended above, cooperation between Guatemalan research personnel and out-of-

country specialists will be necessary to carry out this plan. An independent contractor of high quality will be important to the success of the effort.

3) The elaboration of alternatives for the school calendar should be prepared by a commission consisting of educators and others from different regions of the country. The flexibility which the Ministry should demonstrate on this matter will pay dividends in higher primary-school efficiency. This commission also offers an opportunity to experiment with involving non-educators with educators. No cost to USAID is involved.

4) The problem of the incomplete school must be addressed. Educational equity is not possible unless every student has access to a school offering all six primary grades. As with the revision of the school calendar, one way to bring creative ideas into the system is to involve lay people. A study commission to work from 1986 to 1988, with delegation of responsibility to subcommissions consisting of lay people and professionals in the regional areas, could bring new ideas into play, and give lay people a sense of responsibility for schools. It would perhaps be necessary to provide an ad hoc group, appointed by the Ministry, with a grant from USAID of no more than $10,000 for publicity, travel, and secretarial expenses; this amount could be matched by the Ministry.

5) It is essential that USAID meet its current obligations to the government for continuing loan or grant support of the Bilingual Education Project. The spread of this concept to 400 schools will tax the Ministry's ability to deliver services. While no additional funding is recommended beyond what is already obligated, it is obvious that bilingual education embodies a package of curriculum strategies which will be needed in Guatemala for a long time to come. What is recommended here is an experiment in funding bilingual education modules with USAID support, through contracts with Indian groups that are ready to exercise accountability and assume responsibility for the administration of a project. The reasons for this funding tactic are: (1) to act in accordance with the Ministry's stated goal of promoting community participation in education; and (2) to provide for modifications of the existing bilingual materials and methodologies, so that they will conform more closely with particular communities' values, dialects, and customs. The existing bilingual education materials have been criticized for presenting an idealized Ladino cultural model to indigenous children, and imposing one Indian language on communities that speak another. Hence, there are administrative, professional, and cultural reasons for encouraging the participation of Indian groups. No cost estimates are presented, because it is believed that a contract can be made with institutions other than official ones, even though the objective happens to be the improvement of the educational process. The results of this kind of contracting with indigenous organizations might well include the modification of bilingual education methodology.

6) Support of the Ministry's priority for administrative development is essential. One of the most promising strategies for reforming the Ministry, to increase its administrative efficiency and program competence, is to devise a comprehensive program of preparatory and in-service training for administrators, supervisors, and teachers. Implementation of such a training approach is recommended for the long term. The short-term recommendation is to develop a plan for a ten-year training effort, which builds in part on the program carried out by the University of New Mexico in Guatemala.

   Models of training in several other countries should be examined as a part of the planning process. At least one university in the U.S. should work in partnership with universities in Guatemala, and with the Ministry, to elaborate this plan. It is recommended that $100,000 be spent on this effort, which would last approximately one year.

7) Supported only by their families, a group of volunteers has organized schools in the Mezquital area of Guatemala City, in "champas," or shacks. These schools serve the lowest strata of the society, and are in desperate condition. USAID could signal the PVOs or one of the U.S. professional associations--AASA, the AFT, the NEA, the Catholic Education Association--that these schools merit assistance. A public school district in the U.S. might also wish to "partner" with the Mezquital schools. They have the backing of a strongly organized community group, an excellent volunteer principal, and tremendous spirit. A mini-grant of a few hundred dollars from USAID to encourage and reward this community's resolve would be very well spent. Volunteer efforts are difficult to coordinate and plan, but easy to assist.

3.10.2 Long-Range Recommendations

The following plans are not arranged according to their relative importance or recommended order of adoption. They do relate to the short-term plans set forth above. Their implementation should begin in 1988; no cost figures are included, because of the difficulty of predicting economic conditions at that time.

1) A comprehensive program for training and preparation of administrators and supervisors, as well as teachers and Ministry officials, should be undertaken, based upon the plan suggested in 3.10.1 (6) above. An excellent model for training and preparing both teaching and administrative personnel exists in Botswana. That program was begun with USAID assistance in 1981 and has had dramatic success.

   The involvement of U.S. universities, in partnership with Guatemalan institutions, would be essential as Guatemalan universities increase their capacity to prepare administrators. Guatemalan universities will also become more involved in short-

term training projects, through cooperation with the Ministry for in-service training; this requires planning for institutional change. Minimally, a ten-year plan should be implemented.

Restructuring of the teacher preparation and training is necessary as well, with both efforts supporting each other. This is essential if any primary education reform is to become possible.

The in-service training envisioned for administrators would actually be staff development, which means training to become more effective. The same principle is to be applied to teachers. Their roles must change, but they and the administrators have to be shown, using videotapes and micro-training sessions, exactly how they can change. This concept, which ties training to job improvement, has great potential qualitative benefits. LASPAU has had considerable experience and success with university staff development efforts.

2) A comprehensive, long-range plan for primary education is essential. Many in the Ministry speak of the need for it. The problem with most plans is that they are not implemented, because implementation was not taken into account during the planning process. The comprehensive planning process recommended here should involve educators and lay people at all levels. It should not be centralized, but should use a dispersed, grass-roots approach, with the final documents put together in each department and a coordinated document prepared in the capital, for review regionally.

The planning for primary education should use the studies suggested in 3.10.1 (1) and (2), and the findings of the commissions in 3.10.1 (3) and (4). The process described in those sections can prepare the way for the kind of planning process envisioned here. A school-mapping section of the plan should be dedicated to the problems of incomplete schools, lack of participation by rural and marginal urban children, and the relationship between the location of primary schools and basic-cycle schools.

Involving lay people in this process is more complicated, more time-consuming, and perhaps more expensive than using only education planners. In the long run, however, planning which involves clients and lower-level educators is more efficient, because it prepares the system for change and orients people to the directions change will take. Even if much of the planned activities do not materialize, the planning process can open the system to outside feedback, at least temporarily. This approach does not eliminate the need for planning specialists; but it does link them to practitioners and lay people. It also requires consideration of implementation strategies and realistic planning for them.

3) Multiple strategies are required for the improvement and expansion of bilingual education. They include:

a) Carry out continuous formative evaluation of the bilingual education program. Summative end-point evaluation is too late to correct errors or to suggest incremental changes in the model. There should be an intensive assessment at least quarterly by an external evaluator and an evaluation person from the Ministry. Waiting until 1988 to implement this recommendation is perhaps too late to correct certain aspects of the program.

b) Follow up the experiment to involve Indian groups in the administration of bilingual education modules, as recommended in 3.10.1 (5), above. This may become one of the regular means of support for bilingual education. It is highly desirable to have alternative bilingual education modules available in Guatemala, given the several indigenous languages and cultures, and the impossibility of creating one pattern for bilingual education. These modules should also be subject to continuous program evaluation.

c) Expand the bilingual education program, according to an overall plan. This will be a gradual process, taking perhaps a decade to implement. It is only feasible if evaluation of alternative modules is carried out, as well as continuous evaluation of programs in place.

d) Support the materials development and in-service training required for success of the bilingual education program. The need for development and distribution of materials will be great, especially as more languages are added. The costs of personnel to prepare them will be considerable, as will the costs of production and distribution. Additional investments will be required to train people in the effective use of the materials.

e) Train indigenous teachers, administrators, and supervisors, according to a plan for employing such personnel. The bilingual education program must use indigenous teaching, administrative, and supervisory personnel in significant numbers if it is to be valid, effective, and relevant. External assistance is available now for this kind of training.

4) The administrative functions of the Ministry of Education must be improved. A thorough reform is seen as necessary by the Ministry, according to its own documents. Any attempts at reform can only be successful, however, if the preparation and training programs recommended in (1), above, are undertaken. Continuing technical assistance for the reform could be obtained from other effective Ministries of Education, management consulting firms or organizations, and university departments of

educational administration in Guatemala and in the U.S. Short-term visits by specialists are less useful than long-term, institutional partnerships. The reform should begin as soon as funds are available in 1989.

5) Support should be given to volunteer groups who work for improvements in education. The extension of educational opportunity into rural and marginal urban areas may only be possible through widespread volunteer efforts. One model is the lay missionary program of the Mexican Ministry of Education, in which youth spend three years in a rural community, improving the school and contributing in other ways to development. The Vista Program in the U.S. and the Botswana Brigades were organized for similar purposes.

6) The incomplete school must be extended to rural areas, using a variety of strategies envisioned in an overall plan for primary education. The incomplete school may well be necessary in the most remote areas for as many as 50 more years; but the complete school should be the norm, not the exception, for Guatemalan children. Other ideas for promoting the extension of complete schools include one in El Salvador in which the teachers are paid an extra 50 per cent of salary for taking on an extra session of children. Several strategies are possible, including double-shifting in existing schools; extending the nucleo concept; encouraging teacher-training institutions to staff several schools permanently as internship stations; and expanding the Promoter concept, which has been used so successfully in the bilingual education program. USAID might consider financing experimental investigations of these and other strategies.

7) Innovative techniques for helping children learn should be investigated. For example, research has shown that the most effective learning takes place in the home, up to age five. Rural and urban schools should offer evening programs, in which mothers are trained to use simple materials and methods to teach their children to read and write. Programs similar to this are now being tested in Guatemala, through the PAIN program and the Rural Family Education Project in the Department of Rural Social Education. Successful programs need to be identified, evaluated, and extended to rural and marginal urban areas, by having teachers or promoters train mothers in the primary schools.

8) Radio is virtually a universal medium in Guatemala, and it could be used as a teaching device for pre-primary and primary-school children. Instructional radio programs have been used successfully in Nicaragua, El Salvador, Honduras, and Mexico, as well as in the U.S. These programs need to be assessed for their effectiveness before being adapted and applied in Guatemala to the teaching of oral language skills, for example, in indigenous areas.

9) Continued support should be given to INCAP, the excellent program in nutrition now operating in Guatemala. The relationship of nutrition to IQ and achievement, especially in the consumption range of up to 2,500 calories per day, is well known. The Incaparina program is one of the country's most successful efforts, but in places the supply does does not meet the demand. A study should be made of the effects of this program, along with the feasibility of a more extensive nutrition education program for rural and marginal urban parents. The provision of Incaparina for pre-school children should be considered, using schools as distribution and education centers for families.

10) Give all possible encouragement to the use of schools as centers of community activities. There are many ways in which the buildings can be used more intensively for the collective good of their constituents. Currently, schools are fenced; and the gates are locked after the few hours of instruction. In some cases, the school's gate is locked even while classes are in session.

    Schools might be used for parent orientation at night, or in the late afternoon; if no electricity is available, lighting could be provided by kerosene lamps or a small power generator. The school playground could be used for recreation after class hours. One thing is certain, after talking to Guatemalan children in the schools: they like their school and would rather be there than anywhere else during the day, no matter how poor the facility.

11) Educational research and evaluation activities need to be strengthened, using an inter-institutional approach. A positive relationship should be established between the Ministry of Education and Guatemalan universities now doing research in education. These universities represent resources which can be brought to bear on problems which concern policy and practice.

    The evaluation function of the Ministry is now limited to assisting teachers in evaluating pupils and working with national data on achievement tests. Continuing reform of the pupil evaluation system is a project which should be cooperatively studied by the Ministry and the universities. USIPE should be giving more attention to improving the quality of instruction in the schools. The capability to evaluate education programs should be developed in the Ministry, working jointly with the universities.

    External assistance would be helpful in establishing the capability for high-quality evaluation and research in Guatemala. Without this capability, the Ministry in particular and the government in general will be condemned to making uninformed policy decisions. These can become very costly.

CHAPTER 4

MAINTENANCE OF RURAL PRIMARY SCHOOLS

4.1 Introduction

School buildings must meet two standards: they must be safe and healthy, and they must enhance the teaching-learning process. A large percentage of Guatemala's school buildings fail on both counts. Many have deteriorated to the point where the safety of pupils and staff is threatened. In many rural primary school buildings, the absence of even the most rudimentary equipment means that students will not be able to learn what the teacher wants to teach. If the school is without books, a blackboard, seats, and desks, it is simply a building; it offers no help to teachers or students. So many obstacles are presented by the lack of materials and equipment that the teacher is forced to use only oral presentations. Students must see pictures or something in writing; most are not able to learn simply by listening.

To different degrees, some government agencies have been providing help to the school system. These include the Department of Public Works in the Ministry of Communications and Public Works; the Directorate of Community Development, affiliated with the president's office; the National Reconstruction Committee (CNR); the municipalities; the community committees of villages; and others. Private institutions such as Foster Parents' Plan, CARE, World Vision, individual churches, etc., have also been involved in providing economic support, materials, furniture, and textbooks.

In the past, the construction of new schools was carried out by institutions such as CEEP (Construccion y Equipamiento de Edificios Escolares de Primaria); PEMEM (Proyecto de Extension y Mejoramiento de Educacion Media); and CONACE (Comite Nacional pro Construccion de Escuelas). Even though they may have satisfied immediate needs, these entities used different methods of construction and created different kinds of schools. They did not work according to any national plan that specified priorities, methods, standards, and costs.

In 1983, the UCEE (Unidad de Construccion de Edificios Escolares) was created to organize all public institutions involved in school construction into one entity, in order to correct deficiencies, centralize the construction system, and apply common standards. Programs supported by AID, IDB, the World Bank, and others could then be based on common denominators and carried out by an entity capable of coordinating efforts, supervising school construction programs, and creating a computerized construction-cost system.

In addition, UCEE was charged with the organization of a Department of Maintenance. Unfortunately, this has not yet been created. A comparison of the rate of construction of new schools with the rate of

abandonment of schools in disrepair, shows a decline in the rate of increase of usable classrooms, while the school population is increasing. Part of this problem is a lack of maintenance.

The maintenance of rural primary school buildings is the responsibility of the Ministry of Education, through the Department of Maintenance of School Centers. The maintenance of these school buildings has been inadequate for many years.

The Ministry's Maintenance Department, with a very reduced budget, was able to satisfy some of the needs of the primary system in the past. Over the years, due to the deterioration of the national economy, that budget has been reduced even more. Today it meets only personnel costs; no money is left for maintenance.

Table 4.1 indicates the total number of schools and classrooms in 1981 and in 1984. Table 4.2 indicates that in 1981, only 15,840 of the total number of available classrooms were in use. Of these, 1,246 are

Table 4.1

RURAL AND URBAN SCHOOLS AND CLASSROOMS FOR PUBLIC AND PRIVATE PRIMARY EDUCATION

	Totals	Public	Private
1981			
Schools - Total	7,219	5,922	1,297
Urban	1,372	880	492
Rural	5,847	5,042	805
Classrooms - Total	20,732	16,658	3,874
Urban	9,917	7,134	2,783
Rural	10,815	9,724	1,091
1984			
Schools - Total	7,962	6,598	1,364
Urban	1,528	916	612
Rural	6,434	5,682	752
Classrooms - Total	22,865	18,384	4,461
Urban	10,888	7,426	3,462
Rural	11,977	10,958	1,019

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Table 4.2

PUBLIC PRIMARY EDUCATION
NUMBER OF CLASSROOMS ACCORDING TO PHYSICAL CONDITION BY URBAN/RURAL AND BY TYPE OF CLASSROOM[1/]

GUATEMALA

TYPE OF CLASSROOM	Number of Buildings	TOTAL		GOOD		CONDITION REPARABLE		IRREPARABLE	
		Total	In Use	Total	In Use	Total	In Use	Total	In Use
TOTAL	5,329	17,615	15,840	9,888	8,890	6,478	5,704	1,249	1,246
Conventional classrooms		13,477	12,198	8,026	7,279	4,733	4,205	718	714
Adapted		2,455	2,018	1,166	965	1,006	862	193	191
Butler		589	570	322	314	229	217	38	39*
Emergency classrooms		826	799	240	201	308	317*	278	281*
Others		268	255	134	131	112	103	22	21
URBAN	597	5,847	5,697	3,401	3,406*	2,222	2,058	224	233*
Conventional classrooms		4,614	4,489	2,814	2,837*	1,689	1,536	111	116*
Adapted		752	716	389	377	330	301	33	38*
Butler		160	153	76	75	67	65	17	13
Emergency classrooms		233	254	72	70	103	124*	58	60*
Others		88	85	50	47	33	32	5	6*
RURAL	4,732	11,768	10,143	6,487	5,484	4,256	3,646	1,025	1,013
Conventional classrooms		8,863	7,709	5,212	4,442	3,044	2,669	607	598
Adapted		1,703	1,302	777	588	766	561	160	153
Butler		429	417	246	239	162	152	21	26*
Emergency classrooms		593	545	168	131	205	193	220	221*
Others		180	170	84	84	79	71	17	15

1/ The discrepancy in totals is due to the fact that the "Total" column shows the total existing classrooms in the school; the column "In Use" indicates the classrooms in operation, including the converted classrooms in different areas of the school, such as the warehouse, offices, all-purpose room, etc., and the afternoon shifts.

SOURCE: Situacion de la Infraestructura en la Escuela Primaria Rural en 1981. Proyecto Prodeprir, Ministerio de Educacion, Guatemala, 1982.

judged to be irreparable, and will soon be in such a condition that they will no longer usable. In the rural primary schools, there were 11,768 classrooms, of which 10,143 were in use and 1,013 were in irreparable condition. Combined with the 1,625 not now in use, a total of 2,638 classrooms will soon be unused. This is equal to about 22.4 per cent of all classrooms in the rural primary sector. According to the study from which Table 4.2 is drawn, the government would have to build 3,021 new classrooms to satisfy the needs of 1984, plus those needed to meet the demand created by student population growth.

Table 4.3 shows that in 1981 there were 6,659 "non-essential" rooms, which actually are important in the operation of any school. They include offices, libraries, laboratories, kitchens, storage areas, living quarters for watchmen, and all-purpose rooms. Of these, 5,584 were in use and 433 were judged irreparable. In rural primary schools, there were 4,893 rooms, of which 4,125 were in use and 398 were in irreparable condition. This means that in the rural areas, 1,166 of these rooms would soon have to be replaced, about 20 per cent of the total in use.

4.2 Purpose

The objective of this chapter is to assess the capability of the Ministry of Education to maintain rural primary schools, particularly those built under previous AID loans. The roles of the government and of the local communities will be examined, in relation to the maintenance of the rural primary school. The Ministry of Education's system of procurement and distribution of school materials, equipment, and furniture, will also be analyzed. Finally, recommendations will be made for improving the MOE's school maintenance, procurement, warehousing, and distribution systems.

Since the urban primary school system is intimately attached to the rural system, many of the views expressed here apply to all public primary schools, and the recommendations may be extended to both systems.

4.3 Methodology

4.3.1 Procedures

In order to obtain the information necessary to evaluate the condition of schools in the rural primary sector, field notes were used to elaborate a general questionnaire. This is included in the Assessment as Appendix V.1. A program of site visits was made with the help of UCEE and USIPE, and a number of schools was carefully selected. In the western region, 26 schools were visited in 9 departments, over a period of three days. A second three-day trip covered 21 schools in 6 departments in the eastern region.

School principals, teachers, students, watchmen, janitors, parents, and local authorities were interviewed, and a detailed visual inspection was conducted of all schools visited. The information collected is presented in Section V.4 of the Appendix.

Table 4.3

GUATEMALA: PUBLIC PRIMARY EDUCATION
NUMBER OF NON CLASSROOMS ACCORDING TO PHYSICAL CONDITION, AND USE OF ROOM

AREA AND USE OF ROOM	Buildings with Additional Rooms	TOTAL		GOOD		CONDITION REPARABLE		IRREPARABLE	
		Total	In Use	Total	In Use	Total	in Use	Total	In Use
TOTAL	3,273	6,659	5,584	4,005	3,247	2,221	1,950	433	387
Director		1,514	1,295	1,071	914	391	336	52	45
Sub-Director		18	22	12	20	6	2	-	-
Secretary		19	10	17	9	2	1	-	-
Library		141	119	106	94	32	22	3	3
Laboratory		10	10	10	10	-	-	-	-
Music		10	8	5	4	5	4	-	-
Shop		50	37	34	23	16	14	-	-
Multiple Use		100	95	43	41	51	48	6	6
Storage		973	869	640	560	287	267	46	42
Housing		1,776	1,374	1,028	749	620	520	128	105
Kitchen		1,471	1,275	684	551	612	560	175	164
Snack Room		129	103	61	49	60	46	3	8
Auditorium		187	156	103	82	81	73	3	3
Watchman		180	138	129	89	41	40	10	9
Others		81	71	62	52	17	17	2	2
URBAN	527	1,766	1,459	1,218	980	513	448	35	31
Director		545	461	397	330	141	124	7	7
Sub-Director		12	8	7	7	5	1	-	-
Secretary		15	6	13	5	2	1	-	-
Library		102	82	76	65	25	16	1	1
Laboratory		4	4	4	4	-	-	-	-
Music		10	8	5	4	5	4	-	-
Shop		24	22	12	11	12	11	-	-
Multiple Use		40	37	17	16	22	20	1	1
Storage		347	302	247	214	94	84	6	4

Table 4.3 (cont'd)

GUATEMALA: PUBLIC PRIMARY EDUCATION
NUMBER OF NON-CLASSROOMS ACCORDING TO PHYSICAL CONDITION, AND USE OF ROOM

AREA AND TYPE OF ROOM	Buildings with Additional Rooms	TOTAL		GOOD		REPARABLE		IRREPARABLE	
		Total	In Use	Total	In Use	Total	In Use	Total	In Use
URBAN									
Housing		20	15	11	8	9	7	-	-
Kitchen		300	243	198	145	91	88	11	10
Snack Room		56	41	34	24	20	15	2	2
Auditorium		99	81	53	42	46	39	-	-
Watchman		152	111	112	73	33	32	7	6
Others		40	38	32	32	8	6	-	-
RURAL	2,746	4,893	4,125	2,787	2,267	1,708	1,502	398	356
Director		969	834	674	584	250	212	45	38
Sub-Director		6	14	5	13	1	1	-	-
Secretary		4	4	4	4	-	-	-	-
Library		39	37	30	29	7	6	2	2
Laboratory		6	6	6	6	-	-	-	-
Music		-	-	-	-	-	-	-	-
Shop		26	15	22	12	4	3	-	-
Multiple Use		60	58	26	25	29	28	5	5
Storage		626	567	393	346	193	183	40	38
Housing		1,756	1,359	1,017	741	611	513	128	105
Kitchen		1,171	1,032	486	406	521	472	164	154
Snack Room		73	62	27	25	40	31	6	6
Auditorium		88	77	50	40	35	34	3	3
Watchman		28	27	17	16	8	8	3	3
Others		41	33	30	20	9	11	2	2

SOURCE: Situacion de la Infraestructura en la Escuela Primaria Rural en 1981. Proyecto PRODEPRIR, Ministerio de Educacion, Guatemala, 1982.

CHART 4.4

DIVISION OF PHYSICAL INFRASTRUCTURE — ORGANIZATION CHART

DIVISION DE INFRAESTRUCTURA FISICA

PROGRAMA NORMAS Y DISENOS	PROGRAMA PLANIFICACION Y PROGRAMACION	PROGRAMA INVENTARIO DE BIENES INMUEBLES
ELABORAR LAS NORMAS TECNICAS PARA EL: DISENO CONSTRUCCION MANTENIMIENTO Y EQUIPAMIENTO DE EDIFICIOS EDUCATIVOS	PROGRAMAR LA: LOCALIZACION CONSTRUCCION MANTENIMIENTO Y REPARACION DE EDIFICIOS EDUCATIVOS	REALIZAR Y ACTUALIZAR EL: INVENTARIO DE BIENES INMUEBLES DEL MINISTERIO DE EDUCACION A NIVEL NACIONAL
1. NORMAS DE DISENO 2. NORMAS DE CONSTRUCCION 3. NORMAS DE MANTENIMIENTO 4. NORMAS DE MOBILIARIO 5. ASESORIA EN DISEÑO	1. PROGRAMA REGULAR 2. PROYECTO PRODEPRIR 3. PROYECTO EDUPRIMUR 4. MICROPLANIFICACION FISICO-EDUCATIVA 5. LEGALIZACION	1. CONTROL Y LOCALIZACION 2. ARCHIVO MAESTRO 3. INTEGRACION DE INFORMACION 4. BANCO DE DATOS PARA PLANIFICACION

USIPE
DIVISION DE INFRAESTRUCTURA FISICA
1980

Other information was obtained directly from Ministry officials and technicians responsible for the construction and maintenance of schools, from the people who handle the supply of furniture, and from officials responsible for the supply of instructional materials and supplies.

4.3.2 Definition of Concepts

In general, there has not been agreement about the concept of school maintenance. In some cases, the term has been applied to reconstruction or rehabilitation of unusable classrooms or restoration of schools; in others, it has been used to refer to the addition of structures (classrooms, administrative buildings, shops, all-purpose rooms, etc.) or expansion of schools. It has also been used to mean major repairs (extension of classrooms, sanitary and water systems, etc.). In the majority of cases, however, it denotes minor repairs, such as partial repairs of roofs, walls, doors, windows, electrical connections, etc. In special instances, "maintenance" has meant the immediate repair of damage caused by accidents or emergencies, such as wind, storms, or minor earthquakes. The term is consistently used as a synonym for general cleaning of the school building.

The Manual of Maintenance of Educational Buildings, developed by the Physical Infrastructure Division of USIPE, clearly defines maintenance as the "design and execution of actions selected for their efficiency, to preserve or avoid possible damages in the constitutive elements of a school building." The manual adds that maintenance includes all activities required to preserve the school installation at optimum levels of hygiene and safety. In this concept are included the supply and repair of furniture, the supply and replacement of instructional material, and the provision of other material and utensils necessary to keep the school running without interruptions.

Chart 4.4 depicts the programs of USIPE's Division of Physical Infrastructure, which supports the activities described in the Manual.

4.3.3 The Importance of Maintenance

Rural families affected by difficult economic situations understand that better education for their children will improve their standards of living. With this in mind, many of them move to larger cities, in the belief that urban areas will provide ample opportunities for work, better schools, and access to variety of fields of education. The substandard conditions of the rural schools, physically and academically, only contribute to the negative image of the institution where children and teachers spend 20 per cent of their time. The school environment has a decisive impact on the attitudes and behaviors of the people involved in the education of the rural population. The teachers, affected by the lack of help from the government, feel frustrated; and with time, their enthusiasm and dedication start to decline. The physical condition of the rural school is depressing, and is one cause of the poor performance on the part of teachers and students. It is because of this that the condition and appearance of the schools is so important, and the maintenance program, so necessary.

The intervention of international agencies to improve the state of the schools remains an important part of the effort to solve the educational crisis in Guatemala. The Inter-american Development Bank, the World Bank, and USAID have provided significant amounts of assistance to Guatemala. AID has given special attention to the rural primary sector, as can be seen in Table 4.5. This table does not show the AID assistance from 1961 to 1967, which amounted to $2,973,494.

Table 4.5

AID ASSISTANCE TO PRIMARY SCHOOL SECTOR

Program No.	Revised Budget AID	GOG	Total	Remarks
520-L-015	8,600,000	6,600,000	15,200,000	
520-L-025	7,000,000	5,700,000	12,700,000	
520-L-029	5,200,000	6,218,000	11,418,000	Current 1983 budget
Butler Building Constr.	2,672,943		2,672,943	
Total AID-GOG	23,472,943	18,518,000	41,990,943	

However, no funds were invested in maintenance of rural primary schools, with the exception of repairs to schools damaged by the earthquake of 1976. While monies for maintenance were to be included in counterpart funds under Loan 029, they were never used for this purpose. Inflation started to affect the costs of construction; and in order to continue the building program, the maintenance item was eliminated.

The general policy has been to build more classrooms, rather than to maintain the existing ones so that they do not deteriorate. This has been true even under the USAID programs. Loan 029 allocated only 3.2 per cent of the original program budget to maintenance. The current revised budget does not consider maintenance at all.

Table 4.6 provides information about the current budgets of government entities now involved in school maintenance.

Table 4.6

BUDGET OF SEVERAL GOG INSTITUTIONS INVOLVED IN MAINTENANCE

Department of Public Works[1] - Primary System		
1984	Urban repairs, construction, and expansion	Q 1,821,803
	Rural repairs, construction, and expansion	Q 4,092,889
		Q 5,914,692
1985	Urban repairs, construction, and expansion	Q 878,690
	Rural repairs, construction, and expansion	Q 2,490,300
		Q 3,368,990
		Q 9,283,682
Department of Maintenance of School Buildings		
1984	Maintenance of schools - Primary and Secondary	Q 340,978
1985	Maintenance of schools - Primary and Secondary	Q 343,978
	TOTAL	Q 684,956
Department of Transportation of MOE		
1983	Transportation service and maintenance	Q 219,316
1984	Transportation service and maintenance	Q 221,098
1985	Transportation service and maintenance	Q 221,293
	TOTAL	Q 661,707
School Furniture		
1985	Supply of school furniture TOTAL	Q 600,000
Socio-Educativo Rural		
1984		Q 59,000
1985	No allocation was provided	-0-
	TOTAL	Q 59,000
PRODEPRIR		
1985	TOTAL	Q 1,133,082
UCEE[2]		
1984	Construction, repairs, and expansion - Urban	Q 7,745,729
	Construction, repairs, and expansion - Rural	Q11,810,832
		Q19,556,561
1985	Construction, repairs, and expansion - Urban	Q 7,332,079
	Construction, repairs, and expansion - Rural	Q 7,841,631
		Q15,173,710

[1] DPW works by force account.
[2] UCEE works only under contract.

4.3.4 AID-Financed Primary School Buildings

The AID school buildings were a breath of fresh air to the education system. New models, different styles, better concepts, modern architecture, advanced pedagogical systems, and recent discoveries about the psychology of teaching were all represented. The application of these concepts, and the renewed interest of the government, provided new hope and raised expectations throughout the educational system.

Listed below are the primary reasons why the schools under the AID program are better maintained than others:

1) The strict adherence to construction standards established by UCEE.

2) The quality and type of materials used in the construction.

3) The quality of construction maintained by the contracting engineers (construction); the supervisory firms (architects); and UCEE, who was in charge of the implementation program.

4) The attitude of teachers and students toward a new, modern environment.

5) The ease of maintaining the premises.

6) The extra attention given by the MOE to programs financed by international agencies.

7) The comfort created by the distribution of space.

All these factors contribute directly or indirectly to a different attitude toward maintenance. Chart 4.7 provides a summary of the current condition of school buildings financed by AID.

As an important footnote, it would be interesting to investigate the use of the PL-480 Program, in either form, to finance any future project for school maintenance. This assistance could be channeled through municipalities, which would be interested in participating. Guatemala, which is struggling with its economy while trying to improve the school system, needs extraordinary solutions, and this appears to be one alternative.

4.4 Institutions Involved in Maintenance

In the past, several institutions have provided help in the field of maintenance. The most significant assistance in this area comes from the following entities.

4.4.1 Unidad Sectorial de Investigacion y Planificacion Educativa (USIPE)

Created in 1977, this institution is responsible for the study, planning, and organization of various programs within the Ministry of Education. It also establishes and maintains contacts with international organizations. Its programs include:

1) Development, follow up, and evaluation of the measures necessary to comply with actions taken by the Ministry, in accordance with the National Plan for Education, Science and Culture.

2) Formulation of proposals for evaluation required to improve the effectiveness of actions taken by the Ministry.

3) Preparation of the long, medium, and short-range plans contemplated in the National Plan for Education, Science and Culture, in coordination with the General Economic Planning Council.

4.4.2 Directorate of Public Works (DGOP)

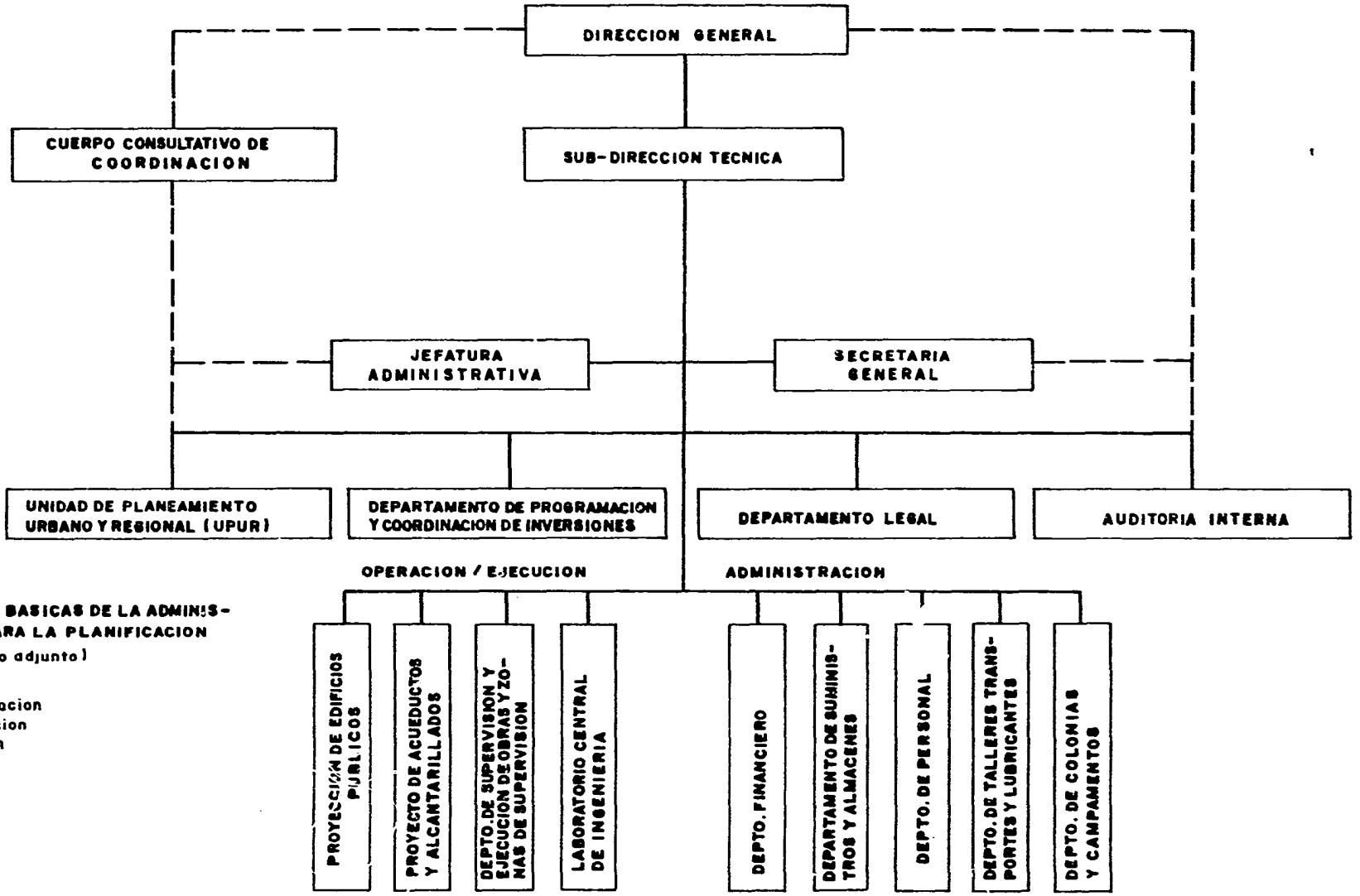
The organization and programs of this directorate within the Ministry of Communications, Transportation and Public Works, is depicted in Charts 4.8 and 4.9. This is a decentralized department which operates throughout the country in ten zones of work, shown in Chart 4.10. It is responsible for repair, construction, and expansion of public buildings, roads, bridges, and schools. Immediate assistance is provided without consultation if the amount involved does not surpass Q300, until the budget is exhausted. If the repairs require more than this amount, the request goes to the Programming Department, where a budget is assigned for the next fiscal year.

The DGOP provides preventive and corrective maintenance for the school system. Its administrative department includes 17 employees, working in accounting, personnel, programming, and supervision. In the field department, there are 120 qualified laborers, including masons, plumbers, electricians, painters, etc.

As of this year, the DGOP responds only to requests for services from the metropolitan area, as there is no budget for per diem to travel outside of Guatemala City. There are funds for materials to be used outside the capital, however. Requests for these are met by depositing the materials in the maintenance department, where they are picked up by the petitioners.

The operations of the DGOP are controlled by its administrative department, which established the requisition procedures that must be followed. However, the DGOP does not comply with standards of construction, including the types of classrooms, dimensions, materials, and other procedures and regulations, set by USIPE. In many cases the DGOP first responds to requests and only later reports to USIPE, which sometimes leads to duplication of effort between the two agencies.

CHART 4.8
ORGANIZATION OF THE DIRECTORATE-GENERAL OF PUBLIC WORKS



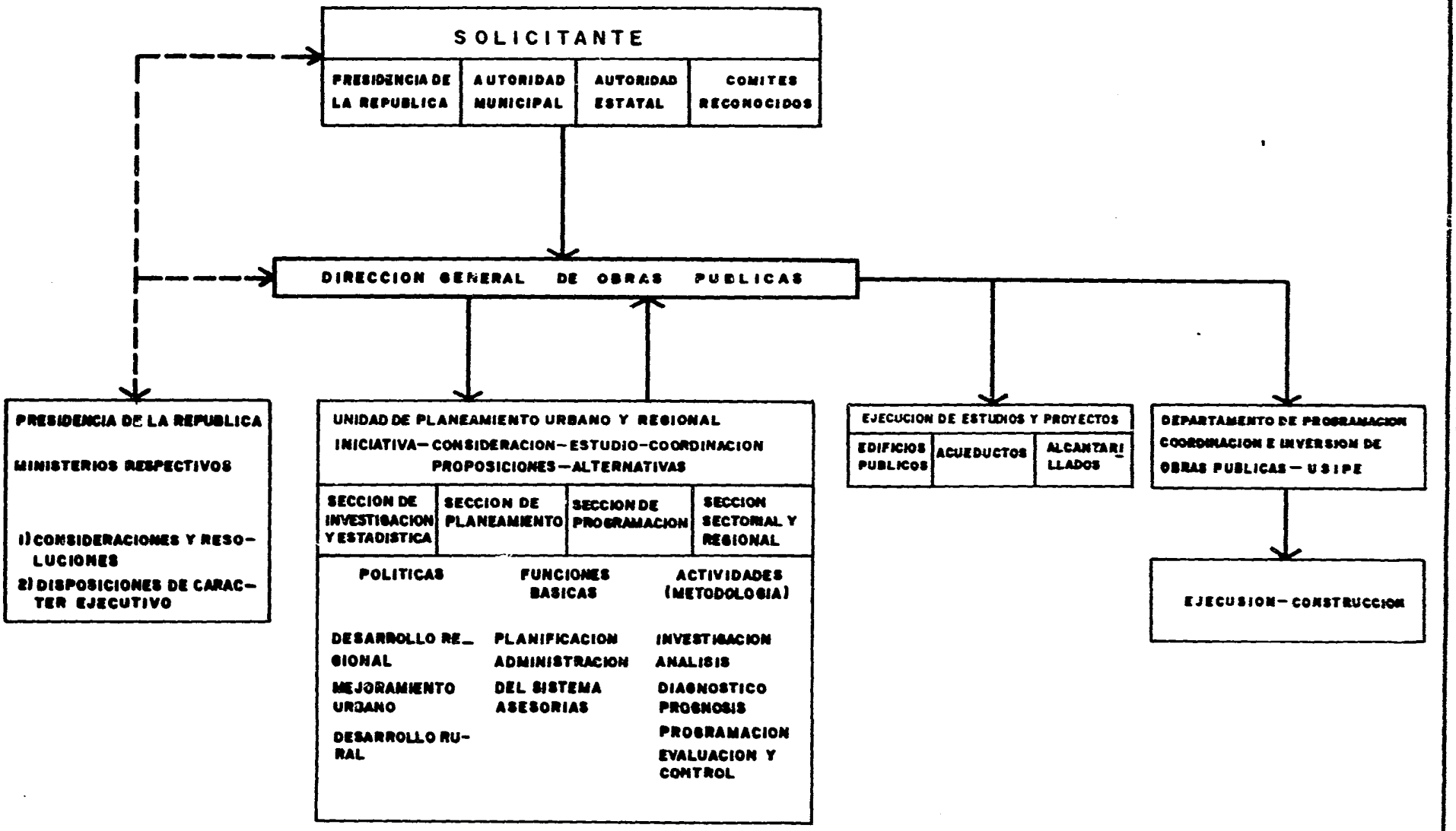
FUNCIONES BASICAS DE LA ADMINISTRACION PARA LA PLANIFICACION
(Ver cuadro adjunto)

1.- Decision
2._Especificacion
3._Coordinacion
4._Operacion
5._Control

_____ Linea de mando
_____ Relacion Constante

CHART 4.9

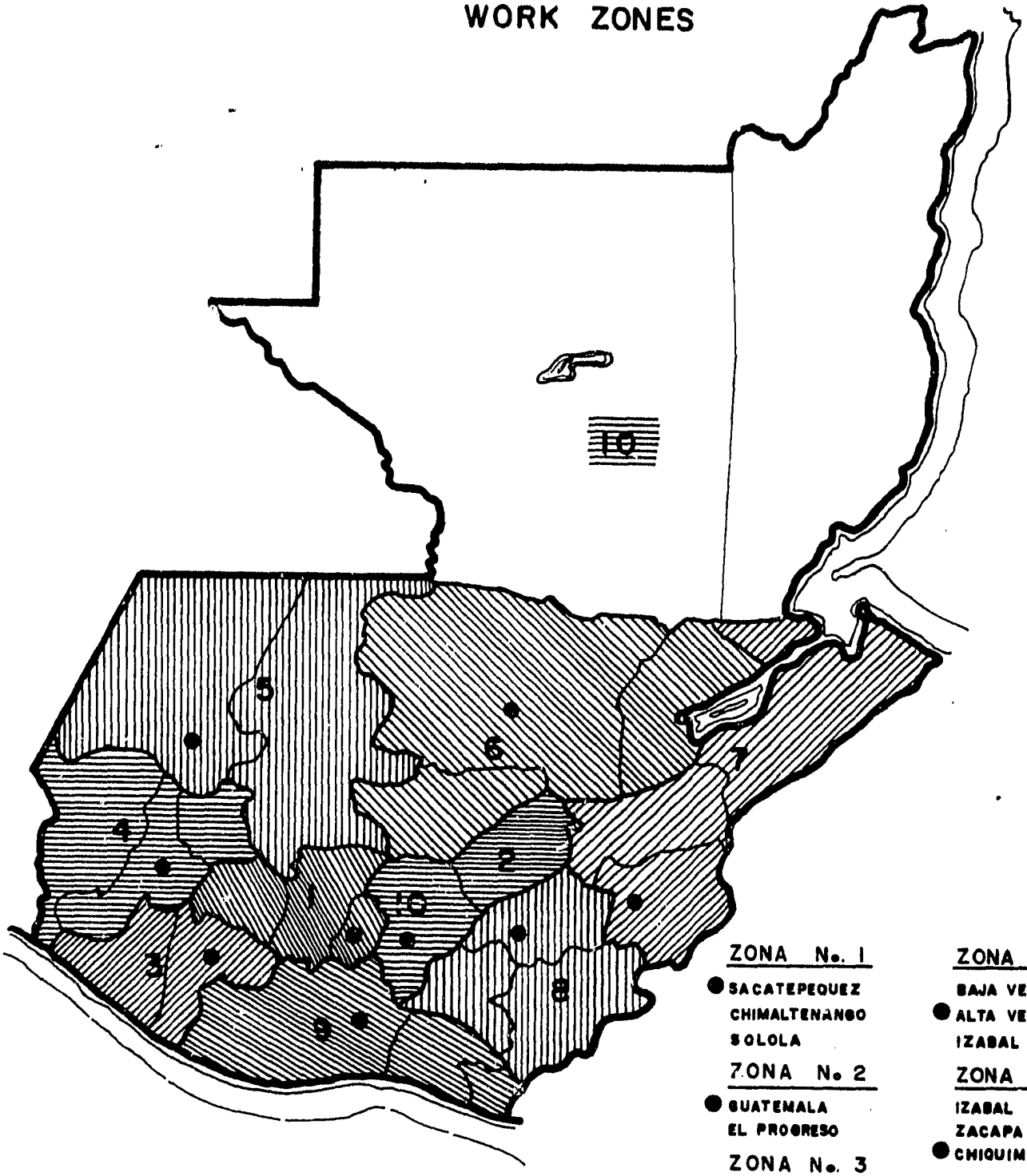
PROGRAMS OF THE DIRECTORATE-GENERAL OF PUBLIC WORKS



UNIDAD DE PLANEAMIENTO URBANO Y REGIONAL

DIRECCION GENERAL DE OBRAS P

CHART 4.10
DIRECTORATE-GENERAL OF PUBLIC WORKS
WORK ZONES



ZONA No. 1
- SACATEPEQUEZ
- CHIMALTENANGO
- SOLOLA

ZONA No 2
- GUATEMALA
- EL PROGRESO

ZONA No. 3
- SUCHITEPEQUEZ
- RETALHULEU

ZONA No. 4
- TOTONICAPAN
- QUETZALTENANGO
- SAN MARCOS

ZONA No. 5
- HUEHUETENANGO
- QUICHE

ZONA No 6
- BAJA VERAPAZ
- ALTA VERAPAZ
- IZABAL

ZONA No 7
- IZABAL
- ZACAPA
- CHIQUIMULA

ZONA No. 8
- JALAPA
- JUTIAPA
- STA ROSA

ZONA No 9
- ESCUINTLA
- STA ROSA
- JUTIAPA

ZONA No. 10
- GUATEMALA
- PETEN

● SEDE

UNIDAD DE PLANEAMIENTO URBANO Y REGIONAL
DIRECCION GENERAL DE OBRAS PUBLICAS
1963

4.4.3 Directorate of Community Development (DESACOM)

This institution, directly affiliated with the president's office, is responsible for coordinating the work and resources of the communities; and helping other groups to accomplish their stated goals.

It provides the necessary organization to programs at the community level, coordinating the activities of communities, national, and international agencies, and local centers, with the support of regional and national offices. The DESACOM's objectives are:

1) To promote socially stable communities.

2) To provide communities with operational guidelines and assistance with legal issues, in order to bring the majority of disadvantaged rural residents into the social, economic, and cultural mainstream.

3) To improve the municipal governments, providing the means and capabilities to strengthen community development.

4) To help rural people acquire the skills and abilities required to solve community problems.

5) To improve living standards.

In 1985, DESACOM received no economic support from the government. It has not been able to operate as in the past, and is using only materials and supplies already in storage.

The municipalities play a very important role in the construction and repair of rural schools. In many cases, this is the only source of assistance. The municipalities donate land, help build the school, provide economic support, and promote feelings of pride among the rural residents, by imbuing them with a sense of ownership.

4.5 Major Problems in Maintenance

The problems in rural schools can be categorized into three types: physical, or structural; economic; and administrative.

4.5.1 Physical Problems

These problems relate to structural aspects of the school, or to the functioning of services which affect the health or safety of the school users. In order of priority, they are the following.

4.5.1.1 Sanitary Services. The situation in terms of these services is very serious in the majority of schools. The major problems are:

1) There are many latrines with the septic tank clogged up, almost or completely filled.

2) Toilets, where found, do not operate properly. Ninety per cent of the flush tanks are damaged, and most of them are without covers.

3) Some of the washable latrine systems are inoperative because of lack of water or poor drainage.

4) The exterior cleanliness of the latrines should be improved. Frequently, teachers did not know how many latrines were in the school, which indicates an absolute lack of supervision when the children clean the bowls.

5) Instructions for sanitary-system maintenance were often missing.

6) The location of latrines, in relation to wind direction, creates a nuisance in some cases.

7) Ventilation in some latrines is poor.

8) Many latrines, especially those which do not have good drainage systems, are located in close proximity to classrooms.

4.5.1.2 Furniture and Supplies. The shortage of furniture is one of the most serious problems facing the Guatemalan education system. Very few schools have an adequate number of desks, tables, chairs, bookcases, or blackboards, and the existing ones are in poor condition. There is no uniformity in terms of style. In one school, the fifth and sixth grades have no benches, and students must stand.

The supply of materials is negligible. In one school the entire year's supply consisted of one box of chalk, three reams of paper, and one book on religion. This lack of school equipment and supplies certainly contributes to the inefficiency of Guatemala's primary schools. Without simple equipment such as a blackboard, and without desks, chairs, benches, or tables, pupils are simply in a custodial situation. Research shows the presence of a blackboard and chalk, and a few reference books on a bookshelf, are correlated with higher learning achievements in developing countries.

Schools which are not equipped with the essentials for teaching are places where pupils have little chance to learn. Because so many schools lack these essentials, many children fail or drop out. No matter how

complete their preparation, or how intelligent or creative they may be, there is a minimum threshold of support below which teachers do not function effectively. And that threshold is the availability of a blackboard and chalk, some few teaching materials, and a place for students to sit and do work in their notebooks.

4.5.1.3 Structure and Construction

1) Water valves are of low quality and cannot withstand the high pressure existing in some schools, much less any tampering by users.

2) The electrical systems in a number of schools require repair. In some cases the electrical wiring is relatively new, but the connection to the main lines outside has not been made for lack of meters, or of a transformer when the outside line carries a high voltage. In the majority of cases, the fixtures are missing because of vandalism. Some of the buildings constructed under AID programs have shops with sophisticated electrical equipment, such as sewing machines, which have never been used for lack of transformers or simple connections. In one school, exterior electrical service has been provided through a long and expensive line with concrete posts, but the connection to the building has not been made. The new equipment occupies a room which was built to be used for other purposes.

3) At least 20 per cent of the doors are damaged to the extent that they cannot be used; another 15 per cent require repairs. Ninety per cent of the hardware on doors needs to be replaced becaue of its low quality. Up to 90 per cent of metal window frames are in good condition, but 20 per cent of the glass needs replacement. Windows facing recreational areas or sports fields are frequently damaged.

4) In general, roofs are in good shape. Some of the asbestos-cement corrugated plates are damaged. Roofs in schools with the old ceramic tiles are heavily damaged, as are their supports, and need replacement.

5) In 95 per cent of the cases, walls are in good condition. Small, fine cracks are due to temperature variations and are not a matter of great concern

6) Concrete slab is the most durable and resistant type of flooring. Its appearance is not very attractive, however; it is not easy to clean, and it ages quickly. Many schools have ceramic floor tiles instead, which offer beauty and ease of cleaning, but have lower durability. These floors are difficult to repair because of the variety of colors to be matched, but little damage was noted in the ceramic tile floors of the schools visited.

7) Gutters and downspouts need to be fixed. Supports are failing, channels are bent, and some sections of the vertical spouts are missing.

8) Painting is needed in 70 per cent of the schools visited.

It must be noted that during his short visits to a large number of representative schools, this writer found that the rural primary schools are generally better maintained than their urban counterparts. This demonstrates that the school and its facilities are of major concern to rural communities. Teachers in rural areas, particularly when they are from the same or nearby villages, consider the school to be a priority. Community committees, parents, and teachers take pride in their local school, and are willing to provide assistance when emergencies arise.

4.5.2 Economic Problems

The availability of funds is the principal obstacle to solving the major and most frequent problems of maintenance. The MOE will have to give special attention to this issue, because otherwise the number of classrooms lost through lack of maintenance will be larger than the number of new ones built, while enrollments increase at the rate of 5 per cent per year.

In the minds of everyone concerned with the problem, there is a clear vision of what to do and where the funding should come from. They understand, too, that Guatemala's economic situation argues against any immediate solution. Nevertheless, some changes should be made now. The incentive and sense of collaboration, provided by the mobilization of resources through community activities, should not be lost.

4.5.3 Administrative Problems

Many of the existing maintenance problems could be resolved through better understanding of their causes by on-site personnel. For example, supervision by teachers of the cleaning of the school site is important. Some teachers do not know the location and number of classrooms, number of latrines, number of students, or who to approach in the case of an emergency. Many teachers seemed unaware of the importance of the state of their environment for the development of their activities. They need the uniformity of a written guide based on common experiences. Knowledge of cleaning procedures, the operation of the sanitary systems, maintenance of dry wells or septic tanks, and consequences of neglecting to use certain chemicals, should be increased.

Most of the schools visited did not have a janitor or even a watchman. With few exceptions, the schools which did have janitors were better cleaned and maintained, within the constraints of the existing budget. Vandalism is increasing; and each school has valuable equipment, furniture, records, material, and food. The loss of these items creates a serious problem in terms of money as well as non-recoverable data and information.

Due to the tedious and costly procedure now required to request help for maintenance for any type of repair, an effort should be made to decentralize the maintenance program, using existing organizations at the departmental level. These organizations should reinforce the community's sense that the economic support of the school is their responsibility, as well as that of the local and central governments. Parents should be even more involved in school maintenance. They could provide the school with labor and the necessary tools for minor repairs, thus avoiding the delays and possible non-responsiveness of official requests for assistance.

Any official request for maintenance or repairs is now transmitted through different channels, to various institutions. A uniform and secure system of maintenance requests must be established, so that the requests are easy for the sender to complete and for the recipient to understand. The ability to schedule work and allocate resources effectively depends upon quality of the information contained in the request.

4.6 Recommendations

Some of the suggested solutions to the problems mentioned above are controversial, some can be applied immediately, and others require a long-term commitment. They are all intended to impress educators, teachers, parents, and students with the importance of regular maintenance.

The recommendations which follow are grouped according to the categories of problems: physical or structural; economic; and administrative.

4.6.1 Physical

1) A mobile maintenance unit should be created to clean the dry or wet wells of the schools with latrines. Lack of cleanliness is the major cause of inoperability. This job can be done year-round during the hours the school is not in use, by the method described in Appendix V.2. As an alternative, a field crew of three could be created to do the same job. One of them should be trained specifically to direct two other locally hired workers. With regular cleaning, the latrines can be reused, eliminating the need for construction of new facilities and reducing costs substantially. Sludge extracted from wells should be dried and buried or used in other areas of the school as fertilizer, for bushes or trees but not for vegetables.[1]

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[1] The Ministry of Energy and Mines and the School of Engineering and Architecture can supply information about recent discoveries related to the use of sludge to produce gas or fertilizers.

2) Rather than invest large sums of money in the repair of the flushing tanks for sanitary systems with water closets (which will always create problems), it is recommended that a common tank be built. This might be exposed or hidden, as long as it is accessible. It should have a capacity of all flush tanks a float to control the water level. This tank would be flu when required and operated by a chain, rather than a butte handle. It would minimize water consumption and substantially reduce the cost of repairs.

3) To avoid the odor that emanates from the dry or wet wells, vent pipes should be extended above roof level.[1] Frequent use of harmless, inexpensive, and non-explosive chemicals is recommended. Sanitary units should be placed far from the main school buildings, unless vented, piped to a main public sewer, and well ventilated, or positioned properly in relation to wind direction.

4) The valves of all services, water and sanitary, should be changed to the globe type, as these are more durable. Buying valves according to brand name is very important, to eliminate the possibility of purchasing so-called "pirate brands," which are poor imitations. In areas where it is considered important, pressure-reducing valves should be used.

5 Furniture should be selected according to durability and ease of repair. The new policy of the Department of School Furniture is to build wood-and-screw furniture, which appears to be appropriate. Parts are easy to remove and replace. Metal furniture is considered to be the best for strength and durability, but its repair requires sophisticated equipment. Therefore it is not recommended. An intensive program of replacement, repair, and painting of school furniture should be completed over a five-year period.

6, Shops and equipment should be renovated, and unused equipment and tools distributed to other schools which might be in need of them. AID should be involved in this process, since most of the property was provided under programs which they financed. Inventories of equipment and materials should be made, to determine the location of all items. Not all materials were provided as planned; and some have disappeared through vandalism or other diversions.

7) The electrical systems in schools must be repaired. INDE could produce cost estimates for the installation or repairs required. Used or rebuilt transformers could be acquired at low cost, as

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[1] Ventilation of latrine modules is very important. High, large openings are required, especially in the side facing away from classroom areas.

part of a campaign to upgrade the status of vocational training in rural schools. Such a campaign should be initiated at high administrative levels.

8) Unused equipment or materials should be removed from shops, to free up space for use as classrooms.

9) Metal doors are durable in dry and non-salty areas, but are expensive and difficult to repair because they require sophisticated equipment and specialized labor which is not often available in the villages. Hard and durable, overlapped wood should be used instead, screwed in all its parts. These should be cheaper than steel doors, because wood is a local material. During the side visits, it was determined that door locks varied in sophistication and were damaged in 75 per cent of the cases. It is recommended that the new type of lock adopted by Public Works be used in the construction of new schools. They are of low cost, locally made, and very durable (Pasador).

10) Windows in school buildings differ by type, material, and location. USIPE is trying to introduce uniform standards, according to the geographic location and climate of the school site. It is suggested that consideration be given to the use of ornamental blocks, red ceramic or concrete, in the window openings. They are relatively inexpensive; they permit excellent ventilation, look attractive, and, to a certain extent, are vandalism-proof. If necessary, windows could be covered internally by heavy mesh, "Cyclone" type (1-1/2" x 1-1/2", galvanized or vinyl covered), which requires little or no maintenance and eliminates the need for glass or frames. Existing windows, given that 20 per cent of the panes are broken or made of plastic, are a source of high maintenance costs. It would be appropriate to provide a mesh cover of the type described for the windows exposed to damage from recreational areas and sports fields, which are those most in need of attention. Windows should be high, so that the students cannot reach them.

11) School roofs now show the effects of wear and lack of maintenance. Corrugated metal covers are rusting in 20 per cent of the schools. Some 10 per cent of corrugated asbestos-cement covers show signs of damage. Ceramic tiles and their supports in the typical, old-fashioned roofs are in disrepair in 70 per cent of cases. These roofing problems, however, are most common in older schools, where the classrooms will require replacement in the near future. In most cases, the walls are of adobe, which is no longer used by the Ministry of Education. The roofs of the new schools, particularly those financed by AID, are in good condition in 95 per cent of cases. It would be interesting to study the use of transparent corrugated plastic plates, combined with corrugated asbestos-cement plates, as a way to provide more illumination to the classrooms. They are durable, and filter the heat and the sun.

12) Walls made of concrete blocks or mortar blocks are durable and painting them should be prohibited for perhaps ten years. Schools built in 1973 still have a nice appearance; to paint them now would only create a maintenance problem in a short period of time. Unless a high-quality paint were used, they would have to be repainted soon. Cleaning the blocks with chemical products is more acceptable and can be done quickly without scrubbing the wall. If they must be painted, uniform pale tints should be used; preferably light gray, light green, or white, when there is not good lighting in the classroom. Painting is required in other areas, however. Steel structures, especially those which support the roof, need immediate attention. To neglect this could cause the early deterioration of those structures and put in jeopardy the life of the school. In the interest of easy cleaning, durability, and low cost, it is recommended that cement tiles with granitic cover be used for floors. Concrete floors, after a few years of use, are difficult to clean and always look dusty. If the size, color, and method of placement are appropriate, suppliers might consider manufacturing a "school-type" tile to guarantee the availability of this product in the future.

13) Gutters and downspouts can be fixed under a repair program. They are not expensive, and the majority of them are easy to repair. This is another instance in which a maintenance manual would be useful.

4.6.2 Economic

The recommendations contained in this section are critical to the establishment of a sound maintenance program; they may also prove to be the most controversial. The economic situation in Guatemala limits the availability of funds just when it is necessary to invest for the future of the school system. Some of the recommendations require difficult decisions which may offend some personnel. Controversy may arise over the recommended plan to decentralize the maintenance program through the establishment of funds to be managed by the school or local community.

1) A fund within each public primary school should be created, based on Q2 per classroom per month or Q20 per year, to satisfy the immediate needs of a recurring and preventive maintenance program. This fund would be managed by a financial committee at the school, or by the parents' association. No other outside entity should have any authority to disburse these funds. If the school population justifies the use of two shifts, the fund would increase. In no case should a classroom operating above capacity consider receiving extra funds. By the same token, a classroom that is below capacity should not be deprived of the regular per-classroom amount.

2) Corrective maintenance should be carried out by the Department of Public Works, which has been providing outstanding help to the school system in rural areas. The maximum expenditure of Q300 should be provided in materials and qualified labor. This should not lead, however, to the elimination of the support which communities have been providing to the rural school system; on the contrary, efforts should be made to overcome the feeling common in rural areas that urban schools receive more attention and funds.

3) Repairs beyond the Q300 limitation should be programmed by USIPE and carried out by the Department of Public Works or by contract with UCEE, depending upon time constraints and the cost of the project.

4) Visits to rural areas should be conducted only according to a regular, normal supervisory schedule. The creation of a comprehensive maintenance request and evaluation sheet to be filled out by a responsible member of each rural school, would minimize the extraordinary and frequent per diem expenses for unnecessary trips. Instead, visits by the departmental supervisor should be more frequent, and he should give special attention to school maintenance. A directive from USIPE to all departmental supervisors should focus their attention on this task.

5) The Department of Maintenance of the MOE should be eliminated, in view of its inoperability, high degree of centralization, and disruptive practices. When visited by the Assessment team, this department was under legal investigation. The funds allocated to it should be transferred to the new system for school maintenance.

6) If the rural school system is going to continue to suffer from lack of support by the Department of School Furniture, the Q0.50 now paid by each student to that institution should be used instead to finance a program of furniture construction in the regional vocational schools. This would stimulate these schools to use their creative ability for construction, and encourage teachers to redouble their efforts to find material for the construction of furniture.

7) The economic means should be found to initiate the program of repairs outlined in the section on physical recommendations, above.

8) The Manual of Maintenance should be widely disseminated, at a cost of about Q6.00 per copy. Every school should have a copy of this important guide.

4.6.3 Administrative

These recommendations are intended to improve the maintenance system through the adoption of new policies and the dissemination of information related to those policies. The improvement of communication between the rural schools and USIPE through the departmental supervisors, and the increased awareness of the importance of maintenance as a parallel task to teaching, are important tasks.

1) Sponsor workshops on maintenance or include this subject in any workshop at the departmental or national level, to educate personnel about maintenance procedures and to allow the exchange of views, experiences, and new ideas about how to improve maintenance programs. One innovation might be to ask the members of the village to make brooms, provide garbage receptacles, or incinerate and bury trash. Rural people are highly creative in devising solutions to their problems.

2) Create an appropriate and useful request form for repairs, in triplicate: one copy for the school, another for the departmental supervisor, and the original for USIPE.

3) Improve the existing evaluation form by incorporating those factors which relate to maintenance. For example, include the existence of watchmen or janitors; the maintenance condition of the building; and other items not now part of the form.

4) Send all teachers a memorandum which points out the importance of school maintenance and asks them to include maintenance in their curricula.

5) Complete the maintenance manual prepared by USIPE, publish it in a quantity sufficient to cover the number of primary schools in the country, and distribute it. Make absolutely sure that the manual arrives at each school.

6) If the MOE Maintenance Department is eliminated as recommended, identify procedures for transferring funds from that department to the rural schools. The department's 1985 budget amounts to Q343,978.

7) Given the agreement of all appropriate officials, make arrangements to transfer equipment, materials, tools, etc., from schools built under the AID programs to others that can use these items. As a large amount of space will be made available by moving out the equipment, partitions should be erected so that two classrooms rather than one could be created at each site. Other arrangements most convenient to the individual schools could also be made.

8) Start to move to double-shifts where classrooms are severely overcrowded or where there are unenrolled children in the school's area. Creating a classroom fund is one incentive for teachers to teach the afternoon shift. During the site visits, a teacher was seen working in the afternoon with students who were behind in their studies. This teacher did not expect remuneration; when asked why she was doing it, she replied that she did not have much to do in the afternoon. This kind of dedication is indicative of the attitude of some teachers. A memorandum requesting their opinion might help to introduce the afternoon shift on a voluntary basis.

9) The possibility of providing what might be called a "School Maintenance Kit" should be studied. This kit should contain the necessary tools and materials for small repairs, and it would become the property of each school. Such a kit, along with the maintenance manual, could prevent deterioration of the school.

10) Create short manuals on do-it-yourself maintenance for particular areas such as latrines and water systems, and distribute them as soon as they are published.

11) Sponsor workshops on school maintenance, involving both the communities and the private sector.

12) Select materials and construction modes which require minimal maintenance.

13) Give priority during any school construction program to those buildings which are considered "irreparable," so that they can be replaced.

14) Recommend that in any future AID program addressed to primary school construction, an item and fund for maintenance be included, amounting to at least 5 per cent of the total budget. No revision of that item or diversion of its funds should be permitted by any party, in order to guarantee the preservation of the maintenance program.

4.7 Special Recommendations with Respect to USIPE

4.7.1 Overview

USIPE has operated successfully in the past, but it now requires additional support, in terms of the maintenance program. It is necessary to strengthen this institution so that it can meet the needs of the educational system in general, and the rural primary system in particular.

The process of providing maintenance to the rural school system has been channeled through different institutions, public and private. In many cases, USIPE--the regulatory agency created for the purpose--has

been circumvented. Petitions submitted on different forms arrive at USIPE and create the need to send technicians to estimate and evaluate the request for repairs, adding per diem and transportation expenses to the actual maintenance cost. Requests for repairs made simultaneously to different agencies can lead to a duplication of effort. It is imperative that USIPE take the lead in the field of maintenance, and become the repository for all requests from the rural primary system. USIPE should receive requests, tabulate them immediately, and decide how and when the school repairs should be made. Private firms, religious institutions, and charitable agencies, foreign and local, are often willing to help certain schools because of the commendable work of principals or teachers. This type of assistance, as well as any other help provided to the school, should be reported to USIPE to maintain records which are important in meeting the future needs of the school.

4.7.2 Recommendation

The existing evaluation form used by USIPE should be accompanied by another, which would collect accurate information relative to maintenance. Each year before the end of the school session, a responsible member of the school should receive a copy of the questionnaire from the Departmental Supervisor. The recipient should make the easy evaluation and send it to USIPE. Subsequently, during the annual visit to the school by supervisors, this information could be updated or corrected. It is very important that this measure be taken, because it provides accurate and detailed information which may not be collected during short and irregular site visits.

The importance of these records and the vast amount of information to be acquired suggests the need to computerize the system for quick identification and interpretation of available data.

4.8 Cost of Rural Primary Classrooms

Upgrading and reconditioning rural primary classrooms brings new life to the school through improvements in physical appearance. The life of the structure can only be extended, and a new look brought to its environment. The life expectancy of a school has been set at 40 years; external conditions can increase or reduce this figure.

Funds invested in upgrading the appearance of a school will not only add an extra ten years to its life; they will also improve the attitudes of teachers and students. But improvements will be futile if the normal maintenance procedures outlined in this report are not followed in the years to come. All the components of the maintenance program should be put into effect as part of the effort to maintain more and build much more, in order to reduce the existing imbalance in access, equity, and class size.

4.8.1 Calculations of Replacement Cost

The assumptions made to calculate the replacement cost for classrooms in "Fair," "Good," and "Bad" condition must be justified on the basis of what has to be done in each particular case.

The enormous variety of classroom types makes it difficult to identify an accurate cost average across all cases. Based on the results of our site visits, however, a close approximation has been made, which relates to the replacement cost of classrooms.

These replacement costs take into account the community's help, reducing effective costs by 40 per cent, because that help represents the cost of unskilled labor. Furthermore, no amounts for taxes, profits, or licenses have been included, placing this cost below typical contractor prices. Inflation is not included; in the future it will have to be factored in, using 1985 unit costs as the base.

The cost for total replacement of those classrooms in "Bad" condition is based on current prices. And all costs are calculated for the classroom, not for the entire school. These would be lower per square meter, but higher per classroom.

Chart 4.11 presents the costs of upgrading classrooms, according to "good," "fair," and "bad" classifications.

4.8.2 Classrooms in the country

1)	Total number of classrooms in use	10,143
2)	Total number of classrooms not in use	1,625
3)	Total number of classrooms in existence	11,768

Classrooms in good condition in the country

1)	Total number of classrooms in use	5,484
2)	Total number of classrooms not in use	1,003
3)	Total number of classrooms in existence	6,487

Classrooms in fair condition in the country

1)	Total number of classrooms in use	3,646
2)	Total number of classrooms not in use	610
3)	Total number of classrooms in existence	4,256

Classrooms in bad condition in the country
(not repairable)

1)	Total number of classrooms in use	1,013
2)	Total number of classrooms not in use	12
3)	Total number of classrooms in existence	1,025

RURAL PRIMARY SCHOOL

BUDGET FOR A THREE YEARS PROGRAM OF CLASSROOM MAINTENANCE AND REPLACEMENT

ITEM		FY86	FY87	FY88	TOTAL	REMARKS
A	REPAIRS / REPLACEMENT	UNITS a COST	UNITS a COST	UNITS a COST	UNITS a COST	ASSUMES 10.143 C.R.
● A-1	CLASSROOMS IN "GOOD"	1650 a 600	2184 a 600	1650 a 600	5484 a 600	ASSUMES 10% NEW
	CONDITION	=Q 990.000	=Q 1,310.400	=Q 990.000	=Q 3,290.400	FURNITURE
● A-2	CLASSROOMS IN "FAIR"	1100 a 1800	1446 a 1,800	1100 a 1,800	3646 a 1,800	ASSUMES 10% NEW
	CONDITION	=Q 1,980.000	=Q 2,602,800	=Q 1,980.000	=Q 6,562.800	FURNITURE
●● A-3	CLASSROOMS IN FAIR	300 a 20,000	413 a 20,000	300 a 20,000	1013 a 20000	ASSUMES 100% NEW
	CONDITION, REPLACEMENT	=Q 6,000.000	=Q 8.260.000	=Q 6.000.000	=Q 20,260.000	FURNITURE
B	MAINTENANCE	UNITS a COST	UNITS a COST	UNITS a COST	UNITS a COST	
B-1	FUND INHERENT TO THE	3050 a 20.0	4043 a 20.0	3050 a 20.0	10143 a 20.0	FUNDS OBTAINED ELIMN.
	SCHOOL -PER CLASSROOMS	=Q 61.000	=Q 80,860	=Q 61,000	=Q 202.860	MAINT. DEPT. MOE
B-2	"SCHOOL KIT"	1700 a 50.0	2282 a 50.0	1700 a 50.0	5682 a 50.0	FOR 5682 SCHOOLS
	BELONGS TO EA. SCHOOL	=Q 85.000	=Q 114,100	=Q 85,000	=Q 284.100	
B-3	MAINTENANCE MANUAL	1700 a 6.0	2282 a 6.0	1700 a 6.0	5682 a 6.0	FOR 5682 SCHOOLS
	BELONGS TO EA. SCHOOL	=Q 10,200	=Q 13,692	=Q 10,200	=Q 34.092	
●●● C	FURNITURE AND MATERIAL	UNIT a COST	UNIT a COST	UNIT a COST	UNIT a COST	
C-1	DESKS, TABLES, CHAIRS,	1100 a 400	1446 a 400	1100 a 400	3646 a 400	FOR 3646 C.R. IN
	BLACKBOARDS, BOOKCABES	=Q 440,000	=Q 578.400	=Q 440.000	=Q 1.458.400	FAIR CONDITION
	TOTAL = QUETZALES	Q 9,566,200	Q 12,960,252	Q 9,566,200	Q 32,092,652	a Q 3.0 / ONE DOLLAR
	TOTAL = DOLLARS	$ 3,188,733	$ 4,320,084	$ 3,188.733	$ 10,697,550	APPROX.

● ASSUMES 10% FURNITURE REPLACEMENT
●● ASSUMES 100% FURNITURE REPLACEMENT
●●● ASSUMES 10% FURNITURE REPLACEMENT

We assign 1 year of cost-of-replacement to Category "Good Condition"

We assign 3 years of cost-of-replacement to Category "Fair Condition"

We assign 40 years of cost-of-replacement to Category "Bad Condition"

4.8.3 Classroom Replacement Cost

The actual cost of a classroom is approximately	Q16,000
The actual cost of furniture is approximately	Q 4,000
The total cost of a furnished classroom is	Q20,000
(See the latest UCCE and USIPE costs)	

1) If the actual cost of a new classroom is Q16,000 (AID model) and life expectancy is 40 years, then the replacement cost/year:

$$\frac{16,000}{40} = Q400 \text{ for the classroom itself.}$$

2) If the cost of furniture/room is Q4,000 (AID model) and life expectancy is 20 years, then the replacement cost/year:

$$\frac{4,000}{20} = Q200 \text{ for furniture/classroom}$$

Then replacement cost/year for furnished classroom = Q600

It has been assumed that the classrooms in "good condition" require 1 year of replacement cost; therefore we must invest: 1 x Q600 = 600/Classroom.

It has been assumed that the classrooms in "fair condition" require 3 years of replacement cost; therefore, we must invest: 3 x Q600 = Q1,800/Classroom

It has been assumed that the non-repairable classrooms are being replaced; therefore we must invest: Q20,000/ furnished classroom.

1) 5,484 Classrooms in "Good Condition" at Q600/CR	Q 3,290,400
2) 3,646 Classrooms in "Fair Condition" at Q1,800/CR	Q 6,542,800
	Q [illegible] 853,200
3) 1,013 Classrooms in "Bad Condition" at Q20,000/CR	Q20,260,000
	Q30,113,200
Q30,113,200 at Q3 = $1	$10,037,733

If done with community help, then the cost of materials is 60 per cent of total cost of repairs, or:

0.6 x Q9,853,200 = Q 5,911,920
0.6 x $3,284,400 = $ 1,970,640

4.8.4 Maintenance Program Cost

Cost of minor repairs and cleaning

Itemized cost of items/classroom/year

2	Brooms at Q2.00 each		Q 4.00
1	Mop		2.00
1	Hand trash picker		1.50
1	Pail		3.50
2	Brushes at Q0.75 each		1.50
1	Bowl brush		3.00
1	Glass cleaner (rubber-tip)	4.50	
			Q 20.00

This cost will be reduced if vocational schools or a village committee manufactures or donates any of the items.

Cost of School Maintenance Kit Q 50.00

4.8.5 Cost Justification for Classroom in "Fair" Condition

1)	Painting:		
	Roof supports	Q 150.00	
	Walls	450.00	
	Doors, windows	100.00	Q 700.00
2)	Floors:		
	Tiles or concrete repairs	Q 100.00	Q 100.00
3)	Walls:		
	Wall repairs	Q 100.00	Q 100.00
4)	Doors		
	Door repairs (frame, wood, nails)	Q 100.00	
	Change of locks	50.00	Q 150.00
5)	Windows		
	Frames	Q 50.00	
	Glass	Q 100.00	Q 150.00
6)	Roof:		
	Supports (structural)	Q 50.00	
	Ceiling	100.00	
	Cover (replacement of panels)	150.00	Q 300.00

7)	Electricity:		
	Accessories (switches, bulbs, others)	Q 50.00	
	Connections - wiring, repairs	50.00	
	Outside system	50.00	Q 150.00
8)	Furniture (3-year program)		
	20% desk replacement (4 2-person units)	400.00	
	Painting (desks, tables)	100.00	
	Tables, repair	50.00	Q 550.00
9)	Water System (School) 3-Year Program		
	Repairs	Q 75.00	
	Replacement of valves	25.00	Q 100.00
10)	School Materials - 3-Year Program		
	Blackboard repairs	Q 50.00	
	Books, 20% at Q10.00 each	200.00	
	Utensils	50.00	Q 300.00
11)	Fences and Gates (School) 3-Year Program		
	Mesh	Q 75.00	
	Gates	25.00	Q 100.00
12)	Recreation - School, 3-Year Program		
	Recreation areas	Q 25.00	
	Window protection	25.00	Q 50.00
13)	Other Rooms - School, 3-Year Program		
	All mentioned before	Q 150.00	Q 150.00
14)	Other contingencies	Q 100.00	Q 100.00
			Q3,000.00

If done with community help, the cost of unskilled labor is 40 per cent of the cost of construction; thus:

Cost of materials and skilled labor (foreman)

0.6 x Q3,000 = Q1,800.00

4.8.6 Cost Justification for Classroom in "Good Condition"

1)	Painting	N/A
2)	Floors	N/A
3)	Walls	N/A
4)	Doors	Q 50.00
5)	Windows	50.00
6)	Roof	100.00

7)	Electricity	- School, 3-year program	50.00	
8)	Furniture	- School, 3-year program	400.00	
9)	Water system	- School, 3-year program	50.00	
10)	School matls.	- School, 3-year program	200.00	
11)	Fences and gates		N/A	
12)	Recreation		25.00	
13)	Other rooms		50.00	
14)	Other contingencies		25.00	Q1,000.00

If done with community help, the cost of unskilled labor is 40 per cent of the cost of construction, thus:

Cost of materials and skilled labor (foreman):

0.6 x Q1,000 = Q600.00

The costs mentioned above are per classroom and include all materials and labor.

CHAPTER 5

SECONDARY EDUCATION

This chapter treats both levels of secondary education in Guatemala: the lower, or basic cycle, and the upper, or diversified cycle.

5.1 Historical Setting

Secondary and normal-school education was established in Guatemala in 1875. The administrations of Presidents Orellana and Chacon established both types of schools in Guatemala City and in the main departmental capitals. Ubico ordered several of them closed, including the Normal Superior and the Normal Schools of San Marcos, Coban, and Jalapa. After the October revolution, the government re-opened the normal schools which had been closed, and opened more in other departmental capitals.

In 1944, there were 13 public secondary and normal schools with 1,861 students. By 1954, there were 22, enrolling 7,098 students, an increase of 263 per cent. The growth of private secondary and normal schools was equally impressive, from 902 students in 1944 to 3,381 in 1954.

A drastic change in the nature of the secondary and normal curricula took place after the Revolution. They had been completely militarized under Ubico; and after the Revolution they were completely demilitarized. The students were given some choice of subject matter. Discussion rather than dictation was encouraged, and attempts were made to modernize teaching materials and equipment. Professors' councils were organized to provide more participation in the governance of these schools.

In the Convention of Santa Ana, a basic cycle of three years was established for the normal schools and the science and letters programs. In 1952, pre-vocational education was introduced into the curriculum of the common cycle, as the basic cycle was then called. Experimental, pre-vocational basic-cycle schools were created as a result.

From 1963 to 1972, according to the 1978 Education Sector Assessment, first-time students in the public secondary system increased at an annual rate of 8.6 per cent. According to the Plan Nacional de Desarrollo 1979-1982, Sector Educacion, the growth in public secondary education from 1965 to 1977 was from 23,000 to 75,000, an increase of 306 per cent. The private sector growth was from 25,000 to 60,000, a 240 per cent increase. In 1965, more than half of the students in secondary education were enrolled in private schools. In 1970 and 1971, the numbers were nearly equal. In 1972, the public sector enrolled 2,000

more than the private, and by 1975 it enrolled 15,000 more students than the private sector. The cooperative schools first registered enrollments in 1974.

5.2 Goals and Strategies

The general objective stated in the 1984-86 National Development Plan for Education is to raise the education level of the population and promote a more effective relationship between education and the processes of national development. Secondary education is charged with responsibility for linking education to employment, involving local communities in self-help initiatives, and coordinating its own activities and programs with those of institutions offering higher levels of education, as well as with other entities committed to national development. In pursuit of these goals, the Plan offers the following as strategies at this level:

1) Curriculum design at the basic level which allows for regional and local adaptation of up to 40 per cent of the content, with the remaining 60 per cent standardized across the nation.

2) Technical career preparation at the diversified level which is responsive to the local, regional, and national labor market.

3) Revision of practice-teaching plans in the normal schools, so that student teachers are better prepared to perform well in their professions.

4) Reduction in the number of normal schools, in order to bring the supply of primary-school teachers more in line with actual and projected demand.

5) Increased emphasis on vocational programs, to encourage students to enter those tracks as opposed to the teacher-training programs.

Increasing opportunity for secondary education is not mentioned in the Plan, nor is expanded financing for cooperative schools, increasing the number of vocational-technical schools, or modernizing facilities at the secondary level. Mention is made of a change of emphasis in teacher training from rote-memorization techniques, although the methodology to be substituted is not specified.

Quite important is the absence of any promise for the extension of access to secondary education into the rural areas. There are few schools beyond the basic cycle which serve rural youth, apart from some teacher-training institutions. If these are closed, reducing that career option for rural students, other programs must be offered in their place, or rural students will simply be shut out of the diversified cycle. The policy decision to extend only primary education to rural areas was taken as necessary, given severe financial constraints and the rising expectations of rural people to some education. Eventually, a political decision will have to be made about secondary education for the same population, as the number of sixth-grade graduates increases. Unless

rural primary teachers deliberately fail large numbers of students, the demand for secondary education in rural areas will surely intensify.

5.3 Structure of Secondary Education

The levels of secondary education are depicted in Chart 3.2, in Chapter 3 of this Assessment. After completing the sixth grade of primary school, a student is eligible to enter the basic cycle of secondary school, which has two types of programs: the experimental, consisting of pre-vocational programs which may or may not be terminal, and the general culture program, which is academic. The cooperative school offers a type of general culture program, with some pre-vocational elements.

After completing three years of basic cycle, called grades 1, 2, and 3, a student is eligible to enroll in the diversified cycle. Some diversified-cycle programs use examinations to select those who wish to enter. The diversified cycle offers an array of programs in the technical area, which require three or four years to complete. Also offered is the three-year teacher-training program, which is severely overcrowded. Another is the science and literature track, which is a two-year academic program designed to lead to higher education. However, a student with a diploma from any diversified-cycle program can apply to the University of San Carlos, the national university, or any of the private universities.

The diversified cycle, especially the technical branch, is very complex in its opportunities. The basic cycle is fairly straightforward and functions something like a junior high school in the United States.

5.3.1 Enrollment

Enrollment figures for secondary education, by level and sector in 1983, are presented in Table 5.1. A total of 124,144 students were enrolled in the basic cycle, and nearly 66,000 were enrolled in diversified-cycle programs. There are twice as many public basic-cycle students in the first grade of the cycle as there are in the third. Whether this indicates a failure rate of that magnitude or a pattern of student dropout, or whether the first grade is simply attracting more students, is difficult to determine.

It appears that the private basic cycle is more efficient than the public, probably because it is more selective. The cooperative school enrollments reflect more efficiency than that of either of the other two classifications. This is encouraging because it is virtually the only low-cost secondary level available, especially in rural areas.

The diversified-cycle enrollment figures show that comparatively few basic-cycle graduates enter the fourth grade, which is the first year of the diversified cycle. The cost of remaining in a program in the public or private schools for more than three years may be too high for many. And it must be remembered that many students simply have no access to upper-level secondary schools.

Private diversified-cycle programs are an important feature of the secondary system; they enroll more than half of all upper-secondary students. Public per-pupil expenditures are high at the diversified level, so the country is saving a great deal of money by depending heavily on private secondary education. The cooperative school is financed partly by municipalities and partly by the users, so it operates at a very low cost to the government.

Secondary education is virtually unavailable in rural areas. Table 5.2 shows secondary enrollments by rural and urban schools, offering vivid proof that secondary education is an urban phenomenon. Only 4 per cent of all secondary students in Guatemala are enrolled in rural schools, and only 1.2 per cent are in rural public schools. To calculate the proportion of rural youth of high school age enrolled in secondary school, would require the use of tenths or hundredths of a per cent. Those in diversified-cycle programs, other than teacher education, are the lucky few who can live with relatives or friends in the capital.

Enrollment in the basic cycle is shown in Table 5.3 for 1982 and 1983. There was a small increase during this period in both public and private schools. Again, opportunities in the rural areas are limited. Of the 124,144 students enrolled in the basic cycle in 1983, only 6,767 were in rural schools. Few rural students have the opportunity to learn anything about industrial arts, rudimentary agriculture, or home economics. They are not prepared to enter the diversified cycle, should such a school even be available; and they are effectively blocked from ever pursuing higher education. If rural areas are to become economically viable, basic-cycle education must be offered there.

Enrollment in the diversified cycle is presented in Table 5.4, according to program. Accounting is even more popular than teacher training. The bilingual secretarial program is heavily attended, because the pay is good in this specialty. Very few students are enrolled in fields such as computing, communication, mechanics, or industrial arts, which includes electricity, electronics, the construction trades, auto mechanics, and plumbing. That relatively few students are enrolled in these programs signifies a lack of orientation to providing the skilled labor necessary for economic development. Enrollment is small in fields related to agriculture, the country's main occupation and primary source of exports. This specialty is given attention in the basic cycle at a very primitive level, and again in higher education programs, where scientific specialists are trained. In between these two levels of training is a very significant gap, with unfortunate consequences for the country's economy.

The distribution by gender of students in the basic cycle is presented in Table 5.5. Private basic-cycle schools were closer to having equal distribution by gender in 1983 than their public counterparts. The cooperative school had only 40 per cent female representation. The diversified cycle as shown in Table 5.6, had more equitable sex representation than the basic cycle in 1983. The private diversified-cycle schools had enrollments which were at least 50 per cent female, except at the fourth-grade level. These tables do not show rural-urban

Table 5.1

SECONDARY ENROLLMENTS BY LEVEL AND SECTOR
1983

	BASIC CYCLE				DIVERSIFIED				
	1	2	3	TOTAL	4	5	6	7	TOTAL
Public	27,472	18,538	15,435	61,445	13,436	10,477	8,072	627	32,612
Private	17,115	13,705	13,644	44,464	14,123	11,390	7,295	531	32,359
Cooperative	7,824	5,643	4,768	18,235	--	--	--	--	--
TOTAL	52,411	37,886	33,847	124,144	27,559	21,867	15,367	1,178	65,971

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Table 5.2

ALL SECONDARY ENROLLMENTS, TEACHERS, AND SCHOOLS
1983

	Students	Teachers	Schools
TOTAL	190,115	13,550	951
Public	94,057	3,862	192
Private	77,823	7,966	541
Cooperative	18,235	1,722	218
URBAN	182,344	12,820	866
Public	91,639	3,726	183
Private	75,298	7,685	508
Cooperative	15,407	1,409	175
RURAL	7,771	730	85
Public	2,418	136	9
Private	2,525	281	33
Cooperative	2,828	313	43

SOURCE: Proyecto de Regionalizacion y Suspension Educativas, Datos Estadisticos Educativos: 1983, USIPE-SEGEPLAN-UNESCO, 1984.

Table 5.3

NUMBER OF STUDENTS AND TEACHERS AND RATIO OF STUDENTS TO TEACHERS IN BASIC CYCLE

	1982	1983
Total Republic		
Students	114,769	124,144
Teachers	8,135	8,527
Student/Teacher Ratio	14.1	14.6
Total Republic, Public Schools		
Students	55,927	61,445
Teachers	2,414	2,488
Student/Teacher Ratio	23.2	24.7
Total Republic, Cooperative Schools		
Students	16,147	18,235
Teachers	1,564	1,722
Student/Teacher Ratio	10.3	10.5
Total Republic, Private Schools		
Students	42,695	44,464
Teachers	4,157	4,317
Student/Teacher Ratio	10.3	10.3
Total Urban Schools		
Students	109,075	117,377
Teachers	7,551	7,905
Student/Teacher Ratio	14.4	14.8
Total Public Urban Schools		
Students	54,125	59,566
Teachers	2,304	2,388
Student/Teacher Ratio	23.5	24.9

Table 5.3 (cont'd)

NUMBER OF STUDENTS AND TEACHERS AND RATIO OF STUDENTS TO TEACHERS IN BASIC CYCLE

	1982	1983
Total Private Urban Schools		
Students	40,746	42,404
Teachers	3,919	4,108
Student/Teacher Ratio	10.4	10.3
Total Cooperative Urban Schools		
Students	14,204	15,407
Teachers	1,328	1,409
Student/Teacher Ratio	10.7	10.9
Total Rural Schools		
Students	5,694	6,767
Teachers	584	622
Student/Teacher Ratio	9.8	10.9
Total Rural Public Schools		
Students	1,802	1,879
Teachers	110	100
Student/Teacher Ratio	16.4	18.8
Total Rural Private Schools		
Students	1,949	2,060
Teachers	238	209
Student/Teacher Ratio	8.2	9.9
Total Rural Cooperative Schools		
Students	1,943	2,828
Teachers	236	313
Student/Teacher Ratio	8.2	9.0

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Table 5.4

ENROLLMENTS IN DIVERSIFIED CYCLE BY TYPE OF PROGRAM

1983

	GRADE					
	4th	5th	6th	7th	% Women	Total
Science and Letters						
Public	836	584	36	--	13.8	1,456
Private	3,113	2,530	26	--	27.7	5,669
Total	3,949	3,114	62	--	24.8	7,125
Pre-School Normal						
Public	144	136	135	--	100.0	415
Private	332	269	287	--	99.9	888
Total	476	405	422	--	99.9	1,303
Primary Normal						
Public	3,472	2,635	3,033	0	55.3	9,140
Private	1,887	1,750	2,002	11	65.3	5,650
Total	5,359	4,385	5,035	11	59.3	14,790
Music Education						
Public	137	38	23	18	30.6	216
Private	18	14	8	6	26.1	46
Total	155	52	31	24	29.8	262
Physical Education						
Public	139	121	58	--	21.8	318
Domestic Science						
Public	168	105	124	--	100.0	397
Private	83	76	178	--	100.0	377
Total	251	181	302	--	100.0	734
Accounting						
Public	4,592	3,880	3,376	609	30.9	12,457
Private	4,224	3,210	2,905	534	36.6	10,873
Total	8,816	7,090	6,281	1,143	33.6	23,330

Table 5.4 (cont'd)

ENROLLMENTS IN DIVERSIFIED CYCLE BY TYPE OF PROGRAM

1983

	GRADE					
	4th	5th	6th	7th	% Women	Total
Secretary/Commercial						
Public	739	627	0	--	100.0	1,366
Private	1,068	971	31	--	98.3	2,070
Total	1,807	1,598	31	--	98.9	3,436
Bilingual Secretary						
Public	998	749	580	--	100.0	2,327
Private	1,396	987	888	--	99.7	3,271
Total	2,394	1,736	1,468	--	99.9	5,598
Administration						
Public	347	223	165	--	10.8	735
Private	482	391	187	--	27.9	1,060
Total	829	614	352	--	20.9	1,795
Marketing						
Public	128	297	--	--	23.5	425
Private	121	82	--	--	18.2	203
Total	249	379	--	--	21.8	628
Advertising						
Public	330	116	20	--	23.6	466
Private	547	532	540	--	24.1	1,619
Total	877	648	560	--	24.0	2,085
Trade and Industry						
Public	732	609	513	--	4.0	1,854
Private	404	258	165	--	1.8	827
Total	1,136	867	678	--	3.3	2,681
Mechanics						
Public	124	101	--	--	0.5	225
Construction						
Public	304	245	--	--	2.9	549
Tourism						
Private	37	23	--	--	65.0	60
Communication						
Private	16	7	--	--	30.4	23

Table 5.4 (cont'd)

ENROLLMENTS IN DIVERSIFIED CYCLE BY TYPE OF PROGRAM

1983

	GRADE					
	4th	5th	6th	7th	% Women	Total
Municipal Administration Public	87	11	9	--	15.0	107
Computing Private	170	93	--	--	30.4	263
Guidance Private	5	9	--	--	14.3	14
Agro-industry Private	78	15	52	--	11.0	145
Community Development Private	15	116	--	--	62.6	131
Police Technician Public	33	--	--	--	0	33
Commercial Administration Private	24	12	17	--	18.9	53
Management Private	18	23	9	--	26.0	50
Communications Science	12	22	--	--	8.8	34
Sub-total						65,772
Agricultural Science Public	167	166	166	--	0.0	500
TOTAL						66,272

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Table 5.5

NUMBER OF STUDENTS ENROLLED IN BASIC CYCLE
ACCORDING TO GRADE AND SEX

1983

	Number of Students	Number of Females	% Females
Total Republic	124,144	55,730	44.9
Total Public	61,445	26,940	43.8
Total Private	44,464	21,489	48.3
Total Cooperative	18,235	7,301	40.0
	First Grade		
Total Republic	52,411	23,040	44.0
Public	27,472	11,844	43.1
Private	17,115	8,095	47.3
Cooperative	7,824	3,101	39.6
	Second Grade		
Total Republic	37,886	17,146	45.3
Public	18,538	8,148	44.0
Private	13,705	6,711	49.0
Cooperative	5,643	2,287	40.5
	Third Grade		
Total Republic	33,847	15,544	45.9
Public	15,435	6,948	45.0
Private	13,644	6,683	49.0
Cooperative	4,768	1,913	40.1

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Table 5.6

NUMBER OF STUDENTS ENROLLED IN DIVERSIFIED CYCLE ACCORDING TO GRADE AND SEX

1983

	Number of Students	Number of Females	% Females
Total Republic	65,971	30,979	47.0
Total Public	32,612	14,147	43.4
Total Private	33,359	16,832	50.5
		Fourth Grade	
Total Republic	27,559	12,690	46.0
Public	13,436	5,783	43.0
Private	14,123	6,907	48.9
		Fifth Grade	
Total Republic	21,867	10,483	47.9
Public	10,477	4,692	44.8
Private	11,390	5,791	50.8
		Sixth Grade	
Total Republic	15,367	7,531	49.0
Public	8,072	3,536	43.8
Private	7,295	3,995	54.8

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

comparisons, but urban sex distribution is more equitable than rural. This is reflected in the data for private diversified, which is an urban institution.

5.3.2 Teachers

Comparison of the number of teachers and students in basic-cycle schools provides a detailed picture of the opportunity structure at that level. Table 5.3 shows that the student-teacher ratio was 14.1 in 1982 and 14.6 in 1983, for all basic-cycle schools in Guatemala. However, urban public schools had a much higher ratio of students to teachers. Rural public schools had a higher ratio than either rural or urban private schools. The lowest student-teacher ratio was in the rural cooperative schools.

Of the 8,527 basic-cycle teachers in 1983, 2,727 had certification as secondary teachers, and 4,411 had normal-school preparation. Only 184 had no certification. The basic-cycle level is between the professionalization of the upper secondary and the general preparation for primary-school teachers. Most teachers tend to move up beyond their preparation to enter the basic cycle, rather than to be prepared as secondary teachers and accept a lower level position.

There were 5,023 diversified-cycle teachers in 1983, of whom 1,829 had certification as secondary teachers, and 1,603 had normal-school preparation. Only 83 were teaching without certification. A surprisingly high number of people trained in normal schools are teaching at this level, probably because the pay is so low that university graduates are not attracted, given the nature of the working conditions, as well as the pay.

5.3.3 Facilities

Basic-cycle facilities range from primitive to impressive. Some teacher-training institutes are modern and well maintained. However, most facilities are old, crowded, and lacking virtually everything needed for effective instruction. The cooperative schools are in the worst condition, because they cannot count on significant, sustained financial support. These schools lack even the simplest equipment for industrial arts. They have next to nothing with which to show the students how to practice small-scale agriculture productively. In addition to the problems caused by lack of equipment, there are no teaching materials with which to illustrate what to do with tools, whether in agriculture, in shops, or in homes. The words of the instructor and a few reference books, plus drawings copied from the board in a pupil's notebook, are the sole teaching materials in most schools.

There appears to be little or nothing in public secondary-school budgets that would allow administrators to plan for acquiring equipment. Any requests submitted are simply not answered, probably because of inefficiency; or if they are answered, responses take months. Delivery times are measured in academic years rather than in weeks.

5.4 Programs

The programs for basic-cycle schools will be presented first, including both General Culture and Experimental Schools.

5.4.1 Basic-Cycle Schools

The curriculum of the general culture schools is as follows, according to Legislacion de los Planes de Estudio:

First Grade	Second Grade
Spanish I	II
Mathematics I	II (emphasis on Algebra)
Social Studies I	II
Natural Sciences I	II
English I	II
Industrial Arts or Home Economics I	II
Physical Education I	II
Aesthetic Education I	II

Third Grade

Spanish III
Mathematics III, with emphasis on Geometry
Social Studies III
Natural Sciences III
General Accounting
English III
Industrial Arts or Home Economics III
Physical Education III
Aesthetic Education III

The experimental basic-cycle schools with a commercial orientation have the following plans of study:

First Grade	Second Grade
Spanish I	II
Mathematics I	II
Social Studies I	II
Natural Sciences I	II
Foreign Language I	II
Plastic Arts I	II
Physical Education I	II
Musical Education I	II
Shorthand	Cataloging and Filing
Typing	Office Organization and Practice

Third Grade

Accounting
Editing and Correspondence

The experimental basic-cycle schools with industrial orientation have the following plans of study:

First Grade

Same as first 8 subjects of 1st grade, Commercial, plus:
Subjects for Boys:
Carpentry
Mechanics
Ceramics
Textiles
Printing
Other
For Girls:
Commercial Dress-making

Second Grade

Same as first 8 subjects of 2nd grade, Commercial, plus:
The same subjects for boys as in first grade of industrial and for girls: cooking.

Third Grade

Same as first 8 subjects of 3rd grade, Commercial, plus:
Accounting, in addition to same 5 subjects for boys and for girls: Home Industries

The plans of study for experimental basic-cycle schools with an agricultural orientation are as follows:

First Grade	Second Grade
Spanish I	II
Mathematics I	II
Social Studies I	II
Natural Sciences I	II
Foreign Language I	II
Plastic Arts I	II
Musical Education I	II
Physical Education I	II
Eduction for the Home I	II
Horticulture	Livestock
Gardening	Fowl Raising
	Hog Raising
	Rabbit Raising

Third Grade
III
III
III
III
III
III
III
III
Accounting
Practice in Raising
Grain and Basic Crops of the Region

A special curriculum abbreviated to two semesters for adults who enroll in the basic cycle is available. The plan of studies provides for a few pre-vocational courses, but most of the work is common to all types of programs. No electives are allowed.

The organization of the cooperative schools was established by Ministerial Decree in 1980. The law states that the purpose of the cooperative school is to meet the demand of people of the interior seeking secondary education, at the same time that it would be impossible to finance completely a new basic-cycle institution. The objectives include the statement that adolescents who cannot afford secondary education should have a chance to complete basic cycle. Another objective states that this type of school should serve cities and aldeas in the interior.

The governing commission of the cooperative has legal responsibility for the school. This is very different from other institutions in Guatemala. It is not completely public, but is recognized as a public entity. The Ministry officially certifies each cooperative institute. The governing commission can delegate authority to the president or vice-president of the cooperative. In real terms, the principal is usually delegated full authority by the governing board. Each cooperative

requires an agreement between the municipalities that wish to participate, the teachers with proper qualifications who wish to participate as members of the teaching and administrative staff, and parents of the students.

The support for the cooperative schools comes from student fees and contributions from municipalities, the Ministry of Education, and the private sector. Parents are expected to pay between Q3 and Q5 a month, per student. The municipalities in 1980 were to provide at least Q250 per year, per grade or section. The Guatemalan government was obliged that year to pay no more than Q2,000 per year, per grade or section. Buildings are sometimes loaned by a primary school to the cooperative school for use in the afternoon.

5.4.2 Diversified Cycle

The programs of the diversified cycle are officially classified into four types: Academic Preparation, Technical and Vocational Preparation, Artistic Preparation, and Normal Preparation. Each has a program sequence which consists mostly of required courses.

The teaching in both the basic and diversified cycles runs heavily to presentation of facts; examinations test for retention of them over periods of one to three months. Examinations are a necessary part of teaching, but research shows that shorter periods of time between tests are more effective for retention of facts and skills than are long intervals. The sooner a mistake is detected, the easier it is to correct.

Teaching in secondary schools is mostly theoretical and memory-based, because the official curriculum guides emphasize filling the students' days with courses. The list of required courses is long, and study sessions or practice periods are rare. The presumption is that one learns most if taught a long list of courses. The lack of equipment and teaching materials, except for the most rudimentary objects in most schools, also limits teachers to theoretical approaches, rather than to the application of concepts or principles.

Teachers also tend to use rote-memorization techniques and theoretical approaches because that is the tradition in secondary schools. They were taught by these methods and trained in their use. A very powerful strategy will be required to persuade them to do otherwise. Secondary education is much more static and resistant to change than is the primary system.

Secondary teaching in a large number of Guatemalan schools is not relevant to daily realities or practical experience. Rather, it is memory bound, passive, and traditional. For the most part, teachers are well intentioned; but some students in the diversified schools have leveled criticisms which call into question the integrity of some parts of the educational system. Four areas of concern have been identified. First, professors in a diversified-cycle school in the capital have demanded fees from students in return for passing grades. Second, students have been exempted from examinations by paying a professor an

amount of money. Third, there is a belief that some professors or administrators get money from the arrangements under which students must buy a special suit of clothes for an internship lasting one month. The cost of the suit to the student under this arrangement is Q120. Fourth, the teaching done by some professors reveals that they do not know their subjects and are not concerned about students learning them. The impression held by some students of the diversified cycle is one of low quality compounded by corruption.

Corruption in any form has a number of negative effects on a system of education. First, the corrupt institution is inefficient. It wastes resources, financial as well as human. Some good students may not be promoted because they lack money to pay bribes. Those who do pay and get promoted by doing so, only contribute to the low quality of graduates from the system. Second, failure rates, transition ratios, completion rates, or other data are not reliable in a corrupt system. They simply do not accurately represent actual practices. Third, improvement or reform of any system depends upon the presence of honest people who will behave with integrity. Technical recommendations are of no value to an organization which allows corrupt practices. Fourth, students are trained by example to either be honest or corrupt. Corruption is a powerful teacher, and its effects are lasting.

The students who have experienced dishonesty have no respect or regard for their schools, and they carry this low esteem to parents and public. Before all else, honesty and integrity must be perceived as the norm in diversified-cycle schools. And indeed, it is the norm in the majority of secondary schools. Many honest and dedicated teachers and administrators are struggling to turn their institutions into lively, activity-oriented centers of modern learning, which stimulate students to think. These professionals are faced with inadequate resources and lack of clear policies, rather than with problems of corruption in their ranks.

5.5 External Efficiency

An interesting aspect of upper-level secondary education in Guatemala is the number of non-academic programs and the attraction they have for students. Equally interesting is the fact that these programs are offered, and students enroll in them, with little or no concern for demand in the labor market. For example, the accounting field is full of students, few of whom will find work in this profession. Student interviews indicate that teachers tell them during their course of study that there are few jobs available. Despite this, enrollments in these programs remain high. The need for an assessment of the labor market is apparent, as is the need for the Ministry to distribute the findings to the schools and to the public. Career choices should not be made out of ignorance.

Chapters 7 and 8 of this Assessment treat the issue of placement of graduates from technical courses and teacher-training programs. As will be shown, there is little follow-up data available on these graduates. These chapters also point out the need for a national manpower study; none has been done in Guatemala, so far as the Assessment team could ascertain.

Chapter 10 includes information about the flow of diversified-cycle students into the universities, and treatment of that topic will not be repeated here.

5.5.1 Access to the Diversified Cycle

Transition rates from the last year of the basic to the first year of the diversified cycle have been estimated for the period from 1981 to 1983. These are presented in Table 5.7. They show that there are about twice as many students in the first diversified-cycle year as there were graduates from basic cycle the year before. Several factors account for this, including:

1) Repetition rates in the diversified cycle are very high.

2) Students do not necessarily go immediately from basic cycle to diversified; rather, they enter diversified when they deem it appropriate, advantageous, and economically possible.

Promotion rates from the basic cycle are not increasing; neither is the number of enrollments in the first year of diversified cycle. What is obvious from the 1981-83 figures is a limited opportunity structure, in which strata of people participate according to personal perceptions as well as economic, social, and political constraints. Students from rural areas, and the urban poor, are not able to take advantage of this eductional opportunity structure; participation by women is relatively low, as well. Access is limited to the segments of society that are urban, middle-class, and Ladino.

5.5.2 Rates of Return

Table 5.8 shows annual opportunity costs to rural and urban men and women for various levels of education. These figures are based on linear trends within each group; the percentage increase is the same for each year of education. the results are somewhat surprising. Bearing in mind that few rural women enter secondary school, much less attend the diversified cycle, the figures indicate that women have high employment value in rural areas, if only in terms of foregone household labor. According to this table, the opportunity cost to rural women after grade 17 is higher than that to any other group. Even at lower levels, costs to some groups of women exceed those to some groups of men; and at completion of grade 13, costs to rural women surpass those to their counterparts in the capital city. Women in cities other than the capital have the lowest opportunity costs of all groups.

The direct monetary benefit of education to rural and urban men and women for different levels is presented in Table 2.20 in Chapter 2. There is a slightly higher annual return to rural women for basic cycle than for total primary, while rural and urban men who finish basic cycle realize less of an incremental return than those who complete primary education. Therefore, for most people, the incremental increase for basic cycle is less than that for the total primary years. There is a large increase in monetary benefits for completing the diversified cycle, for all classifications.

Table 5.7

TRANSITION RATES BETWEEN LEVELS

1981-1983

Year t	Promoted from 6th Grade Primary	Promoted from 4th. Stage Adult Primary	Total Primary Promoted	Enrolled in 1st Year Basic, t + 1	Transit. Rate Primary to Basic-%	Promo-ted from 3rd. Year Basic	Enrolled in in 1st. Year Diver-sified, t+1	Transition Rate from Basic to Diversified %
1979	52,208	3,095	55,303	46,731	0.901	N/A	24,903	N/A
1980	56,475	3,461	59,936	49,165	0.820	N/A	26,460	N/A
1981	58,973	3,689	62,662	46,544	0.743	14,664	25,517	1.740
1982	60,438	3,000	63,438	52,411	0.826	12,526	27,559	2.000
1983	64,090	3,505	67,595	54,621	0.808	13,319	27,947	2.098

SOURCE: USIPE, Datos sobre Promocion, Repitencia y Desercion, Anos: 1977-1982, Ministerio de Educacion, Guatemala.

Table 5.8

OPPORTUNITY COSTS OF FORMAL EDUCATION
BY SEX AND GEOGRAPHIC SECTOR

(Quetzales per Year)

Highest Grade Attained	MEN Urban Center	MEN Urban Other	MEN Rural	WOMEN Urban Center	WOMEN Urban Other	WOMEN Rural
1	420	328	349	315	177	229
2	478	378	398	363	208	271
3	545	434	453	418	244	320
4	620	499	516	480	286	379
5	706	575	587	553	336	450
6	804	661	669	636	394	532
7	916	760	762	713	463	631
8	1,043	874	867	841	543	747
9	1,188	1,006	988	968	637	885
10	1,353	1,157	1,125	1,113	748	1,047
11	1,541	1,331	1,281	1,280	878	1,240
12	1,755	1,531	1,459	1,472	1,030	1,468
13	1,998	1,761	1,661	1,694	1,209	1,738
14	2,276	2,026	1,897	1,948	1,418	2,058
15	2,592	2,330	2,155	2,241	1,664	2,347
16	2,952	2,680	2,454	2,578	1,953	2,885
17	3,361	3,083	2,795	2,965	2,292	3,416

SOURCE: Based on a table from Criterios para la Planificacion de los Recursos Humanos, PREALC, 1982.

Table 2.22 in Chapter 2 shows internal rates of return for investments in education. These are higher for men than for women in basic cycle. Rural men and women who have attended the diversified cycle have identical rates of return.

5.6 Internal Efficiency

Data do not exist in Guatemala on grade-to-grade promotion based on cohort examination. Some promotion and enrollment data are available, but they have not been fitted into any statistical panorama that allows very precise measurement of the internal efficiency of the system. The data base is very limited; and it is probably affected by a large margin of error.

Table 5.9 shows enrollments and promotions across the basic and diversified levels of the secondary system for 1981. Through the first

Table 5.9

STUDENTS PROMOTED AND NOT PROMOTED
IN PUBLIC SECONDARY SCHOOLS
1981

BASIC-CYCLE

	Total	Promoted	% Promoted	Not Promoted	% Not Promoted
First Grade					
Public	23,266	8,054	34.6	15,212 8,938	(65.4)[1] (38.4)[2]
Private	16,342	8,433	51.6	7,909 4,013	(48.4)[1] (24.6)[2]
Cooperative	6,587	2,935	44.5	3,652 1,864	(55.4)[1] (28.3)[2]
Total	46,195	19,422	42.0	26,773 14,815	(58.0) (32.1)
Second Grade					
Public	17,238	6,355	36.8	10,883 5,,944	(63.1)[1] (34.5)[2]
Private	13,799	7,234	52.4	6,565 3,058	(47.6)[1] (22.2)[2]
Cooperative	4,974	2,433	48.9	2,541 1,232	(51.1)[1] (24.8)[2]
Total	36,011	16,022	44.5	19,989 10,234	(55.5)[1] (28.4)[2]
Third Grade					
Public	14,728	5,976	40.5	8,752 4,600	(59.4)[1] (31.3)[2]
Private	12,768	6,409	50.1	6,359 3,300	(49.8)[1] (26.0)[2]
Cooperative	4,036	2,279	56.4	1,757 800	(43.5)[1] (20.0)[2]
Total	31,532	14,664	46.5	16,868 8,800	(53.5)[1] (27.9)[2]

Table 5.9 (cont'd)

STUDENTS PROMOTED AND NOT PROMOTED
IN PUBLIC SECONDARY SCHOOLS
1981

DIVERSIFIED CYCLE

	Total	Promoted	% Promoted	Not Promoted	% Not Promoted
Fourth Grade					
Public	12,603	5,315	42.1	7,288	(57.8)[1]
				3,814	(31.7)[2]
Private	12,532	6,436	51.4	6,096	(48.6)[1]
				2,736	(21.8)[2]
Total	25,135	11,751	46.8	13,384	(53.2)[1]
				6,550	(26.1)[2]
Fifth Grade					
Public	10,119	5,020	49.6	5,099	(50.4)[1]
				2,366	(23.4)[2]
Private	11,228	7,018	62.5	4,210	(37.5)[1]
				1,824	(16.2)[2]
Total	21,347	12,038	56.4	9,309	(43.6)[1]
				4,190	(19.6)[2]
Sixth Grade					
Public	5,807	3,457	59.5	2,350	(40.5)[1]
				998	(17.0)[2]
Private	6,866	5,551	80.8	1,315	(19.2)[1]
				452	(6.6)[2]
Total	14,793	11,128	75.2	3,665	(24.8)[1]
				1,440	(9.7)[2]

Table 5.9 (cont'd)

STUDENTS PROMOTED AND NOT PROMOTED
IN PUBLIC SECONDARY SCHOOLS
1981

Seventh Grade

	Total	Promoted	% Promoted	Not Promoted	% Not Promoted
Public	556	340	61.1	216	(38.8)
Private	462	363	78.6	99	(21.4)
Total	1,108	703	69.1	315	(30.9)

1/ Failed one or more subjects.
2/ Failed three or more subjects.

SOURCE: Taken from Resultados Finales de Evaluacion y Presupuesto Ejecutado. Niveles Preprimaria, Primaria y Medio. Ciclo Escolar 1981, USIPE, Ministerio de Educacion, 1983.

two grades of the basic cycle, private schools show the highest promotion rates. Cooperative schools have the next highest, with public schools last. Promotion rates from the third grade of the basic cycle ranged from 40.5 per cent in the public schools to 56.4 per cent in the cooperative schools. The promotion rate in private schools was 50.1 per cent, and the average across all school types was 46.5 per cent. A higher promotion rate would not have allowed more students to enter the diversified cycle, because the places were simply not available.

Promotion rates in private diversified-cycle schools in 1981 were consistently higher than those in the public schools. In both types of schools, the promotion rate increased at each higher grade, with the best performances recorded in the sixth and seventh years of secondary school, or the last diversified grades.

High rates of failure in both levels of secondary school are due in part to rigorous examination practices based upon memorization of facts. It has been noted that there are few opportunities for students to learn through more sophisticated methodologies. Facilities for their application do not exist in the schools, and teachers have shown reluctance to move away from dependence on lectures and mere presentation of facts.

High rates of non-promotion in the basic and diversified cycles are indicative of the low efficiency of secondary schools in Guatemala. Failure rates are highest in the public schools, at all levels of the secondary system.

A student who has failed any subject may take a test in that same subject the succeeding year. If he passes, credit for that subject is granted. Nearly two-thirds of all public-school students in the first two years of the basic cycle fail at least one subject, as do more than half of the fourth- and fifth-year students. No data are available on what subjects are most likely to be failed. A failure rate of this magnitude can be seen as an indictment of the system, rather than of its students.

According to Ministry policy, national development and education must be related. So long as failure rates in public secondary schools remain high, this policy is not being translated into practice. A system that requires more years for completion than are necessary, and drives large numbers of students away, can certainly be seen as wasteful and inefficient. Consideration should be given to completely overhauling the secondary education system in Guatemala. An important part of this task is a re-tooling of teaching methods and a review of the entire process of student evaluation.

5.7 Administration and Supervision

The administration of secondary education in Guatemala is highly centralized. Private schools are subject to supervision by the Ministry of Education. The only institution which has community participation is the cooperative school.

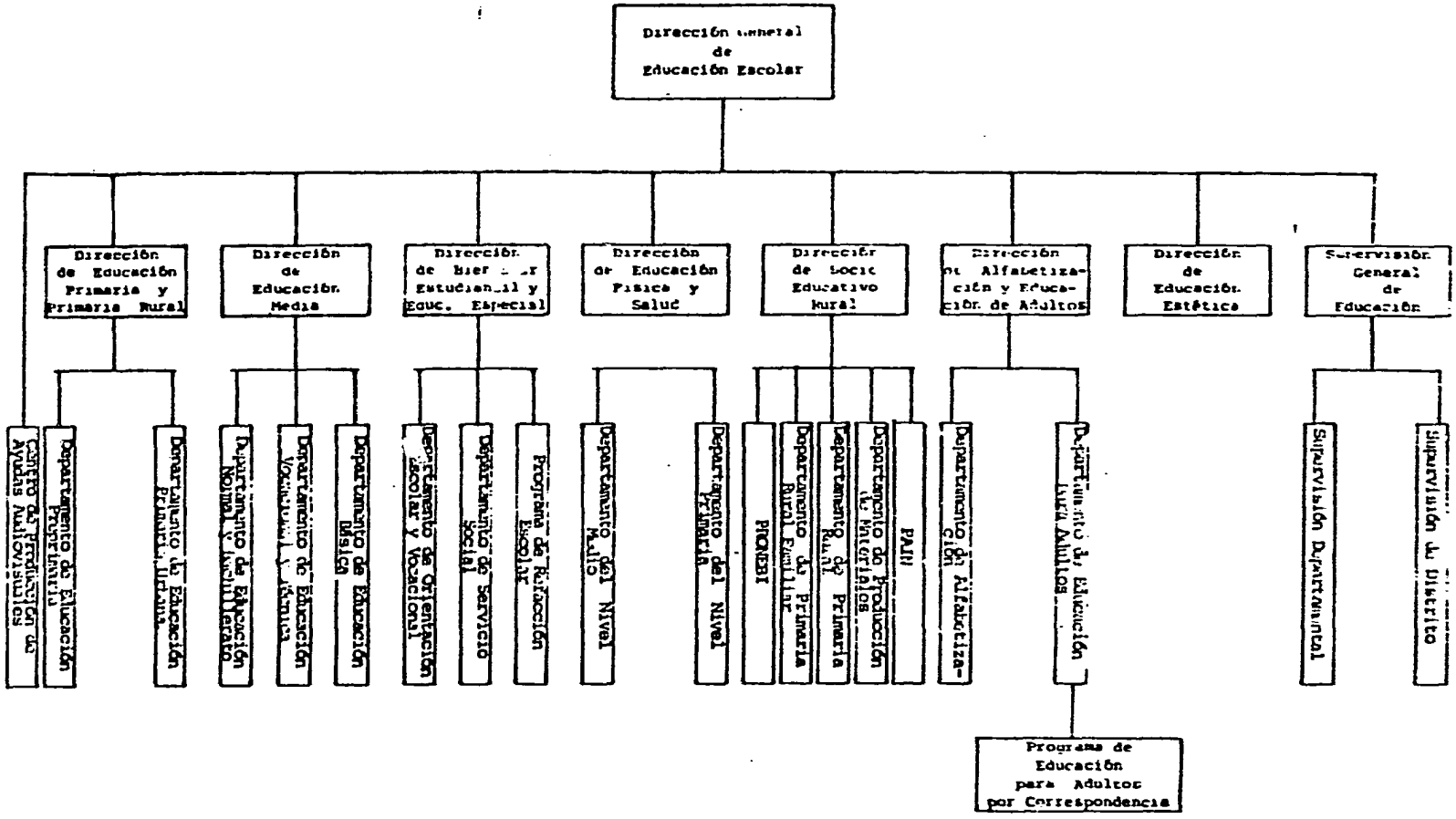
Chart 5.10 illustrates the organization of the formal education subsector in Guatemala. The Director-General of Formal Education, who reports to the Vice-Minister of Education, is the officer responsible for operating the primary and secondary schools. Under the Director-General, the Directorate of Secondary Education administers the secondary schools. Under this Directorate is the Department of Basic Education, overseeing the basic cycle; and the Departments of Vocation/Technical Education and of Normal Education and Bachillerato Degree Education, which divide responsibility for the diversified-cycle schools. The Directorate of Student Welfare and Special Education includes the Department of Academic and Vocational Counseling, which supervises the work of counselors in secondary schools in the capital. The Directorate of Physical Education and Health supervises instruction in that activity in the capital, through its Department of Secondary Education. The Directorate of Aesthetic Education supervises teaching in the fine arts in the capital's secondary schools.

For primary and secondary schools outside the capital, supervision is the responsibility of the Directorate of General Supervision. Supervisors are assigned by departments and districts.

General supervisors of secondary schools in the capital are part of the Directorate of Secondary Education. There were 47 supervisors for the capital city in 1985, each assigned to a sector with as many as eight private schools for every public school. In fact, a few supervisors had only private schools within their areas of jurisdiction.

Chart 5.10

ORGANIZATION OF FORMAL EDUCATION GUATEMALA



Secondary principals are responsible to the supervisors in their district or sector. In 1983, there were 434 full-time and 441 part-time principals of basic-cycle schools, and 231 full-time and 176 part-time principals of diversified-cycle schools, according to data from USIPE.

5.8 Costs of Education

The only figures available on which to compute the costs of secondary education in Guatemala are government expenditures in the sector, by level of education, for 1981 and 1982. Omitted from the calculations are family costs, which are known to be substantial, and contributions to education from municipalities for the cooperative schools. Thus, the per-student expenditures shown in Table 2.14 in Chapter 2 represent the minimum amounts expended, several years ago, for each student enrolled and each promoted.

The expenditure per student enrolled at the basic level was Q147 in 1981, compared with Q171 in 1982. Enrollment at the basic level declined during the same period by some 18 per cent. Expenditure per student promoted in 1981 was Q396 at the basic level; the comparable figure in 1982 was Q493. The number of students promoted decreased by 15 per cent from 1981 to 1982. With the exception of expenditures per student, both enrolled and promoted, for the bilingual education and the adult primary programs, no other level showed such an increase during the two-year period. Both of those programs registered unit expenditures that were considerably lower than those for basic-cycle secondary education. It should be noted that the total expenditure for the basic cycle decreased over the two-year period, by some Q458,644. The increases in unit expenditures seem to derive solely from the decline in enrollments.

At the diversified level, enrollments and unit expenditures both declined from 1981 to 1982. The decrease in total expenditures over the two years was Q923,961, or 17 per cent. Expenditures per student enrolled declined from Q181 to Q172, or 5 per cent; and per student promoted, from Q355 to Q353, or 0.5 per cent. During the same period, enrollment decreased by 12 per cent, from 30,645 to 26,863; the number of students promoted fell by 16 per cent.

It is interesting to note that in 1981 and 1982, at least, the costs to the system of maintaining a student in the basic level were quite similar to those invested in an enrolled student at the diversified level. However, it required 2.7 times the student enrolled expenditure to produce a basic-level graduate. At the diversified level, the expenditure for a promoted student was twice that for an enrolled student. The conclusion, given the minimum amount of very limited information, can be drawn that in 1981 and 1982, both levels were quite inefficient, with the basic level even more so that the diversified level; and that the diversified level, when compared to the basic level, is underfinanced, given its greater complexity and substance of subject matter, as well as its longer duration in several areas.

5.9 Needs

The needs of the secondary system are so large and so numerous that it is difficult to limit them to even a few. However, the following are judged to be most critical:

1) Institute a qualitative reform of teaching.

2) Conduct a reform of the examination system.

3) Upgrade the professional training of administrators and supervisors.

4) Construct and maintain a reliable data base to profile current students and track graduates, dropouts, and failures.

5) Develop a comprehensive plan for the future of secondary education, related to employment in the traditional and modern economic sectors, and including attention to research and evaluation, as well as the four needs noted above.

6) Assist the cooperative schools to fulfill their mission as the avenues through which rural youth can participate in secondary education.

7) Correct corrupt promotion and examination practices where they exist.

The secondary education system in Guatemala is inefficient, and out of touch with the country's development needs. While great strides have been made in extending primary education to large numbers of people, particularly in the rural areas, access to secondary education has not been increased. This situation must be corrected. A start can be made by supporting cooperative schools, which require the least amount of money; this option is made more attractive by the fact that these schools encourage citizen cooperation.

However, the educational planning process must address questions of quality as well. These should be resolved first, so that when access to secondary education is expanded, a reformed system will better meet the needs of rural indigenous and urban poor people.

Even the private secondary schools should cooperate with the Ministry to improve the quality of secondary education and expand access to it. They should examine their own roles in relation to national development goals, particularly in terms of participation of all segments of Guatemalan society.

5.10 Constraints

The biggest and most obvious constraint to the improvement of secondary education is the economy. For the foreseeable future, it will not allow any significant increase in access to secondary education for large numbers of people. As a result, secondary education appears to

have been put aside as a priority. This is unfortunate, because reform is often easier to achieve in times of economic hardship. When funds are readily available, reforms are seen as unnecessary.

The most pressing problem within the secondary system now is its low quality, compounded by the inefficiency indicated by high rates of failure. Educators must commit themselves to ensuring that secondary education will contribute to national development, and to the betterment of the individual student. Inefficient systems merely squander resources, both human and financial, which the country can ill afford to lose.

Secondary education is also characterized by administrative inefficiency. The system is running, but barely; and it has no clear orientation toward contributing to the nation's development. There are few data available to ascertain what is happening in the programs or with the students.

Data are needed to indicate what is happening to the people who are in the system, as well as to those who have moved out of it. This information can help the secondary system examine its own processes. What does it do for and to the student who comes in? That question can only be answered through ongoing and regular collection of accurate terminal data.

Administration and supervision do not now help the system's efficiency. Often, administrators and supervisors are appointed simply because they have the requisite number of years of experience. Professional preparation and in-service training in these fields are desperately needed. The Ministry, through USIPE and agreements with several universities, has initiated this process. It should be expanded very soon, although economic constraints may block its progress.

5.11 Recommendations

Only three recommendations are offered, because it is recognized that secondary education is not a high priority. Only one of these requires even a modest expenditure of money in the short term.

1) A loan should be made to the government of Guatemala for the purchase of materials and equipment for the cooperative schools. There were 18,235 students in these schools in 1983. Since the rural schools are in the most desperate straits, municipalities are not able to contribute much to these schools, and certainly parents cannot make up the difference. If AID could provide funding at the level of Q20 per student, these schools could improve their instruction, making it more efficient and practical. This money might be provided directly to the organizations responsible for the schools or to a consortium of them, thereby recognizing their special status and stimulating local participation in their governance.

2) USIPE should, as soon as possible, design and organize a realistic data base to guide decisions about quality of instruction, access, and eventually, expansion of secondary education. This would not require any additional money; instead, someone in authority needs to demand that certain kinds of data be provided. The public education system is small enough so that the establishment of such a data base would not now be an overwhelming task. The sooner this is done, the easier it will be to make decisions based on knowledge rather than on value orientation.

3) A planning process should be initiated, involving parents, students, teachers, administrators, and employees in both traditional and modern sectors, across all regions of the country. This will be a complex undertaking, but it has great potential in terms of correcting inefficiencies within the educational system. The planning process should address qualitative reform of courses, content, and teaching methods; how private and public secondary schools can collaborate; how to correct inequities in access to the system; and how to improve administration and supervision. It is doubtful that AID will finance this, but in any event it is preferable to get the necessary fudning from the private sector. Much of the labor could be on a volunteer basis, with the exception of the technical experts who would assist the lay members of the planning commission. Their task would be to diagnose the system's ills and prescribe realistic remedies. It is important to build up a cadre of people involved in and commited to the improvement of the secondary system.

The justifications for these three recommendations are found throughout this section, not just in its closing pages. But secondary education is always more difficult to reform than primary education; as a system, it is more resistant to change. It should be expected that the recommendations noted above will not be easy to implement, nor can positive results be achieved in a short period of time. The following actions will facilitate improvements, however.

1) Leadership at the highest levels of the Ministry and the national government is needed, to change perceptions about secondary education. This means that some very highly placed people must make secondary education a priority. Fundamental to this is the realization that secondary education cannot be allowed to drift simply because of limited resources.

2) The public and private education sectors should work together, along with public and private employment sectors, to push for reform and follow it through to implementation. All should be active participants in the process, assisting with plans as well as contributing recommendations.

3) Financing from external agencies and government entities should be sought, in order to support the reform and expansion of secondary education. Even if an agency cannot provide funding, it should lend its strong encouragement and whatever marginal support it can. Within ten years, Guatemala must have a larger, more efficient, development-oriented system which is accessible to all levels of society.

4) Regular participation of parents, the general public, and students should be encouraged in the governance of secondary education. This can facilitate planning, reform, and expansion, when the latter becomes possible. The schools can be greatly improved if their constituencies will work together with teachers and administrators to upgrade the system.

CHAPTER 6

THE INDIGENOUS POPULATION: ACCESS TO SECONDARY/TECHNICAL AND HIGHER EDUCATION

6.1 Introduction

This chapter focuses on the participation of Guatemala's Mayan Indian population in secondary/technical, higher, and adult basic education programs. These programs have been examined with respect to their efficiency and relevance to the educational needs of the country's indigenous population. An attempt was made to determine if there has been any special effort to adapt them to indigenous needs, problems, culture, and language. The purpose was to determine whether or not urban-oriented Ladino education curricula at the secondary and higher levels have in any way been redesigned to meet the unique needs and experience of the primarily rural, poor Mayan Indian population.

6.2 Methodology

Because no literature or previous studies exist on indigenous participation in secondary and higher education, all the data presented in this chapter were collected by social anthropologists. We interviewed school personnel in the 9 rural Highland departments where over 76 per cent of the indigenous population resides. We also interviewed indigenous students and professionals in the rural departments and in Guatemala City. The field-work component took us to the following departmental capitals and cities:

Coban, Alta Verapaz
Salama, Baja Verapaz
Chimaltenango, Chimaltenango
Huehuetenango, Huehuetenango
Quetzaltenango, Quetzaltenango
Chichicastenango, El Quiché
San Marcos, San Marcos
Solola, Solola
Totonicapan, Totonicapan
Antigua, Sacatepéquez
Guatemala City, Guatemala

The information on secondary schools was collected in its entirety in the course of informal interviews with school personnel and students. Numerical data on total school enrollments and indigenous percentages were provided by school principals and guidance counselors.

The total and indigenous enrollments at the five universities were collected from official registers provided by each institution. The indigenous students were identified according to Indian last names selected by Timoteo Xoyon, a native Quiché and Cakchiquel speaker; Senor Xoyon also did the enumeration for all five university rosters.

An attempt was made to identify the number of indigenous professionals in architecture, pharmacy, engineering, agronomy, public accounting, medicine, law, and veterinary medicine. The estimates of indigenous membership in professional organizations were also based on Indian last names. We realize that many indigenous people have taken Spanish surnames, but a large number of persons with indigenous names have also become acculturated to Ladino society; this will, in part, compensate for lower percentages generated by counting only indigenous last names. The percentages should, however, only be considered as estimates of overall indigenous participation in universities and professional organizations. The absolute numbers and percentages of indigenous students in secondary, technical, and vocational schools, on the other hand, are based on the knowledge of school personnel, particularly guidance counselors, about the ethnic identification and Mayan language abilities of their students. These figures are therefore a more accurate representation of indigenous participation in education.

6.3 The Indigenous Population

6.3.1 Ethnicity

The indigenous population of Guatemala, currently estimated to be nearly 3.5 million of a total population of about 8 million, has undergone numerous changes since the Spanish Conquest. At the time of the Conquest, there were at least 1 million Mayans divided into many ethnic groups. The two largest were the Quiché and Cakchiquel, which were organized into complex states, complete with nobility, priesthood, armies, artisans, merchants, and commoners. During the 450 years that followed, each sector of the different ethnic groups interacted with the myriad of European influences in distinct ways. In other words, the indigenous people were not homogeneous at the time of the Conquest, and they are not today.

Indian ethnicity is difficult to define because as a concept it cannot be uniformly applied to all indigenous people in Guatemala. A number of different criteria have been used, which include religious beliefs, self-image or self-identification, rituals, economic activities, dress, food, and, of course, language. Problems appear when an attempt is made to establish uniform criteria for each of these variables; it simply is not possible. Indians can be conservative Catholics, progressive Catholics, Evangelical Protestants, or costumbristas,[1] or they can proclaim no religious belief at all. Their economic activities vary from farmer to factory worker and from rural to urban. Dress can be

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[1] A syncretic indigenous religion.

traditional for both men and women, or both may have adopted European dress. Many speak only one of 23 Mayan languages and their dialects, some speak more than one. Some also speak Spanish, while others claim to speak only Spanish but still consider themselves indigenous. To further complicate the picture, some proclaim to be Ladinos in the urban context and promptly deny any Indian characteristics, including language. These same individuals will consider themselves completely indigenous when visiting relatives in the countryside.

For the purposes of this Assessment, we will distinguish between rural and urban indigenous people on the basis of language and individual socio-cultural identification. Over half of the residents of Quetzaltenango, for instance, Guatemala's second largest city, recognize their Indian ethnicity. Furthermore, we will distinguish between the rural poor who live outside of municipal capitals and larger villages, and those who live in rural areas within easy travel distance to cities and towns with educational facilities. Our definition of "indigenous" is therefore both cultural and economic, taking into consideration location of residence as well as ethnic identification. We also take for granted that the Guatemalan indigenous population is highly stratified, with a small wealthy elite, a middle range of moderate income, and a large majority of the very poor who live primarily in rural areas. In terms of access to education, we will continually refer to this latter group.

6.3.2 Demography

Table 6.1 shows the total population of Guatemala in 1984, by department, urban and rural residence, and number of indigenous inhabitants. These figures were projected by SEGEPLAN from counts taken in the 1981 Census. According to SEGEPLAN, the Indian population will number nearly 4 million by 1990.

For the purposes of the Census, "rural" was defined as those who live in a population center with less than 1,000 inhabitants, or in any other town with dispersed settlement patterns. Ethnicity, for the Census, was based on the individual's own identification. The use of self-classification as a method for identifying indigenous people has probably contributed to an under-estimation of the size of the Indian population. Another reason to believe the figures may be low is that the 1981 Census was taken during the height of guerilla activities and the government's counter-insurgency campaign; many regions were not visited, and large segments of the population were displaced and homeless.

6.3.3 Land and Economic Potential

Since Guatemala is primarily a rural and agricultural country, a discussion of the indigenous population and education would not be complete without reference to the most important economic resource, land. Guatemala has the most non-equal land distribution in Central America, even more so than El Salvador and pre-revolutionary Nicaragua. Using the GINI index to represent degree of inequality, where 100 is maximum inequality and 0 is perfect equality, Guatemala is 85; El Salvador, 80.1; and Nicaragua, before the revolution, 82.7.

Table 6.1

GUATEMALA: TOTAL, URBAN, RURAL, AND

INDIAN POPULATION BY DEPARTMENT, 1984

Department	Total Population	Urban Population	Rural Population	Rural %	Indian Population	Indian %
COUNTRY TOTAL	7,739,616	2,976,228	4,903,388	63	3,296,183	43
Quetzaltenango	460,167	173,483	286,684	62	278.861	61
Huehuetenango	571,830	78,912	492,918	86	376,836	66
San Marcos	577,158	69,259	507,899	88	279,922	49
Totonicapan	244,229	30,528	213,701	88	237,391	97
Chimaltenango	281,928	105,159	176,769	63	225,260	80
Quiché	462,355	52,708	409,647	89	394,389	85
Solola	195,139	69,079	126,060	65	183,821	94
Jutiapa	306,679	59,802	246,877	81	24,841	8
Jalapa	161,073	45,745	115,328	72	53,959	34
Santa Rosa	233,251	53,881	179,370	77	6,998	3
Alta Verapaz	475,614	68,013	407,601	86	426,626	90
Baja Verapaz	153,110	28,478	124,632	81	87,885	57
Suchitepéquez	299,791	85,141	214,650	72	169,082	56
Retalhuleu	194,425	55,022	139,403	72	60,661	31
Escuintla	440,883	139,760	301,123	68	43,206	10
Guatemala	1,645,942	1,547,185	98,757	6	197,513	12
Sacatepéquez	146,575	105,681	40,894	28	68,597	47
El Progreso	94,711	25,856	68,855	73	633	0.7
Chiquimula	219,074	52,359	166,715	76	77,771	36
Zacapa	142,323	40,135	102,188	72	3,700	3
Izabal	261,783	48,692	213,091	81	59,425	23
Petén	171,576	41,350	130,226	76	38,776	23

SOURCE: Censos Nacionales, IV Habitacion - IX Poblacion. Caracteristicas Generales, 1981. Ministerio de Economia, Guatemala, 1984.

The number of farms in Guatemala with a land area of less than 1.4 hectares, or about 3.4 acres, is 288,083, which represents 54.2 per cent of the total number of farms. These farms, however, only occupy 4.1 per cent of the arable land. The number of farms with over 450 hectares is 1,362, or 0.26 per cent of the total number; but they have 34 per cent of the land. Furthermore, there are 185,000 families without any land, representing about 1 million rural residents.[1] A large percentage of the landless, perhaps 75 to 80 per cent, are Indians in the Central and Western Highland departments included in our sample.

6.3.4 Attitudes Toward Education

Indigenous attitudes toward education are strongly conditioned by past experience and perceived benefits. Parents as well as young adults calculate the cost of a particular educational program and then consider the employment possibilities and potential earnings; this is then compared to a person's or family's current economic status and projected future earnings. Rural residents are not ignorant of eductional benefits, but many are skeptical because they are also aware of high unemployment for some sectors of the economy, particularly primary-school teachers and accountants.

The reluctance of many rural indigenous poor to invest their scarce resources in education should not be interpreted as a sign of cultural backwardness, but as an adaptive behavior based on sound economic decisions. It is our contention that secondary/technical and adult vocational programs that can demonstrate good employment opportunities for graduates will get high indigenous enrollments. We have conducted lengthy interviews with indigenous rural residents for this Assessment and other projects in the past, and we have found acute awareness of economic and political conditions in Guatemala. It would be an error to interpret apparent conservative behavior of indigenous people as a lack of understanding of the dominant Ladino culture.

6.4 The Indigenous Population and Secondary Education

6.4.1 Introduction

The objective of the visits to 26 public, religious, and private secondary schools, in 9 principally indigenous departments, was to assess objectively indigenous enrollments and to establish the possible existence of curricula adapted to indigenous students.

Enrollments were determined on the basis of ethnic origin and area of residence, as listed in student registries. As mentioned above, ethnic classification is often difficult and unreliable; but the assistance of school guidance counselors proved helpful. These people work closely with students and have extensive knowledge of student ethnic

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[1] These figures are from Tierra y Trabajo en Guatemala, Editorial Papiro, Guatemala, 1983, and from the 1979 Agricultural Census.

identification. School principals, especially in public institutions, frequently had only vague and often inaccurate conceptions of their students' identity.

Data on curricular adaptations were gathered by interviewing administrators, guidance counselors, teachers, and students. Questions included inquiries about adaptations of existing courses; the establishment of special courses and after-school sessions; and the frequency of offers of individual help for students by faculty members.

6.4.2 Schools Visited

Table 6.2 lists the 26 schools visited during the preparation of this chapter of the Assessment. The schools included eight normal schools for rural and urban teachers, five trade and vocational schools with a basic-secondary curriculum and one at the diversified level, a public music school, a post-secondary nursing school, three agricultural schools at the basic middle level, six indigenous schools operated by the Catholic Church, and one private high school.

The visits varied in length from one hour and a half to over five hours. Some directors and personnel were extremely cooperative and forthcoming with enrollments, percentages, and other data relating to Indian students.

At each school we asked questions relating to the following subjects and areas:

1) Description of school, program, curriculum, and special emphasis on orientation.

2) Enrollment by year and field of study.

3) Number of indigenous students.[1]

4) Admission policies and exams and performance of indigenous students.

5) Cost of schooling and socio-economic status of students.

6) Scholarships.

7) Special programs, curricula, or guidance for indigenous students.

8) Problems encountered by indigenous students.

9) Other relevant data.

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[1] We made special efforts to apply uniform criteria for indigenous classification, based on self-identity, language, and place of birth.

Table 6.2

SCHOOLS VISITED[1]

NORMAL SCHOOLS:

Alta Verapaz
Instituto Normal Mixto del Norte

Baja Verapaz
Instituto Diversificado de Baja Verapaz

Chimaltenango
Instituto Normal Rural "Pedro Molina"

Huehuetenango
Instituto Normal Mixto "Alejandro Cordova"

Quetzaltenango
Instituto Normal de Senoritas del Occidente
Instituto Normal de Varones del Occidente

San Marcos
Instituto Normal Mixto de Occidente

Totonicapan
Escuela Normal Rural de Occidente

TRADE AND VOCATIONAL SCHOOLS:

Baja Verapaz
Instituto Nacional Experimental de Educacion Basica

Quetzaltenango
Escuela Nacional de Enfermeria
Escuela Nacional de Musica
Instituto Femenino de Educacion Basica
Instituto Industrial de Varones

Quiche
Instituto Nacional de Educacion Basica

San Marcos
Instituto Nacional Experimental de Educacion Basica

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[1] Because a number of teachers, administrators, and students requested that they not be identified, we have mentioned no one by name either in the text or in the List of Persons Contacted, in Appendix II.

Table 6.2 (cont'd)

SCHOOLS VISITED

AGRICULTURAL SCHOOLS:

Alta Verapaz
Escuela de Formacion Agricola

San Marcos
Escuela de Formacion Agricola

Solola
Escuela de Formacion Agricola

RELIGIOUS SCHOOLS:

Alta Verapaz
Casa San Benito

Antigua
Instituto Indigena Nuestra Senora del Socorro

Guatemala
Instituto Indigena Nuestra Senora del Socorro
Instituto Indigena Santiago

Huehuetenango
Casa Indigena
Colegio La Salle

Solola
Colegio Seminario San Jose

PRIVATE SCHOOLS:

Alta Verapaz
Colegio Particular Mixto Verapaz

The numerical data have been tabulated according to type of school with analytical narratives to interpret quantitative and qualitative information.

6.4.2.1 Normal Schools. The total enrollment in the eight normal schools visited was 7,946, with an indigenous component of 2,684 or 34 per cent, as shown in Table 6.3. The indigenous students in all

eight schools were primarily from the urban center where the school is located, or from a rural area within commuting distance. Under 5 per cent came from more distant rural areas and lived in rented rooms. An exception is "Pedro Molina" in Chimaltenango, where the entire student body is resident.

The eight schools can be divided into two groups: the schools in Baja Verapaz, Chimaltenango, and Totonicapan train rural teachers, while the other five train teachers for urban service. The rural teachers also receive indigenous language training in Kekchi, Cakchiquel, and Quiché, respectively.

By law, the three rural normal schools use the standard Ministry of Education curricula at both the basic and diversified levels. The Mayan language programs are given during the three years of normal school. In all cases these are taught by a native speaker. No courses are given on Mayan culture or history. The school in Totonicapan has added courses on the identification of community needs and implementation of small-scale development projects. This same school has just completed an exhaustive study involving completion of student profiles, including economic background, attitudes, and aspirations; a series of teacher evaluations by students and other faculty; and an examination of the curriculum, with an eye to offering technical and vocational training. Since this study was so extensive and involved a large majority of indigenous students, the results are presented in Section 6.4.2.6, below.

Of the three rural normal schools, Totonicapan has the highest indigenous enrollment, followed by "Pedro Molina" and the Diversified School in Baja Verapaz. The high enrollment in Totonicapan is a reflection of the fact that over 90 per cent of the population in the department is indigenous. The small size of the department makes commuting from rural villages easier; we were told that 30 to 40 per cent of the students come from rural areas.

All three schools use entrance examinations to measure ability in math, Spanish, and science. A series of vocational and aptitude tests is also given. The tests are written for urban Ladino students and the guidance counselors and school directors said that indigenous students had, in general, very low scores. The most common reason given was their inadequate primary preparation and inability to express themselves in Spanish. For those who had completed the basic level at another school, the students from rural cooperative schools were the least well-prepared.

School fees have to be paid by the students in Baja Verapaz and Totonicapan, while at "Pedro Molina" all have "full" scholarships. In addition to school fees, the students must purchase their own paper, pencils, and vocational supplies; this can be a large expense for poor families. Even "scholarship" students must purchase supplies, shoes, and clothing. All three schools have a limited number of partial scholarships (bolsas de estudios), provided by the state to cover a

Table 6.3

INDIGENOUS ENROLLMENT IN EIGHT GOVERNMENT NORMAL SCHOOLS

School	Department	Grade	Enroll-ment	Indig. Enroll.	% Indigenous
Inst. Normal Mixto del Norte	A.V.	1 Basico	412	103	25
		2 Basico	291	44	15
		3 Basico	263	26	10
		4 Magisterio	246	49	20
		5 Magisterio	89	13	15
		6 Magisterio	79	12	15
		4 Bach.	66	7	10
		5 Bach.	33	3	10
Totals			1,479	257	17.4
Instituto Diversificado de Baja Verapaz	B.V.	1 Basico	none		
		2 Basico	107	21	20
		3 Basico	100	19	19
		4 Magisterio	84	15	18
		5 Magisterio	96	23	24
		6 Magisterio	86	15	17
		Admin. Pub.	32	2	6
Totals			505	95	19
Instituto Normal Rural "Pedro Molina"	Chimal.	1 Basico	130		
		2 Basico	75		
		3 Basico	120		
		4 Magisterio	35		
		5 Magisterio	41		
		6 Magisterio	44		
Totals			445	333	75
Instituto Normal Mixto "Alejandro Cordoba"	Huehue.	1-3 Basico	712	35	5
		Magisterio	804	45	6
		Admin. Pub.	96	10	10
Totals			1,612	90	6
Instituto Normal de Senoritas del Occidente (INSO)	Quetz.	1 Basico	241	115	48
		2 Basico	217	99	46
		3 Basico	177	85	48
		4 Magisterio	200	116	58
		5 Magisterio	133	69	52
		6 Magisterio	179	75	42
Totals			1,147	559	49

Table 6.3 (cont'd)

INDIGENOUS ENROLLMENT IN EIGHT GOVERNMENT NORMAL SCHOOLS

School	Department	Grade	Enroll-ment	Indig. Enroll.	% Indigenous
Instituto Normal de Varones de Occidente (INVO)	Quetz.	1 Basico	250	121	48
		2 Basico	160	89	56
		3 Basico	144	72	50
		4 Magisterio	175	91	52
		5 Magisterio	150	84	56
		6 Magisterio	175	77	44
		4 Bach.	60	3	5
		5 Bach.	70	2	3
Totals			1,184	539	45
Instituto Normal Mixto del Occidente (INMO)	S.M.	1 Basico	100	19	19
		2 Basico	124	16	13
		3 Basico	163	66	29
		4 Magisterio			
		5 Magisterio	580	185	32
		6 Magisterio			
Totals			967	286	30
Escuela Normal Rural No. 2 de Totonicapan (ENRO)	Toto.	1 Basico	154	---	---
		2 Basico	88	---	---
		3 Basico	69	---	---
		4 Magisterio	113	---	---
		5 Magisterio	90	---	---
		6 Magisterio	93	---	---
Totals			607	525	86
Grand Totals			7,946	2,684	34

variety of school-related expenses, although fewer and fewer of these have been available over the past several years.

None of the three schools has any special programs or formal curricular adaptations for indigenous students. Many faculty members, especially at "Pedro Molina" and Totonicapan, said that they provided after-hours help for students who had problems comprehending and expressing themselves in Spanish.

The most severe problems faced by the indigenous students are overcoming their deficient primary and basic preparation, and meeting expenses. Even those with full or partial scholarships have problems making ends meet. Those who come from poor families beyond commuting distance are effectively excluded from education, unless financial assistance is available to them.

The five normal schools that train urban teachers present a somewhat different picture. All five have basic and normal-school programs and two--the Instituto Normal Mixto del Norte in Coban, Alta Verapaz, and the Instituto Normal de Varones de Occidente in Quetzaltenango--have an upper-secondary program in science and humanities. A limited amount of vocational training is also available at all five schools.

According to Table 6.3, the indigenous enrollments are highest at the two schools in Quetzaltenango, 49 per cent for the girls' school and 45 per cent for the boys', followed by the Instituto Normal Mixto in San Marcos with an indigenous enrollment of 30 per cent. Next is the Instituto Normal Mixto in Coban, with 17.4 per cent. The majority of these students are from the Casa San Benito, a residential center for pre-seminary students operated by the Archdiocese of Alta Verapaz. Only 6 per cent of the enrollment at the Instituto Normal in Huehuetenango is indigenous.

Although the percentages of indigenous enrollments differ, the five schools have similar enrollment patterns. Upon completion of the three basic years, as many as half leave to go to commercial schools to receive training in accounting and secretarial skills. The vacant spaces are filled primarily by indigenous students who have completed the basic years in nearby cooperative schools. This is most common at the schools in Quetzaltenango and San Marcos.

The percentage of indigenous students in the two schools that offer an upper-secondary academic program is extremely low: 5 per cent and under at INVO in Quetzaltenango and 10 per cent at the Instituto Normal in Coban, Alta Verapaz, where all the indigenous students were from the Casa San Benito.

None of the five schools that train urban teachers give admission exams at the basic, normal, or academic secondary level. We were told by two guidance counselors in Quetzaltenango and the director in San Marcos that most of the Indians who enter normal schools do so by default; there

are no other schools available. Most cannot pass the entrance exams to the experimental and private schools. For the very few who could pass the private school exams, the costs of attendance are prohibitive. The cost of attending the urban normal schools is minimal--fees rarely exceed Q12 to Q15 per year--but students do have to buy all supplies and school uniforms, if they are required.

The socio-economic status of the students in Quetzaltenango, especially at the boys' school, is relatively low. The guidance counselors said that many students come to school poorly dressed and without breakfast. Most are from families living in the city or in nearby rural areas; very few come from remote rural villages.

At the two schools in Quetzaltenango, the girls have 37 partial scholarships and the boys have 19. In both cases, the majority of the scholarships go to students from the city; no more than one-third are given to residents from rural areas, and even fewer go to indigenous students.

Partial scholarships are awarded based on competitive examinations and an assessment of financial need. The tests are given at an announced time and place and prospective candidates must pay their own expenses to and from the testing centers. Last year, for instance, tests for students wishing to go to school in Quetzaltenango were given in Huehuetenango, some 75 km to the north. Not only do indigenous students have to take competitive exams written for urban Ladinos, but they must also incur substantial transportation costs. At least one parent must accompany the prospective student. A trip normally involves one overnight stay, and total expenses are beyond the resources of the majority of poor indigenous parents, rural or urban.

The financial problems for those who receive the awards are by no means over. A partial scholarship provides Q40 per month. In Quetzaltenango, Huehuetenango, San Marcos, and Coban, the average cost of room and board is Q60 to Q70 per month, not including laundry service. Students who receive financial support still need income to pay the balance of living expenses, clothes, transportation home, and school supplies. Even with partial scholarships, the very poor cannot afford to go to school.

None of the five normal schools have any special programs or curricula for indigenous students. Occasionally a teacher will give extra help, but this is rare since most teachers hold other jobs and leave school as soon as classes are over.

The most common problem faced by indigenous students at both the lower diversified and normal-school levels is poor preparation in the primary or cooperative schools. Many drop out after the first year because of poor comprehension of reading materials and a virtual inability to perform written exercises.

6.4.2.2 Vocational and Trade Schools. Many different kinds of trade and vocational schools exist in the major Highland population centers, with both public and private institutions offering a wide

variety of practical training in numerous fields. We visited seven schools ~~that~~ can be put into four categories: (1) public experimental schools with a basic middle-level occupational curriculum; (2) open-enrollment public vocational schools of the middle and upper secondary level; (3) a post-secondary nursing school; and (4) a music school. For enrollments, see Table 6.4.

The public experimental schools (Instituto Nacional Experimental de Educacion Basica con Orientacion Ocupacional) we visited are located in Salama, Baja Verapaz; Chichicastenango, Quiché; and San Marcos. All three schools are co-educational and are part of the PEMEM program financed by the Inter-american Development Bank (IDB), designed to improve secondary vocational education. In addition to the standard basic-level curriculum, the three schools offer vocational courses in agriculture, industrial arts, business, and home economics.

The indigenous enrollment in these schools is varied. The school in Quiché has an overall indigenous percentage of 70. In Salama, Baja Verapaz, indigenous enrollment is 54 per cent in the first year of operation, and in San Marcos the indigenous students represent less than 1 per cent. To account for these wide differences, the specific circumstances of each school will be examined.

The school in Chichicastenango, Quiché, has been in operation for a number of years. The students come from urban areas and villages that have better-than-average primary schools for indigenous students, particularly the Escuela Nacional Comunal Indigena. Even though there is an entrance exam, large numbers of indigenous students have been able to qualify. The more distant rural areas, however, continue to be under-represented in the student body.

The school in Salama, Baja Verapaz, is in its first year of operation. The normal school is phasing out its basic program and until completed in two years, the new experimental school will have an open-enrollment policy; the 54 per cent indigenous enrollment is a reflection of the temporary lowering of the examination barrier.

According to its principal, the four-year-old experimental school in San Marcos takes great pride in its high admission standards; the negligible indigenous enrollment stands witness to this fact. As further evidence of testing rigor and poor primary education, 30 urban San Marcos students from a primary school within 100 meters of the experimental school took the entrance exam; only three qualified.

The direct cost to the students in the three experimental schools consists of the relatively low annual fees, but an important difference in vocational schools of all types is that the students must pay for all cloth, wood, metal, wire, cooking ingredients, leather, thread, and other miscellanous supplies needed in the classroom and shop. Consequently, the costs are higher than in the normal schools, and the poor, both indigenous and Ladino, cannot afford to pay.

Table 6.4

INDIGENOUS ENROLLMENT IN SEVEN TRADE AND VOCATIONAL SCHOOLS

School	Department	Grade	Enrollment	Indig. Enroll.	% Indigenous
Inst. Nac. Experimental de Educacion Basica	Baja Verapaz	1. Basico	250	135	54
		2. Basico	To be filled in next two years as normal school basico is phased out		
		3. Basico			
		TOTALS	250	135	54
Escuela Nac. de Enfermeria de Occ.- (post-second.)	Quetzaltenango	1.	64	8	12.5
		2.	37	3	8
		3.	70	6	9
		TOTALS	171	17	10
Escuela Nac. de Musica	Quetzaltenango	All	62	31	50
		TOTALS	61	31	50
Inst. Femenino de Educacion Basica y Artes Femeninas	Quetzaltenango	1. Basico	197	13	7
		2. Basico	113	7	6
		3. Basico	70	5	7
		Vocacional	77	14	18
		TOTALS	457	39	8.5
Inst. Industrial de Varones	Quetzaltenango	1. Basico	317	82	25
		2. Basico	185	65	35
		3. Basico	145	67	46
		4. Vocac.	132	32	24
		5. Vocac.	136	25	18
		6. Vocac.	130	26	25
		TOTALS	1,018	297	29
Inst. Nac. de Educacion Basica	Quiché	1-3 Basico	190 approx.	133	70
		TOTALS	190	133	70
Inst. Nac. Experimental de Educacion Basica	San Marcos	1. Basico	94	1	1
		2. Basico	95	1	1
		3. Basico	83	0	0
		TOTALS	272	2	0.7
		GRAND TOTALS	2,420	654	27

No special programs or curricular adaptations exist for indigenous students.

The open-enrollment government trade and vocational schools visited include one for men and one for women, both located in Quetzaltenango. The Instituto Femenino has a basic program in the morning and a vocational upper-secondary program in the afternoon that includes cooking, machine embroidery, cosmetics and hairdressing, machine weaving, dressmaking, and artificial-flower making.

As shown in Table 6.4, the overall indigenous enrollment is only 8.5 per cent, but the 18 per cent of the enrollment in the afternoon vocational courses is indigenous.

The Industrial Institute in Quetzaltenango has just over 1,000 students in its basic and diversified vocational training programs. At this school we were able to visit all the shops, interview many vocational teachers, and talk to students.

The basic curriculum includes woodworking, auto mechanics, printing, electrical wiring, shoe repair, tailoring, and welding. The diversified curriculum consists of radio repair, electronics, general mechanics, tool and die making, and architectural design.

A large percentage of the students come from the surrounding rural areas, but as far as we could determine from last names on class lists, only 29 per cent could be classified as indigenous. About ten students commute daily from San Marcos and San Juan, round trips of 80 and 60 km, respectively. One is from the Petén and goes home to visit every three months. Two come from the Verapaces. The Industrial Institute has an open admission policy and is, in fact, bulging at the seams. Both classroom and shop facilities are severely overcrowded. The guidance director told us that many of their students have taken the entrance exams for the experimental schools but failed to qualify.

The cost factor for vocational supplies is particularly critical. The faculty fights a continuing battle to keep supply costs as low as possible; many teachers subsidize students who cannot pay. Hardwood is used on metal lathes, the cheapest possible cloth is used for tailoring, and junkyards provide supplies for auto mechanics. A student project to make a jacket requires Q12 in cloth; wire for rewinding an auto alternator costs between Q5 and Q6; and leather for shoe repair has doubled in price during the past year.

The value and quality of vocational training is determined by the amount of hands-on experience a student can get. In many cases this is limited to the raw materials a student can afford; at times several work in teams to reduce expenses. Many who could enter the Institute do not, because of the high costs of metal, wood, cloth, wire, etc.

The guidance department and individual faculty members make extraordinary efforts to help students, particularly indigenous, who have little or no money. Faculty members have made contacts with local businesses to bring broken machinery for repair; the students provide

free labor and the customer only pays for the materials and parts. The Quetzaltenango branch of INTECAP, through the efforts of the director, has helped the Institute by giving short courses and letting students use their modern facilities, raw materials included. The Institute faculty members were very enthusiastic about this collaboration and hoped it would continue and gradually increase in scale.

We were told of a few cases where graduates were hired by local businesses; the school, however, did not have any statistics to show how many were hired and could provide only anecdotal data about individual cases. Students expressed relative optimism about the prospects for work in their chosen trade. Several mentioned that they had purposely avoided going to the normal school despite the higher cost of vocational training.

The National Nursing School (Escuela Nacional de Enfermeria de Occidente) in Quetzaltenango is a post-secondary professional school under the direction of the Ministry of Health. It is the only school that has done a study of indigenous enrollments dating back to the class that entered in 1964. Three years of study are necessary to complete the nursing degree, but many drop out and return to finish several years later. Table 6.5 shows the number and linguistic affiliation of students in the classes of 1969, 1972, 1977 and 1982.

Table 6.5

INDIGENOUS ENROLLMENT IN THE ESCUELA NACIONAL DE ENFERMERIA DE OCCIDENTE, QUETZALTENANGO: 1969, 1972, 1977, AND 1982

Department	Linguistic Group	1969	1972	1977	1982
Huehuetenango	Mam	7	3	15	30
Quiche	Quiche	0	0	1	7
Solola	Cakchiquel	2	0	0	5
Totonicapan	Quiche	3	4	4	11
Total Enrollment		121	51	191	415
Indigenous Students		7%	14%	10%	13%

SOURCE: Escuela Nacional de Enfermeria de Occidente, Quetzaltenango, 1985.

The Rios Montt government solicited these data in 1982 to justify an effort to increase indigenous enrollments in professional schools. In response, the nursing school made a concerted effort to increase the number of indigenous students. Table 6.6 shows the number, linguistic affiliations, and per cent of indigenous students who enrolled in 1983 for the class of 1986. The increase was marginal with respect to the percentage in the class of 1982. The number of indigenous students who come from bona fide rural areas was estimated to be below 5 per cent. In other words, at least two out of every three indigenous students come from the urban centers or nearby rural areas in their respective departments.

Table 6.6

STUDENTS ADMITTED IN 1983 FOR THE CLASS OF 1986
NATIONAL NURSING SCHOOL

Department	Total Admitted	Indigenous Admitted	Language
Chimaltenango	2	1	Cakchiquel
Huehuetenango	2	-	--
Quiché	3	1	Quiché
Quetzaltenango Municipios	41	7	Quiché
San Marcos	20	1	Quiché
Solola	1	1	Mam
Suchitepéquez	2	1	Quiché/Cakchiquel
Totonicapan	5	1	Quiché
Otros (Costa Sur Occte.)	8	-	
TOTAL	84 = 100%	13	15.5%

SOURCE: Escuela Nacional de Enfermeria de Occidente, Quetzaltenango, 1985.

The nursing school uses a "difficult" entrance exam, according to the executive director. But even so, more indigenous students pass than are able to attend because of the high expenses. Many indigenous communities have expressed interest in sending students who, after graduation, would serve the local population.

Over half the current students have partial scholarships that include a written agreement to work for the Ministry of Health for three years after graduation. The scholarships are based on four categories of need and range from Q25 to Q50 per month. Additional expenses are paid by the student and his/her family. We were told that very few of the students from rural areas graduate from the school. Many are excellent students but leave because of financial problems.

A number of the indigenous students have difficulty expressing themselves orally and in writing. Although there are no special programs for them, many have been allowed to repeat courses. A few have also taken special Spanish courses at other nearby institutions, and others have worked as volunteers in the hospital and health centers. Many indigenous students have feelings of insecurity and fear failure because they are not as well prepared as the Ladino students. Over time those who remain to graduate get over these feelings and do well.

Students who graduated from religious schools, especially Catholic ones, were well prepared, wrote well in Spanish, and could still speak their native languages; they continued to identify themselves as indigenous but without fear and insecurity. One case, in particular, was the daughter of a member of Rios Montt's Council of State, an Indian from Quiché, who became number one in her class.

The nursing curriculum is very technical, with a large and complex vocabulary the students must memorize. The executive director, who taught many courses, said that many indigenous students learn the difficult work with great ease because they already know two totally different languages.

The Music School (Escuela Nacional de Musica) in Quetzaltenango is in an advanced state of decay. The physical plant and the musical instruments are all very old and in desperate need of repair. According to the secretary, who has worked there for over twenty years, the budget has been cut so severely that now it covers salaries and very little else.

For beginning students, the curriculum consists of courses in music theory and practice. This eliminates those who have no real inclination, talent, or interest. After these initial courses, the students specialize in particular instruments: marimba, violin, trumpet, and piano. The curriculum is designed to be completed in three years of afternoon courses, but most of the students take much longer.

The total enrollment at the school is 120, but only 62 are attending courses with any regularity. As can be seen in Table 6.4, half the students are indigenous, a pattern which has held for the past ten years. The faculty consists of five full-time and four part-time instructors, as well as a principal.

Every year, two to three students who have finished the program and show promise go on to the conservatory in Guatemala City. Many who have gone in recent years have been indigenous.

The school has no scholarship program but the fees are very low, not exceeding Q15 per year. The students do not have to buy many books, and they practice on instruments owned by the school.

The indigenous students who come to study music do so because of the perceived earnings potential; the rural villages have frequent fiestas which create a constant demand for musicians, particularly marimba players. There is also a demand for musicians in the city for weddings, baptisms, confirmations, and birthdays. Even though unemployment is high, the number of fiestas with music has not decreased; festivities are one way for people to forget, temporarily, about their economic problems.

6.4.2.3 Agricultural Schools. The three basic-cycle agricultural schools (Escuelas de Formacion Agricola), part of a World Bank program to improve secondary education, have been in operation for a little over two years; the standard basic cycle is given an agricultural

emphasis with many additional courses. The three-year curriculum is divided into 6 semesters for the 400 resident students in three schools.

In addition, the schools also offer extension courses for local farmers and housewives. These are relatively short and are developed at the discretion of each local school director. Most of the courses have been about one month long; those for local farmers have consisted of teaching modern cultivation practices and the use of improved hybrid seeds. Housewives have been taught the value of proper nutrition, sanitary food storage, and food preparation.

Table 6.7 shows the enrollments at the three schools. Solola has 44 per cent indigenous;, Alta Verapaz, 39 per cent; and San Marcos, 34 per cent. All three principals said they were trying to increase indigenous enrollments, but many Indian applicants fail the entrance examinations. The school in Solola has tried to enlist indigenous females, and even though some have taken the entrance exams, none have qualified. The Solola director said that the ideal mix would be 50 per cent female.

Table 6.7

INDIGENOUS ENROLLMENT IN THREE AGRICULTURAL SCHOOLS

School	Department	Grade	Enrollment	Indigenous Enrollment	% Ind.
Escuela de Formacion Agricola	San Marcos	1. Basico	49	18	37
		2. Basico	50	17	34
		3. Basico	48	15	31
	TOTALS		147	50	34
Escuela de Formacion Agricola	Solola	1. Basico	41	19	46
		2. Basico	43	20	46
		3. Basico	50	20	40
		TOTALS	134	59	44
Escuela de Formacion Agricola	Alta Verapaz	1. Basico	50	18	36
		2. Basico	44	13	30
		3. Basico	25	15	60
		TOTALS	119	46	39
		GRAND TOTALS	400	155	39

The admission requirements for the three schools are:

1) be a primary school graduate;
2) be interested in and have talent for agriculture;
3) be single;
4) be between 12 and 15 years old;
5) preferably be able to speak an indigenous language
6) pass admission exams in:
   * Spanish language proficiency
   * Mathematics
   * Social Studies
   * Natural Sciences
7) pass psychological and personality tests.

Admission to the extension courses for local farmers and housewives requires the ability to read and write. In addition, the candidates must be agriculturalists, or housewives who can benefit from the courses. In other words, the courses are limited to literate land-owners and their wives. The school in Solola has made an exception to include adults currently enrolled in literacy programs.

In San Marcos, 380 persons came to take the entrance exams for 50 places; a slightly smaller number came to the other two schools. To take the exams the candidates must be accompanied by one parent, who is also interviewed. The candidates stay at the school for three days of testing and interviews with faculty; physical exams are also given. Each candidate pays Q1 per day for lodging and meals after which the parents come and pick them up, and the successful candidates are notified by mail.

The admission exams are translated and adapted from North American testing instruments and are most appropriate for urban Ladino Guatemalans. The principals of all three schools expressed dissatisfaction with the exams. One wanted to do away with them altogether. The numerous entrance interviews with the faculty provide extensive additional information about the potential students, but the bottom line is still how well a candidate does on the admission exams. If the numerical scores are too low, it does not matter how much other supportive data are available from the interviews, although borderline cases are often decided on the basis of qualitative interview information. Many otherwise promising indigenous candidates are eliminated because of low test scores.

All the students have "full" scholarships which include room, board, laundry, and all fees. Not included is clothing, shoes, or the other miscellaneous things young students are apt to buy. Students must pay their own way when they go home for vacation.

Other than two semesters of Mayan language study, no courses or programs relate to the special needs and culture of the indigenous students. Teachers do, however, give help and support after normal class periods, and many seem to be fond of their students. Each teacher serves as an advisor (maestro guia) for 10 to 12 students; and they become both friend and confidante. Table 6.8 presents the entire three-year curriculum.

Table 6.8

BASIC-LEVEL CURRICULUM AT THE AGRICULTURAL SCHOOLS
(ESCUELAS DE FORMACION AGRICOLA)

SEMESTER 1	hrs/ wk	SEMESTER 2	hrs/ wk	SEMESTER 3	hrs/ wk	SEMESTER 4	hrs/ wk	SEMESTER 5	hrs/ wk	SEMESTER 6	hrs wk
Spanish	5	Spanish	5	Spanish	5	Spanish	5				
Mathematics	5	Mathematics	5	Mathematics	5	Mathematics	5	Mathematics	5	Mathematics	5
Social Studies	5	Social Studies	5								
Science	5	Science	5	Science	5	Science	5	Science	5	Science	5
Native Lang.	2	Native Lang.	2								
Physical Ed.	2	Physical Ed.	2								
Intro. to Ag: Science	6	Gen. Chemistry	6	Inorganic Chemistry	6	Organic Chem.	6	Rabbit Raising	5	Beekeeping	5
Intro. to Animal Science	6	Flower Cult.	6	Soils, Plants, Water	5	Agricultural Production	6	Agricultural Marketing	3	Agricultural Production	6
Soil & Water Conservation	6	Soil Fertility	6	Control of Pests & Dis.	5	Irrigation	5	Plant Hygiene	5	Cooperatives	5
Horticulture	6	Horticulture	6	Environmental & Animal Sani.	4	Sheep & Goats	4	Agricultural Production	6	Forest Conservation	5
				Mechanized Ag.	4	Dairy Cattle	5	Climatology	3	Industrialized Cattle Raising	6
				Engine Mech.	4	Pig Raisins	4	Forestry	5	Admin. & Farm Accounting	4
				Aviculture	5	Grasses and Pasture	3	Pig Raising	5	Agri. Credit	3
								Industrialized Agriculture	6	Typing	4

SOURCE: Unidad de Formacion de Recursos Humanos. Memoria de Labores, 1984, Ministerio de Agricultura, Ganaderia y Alimentacion.

Every class has students with problems. For many this is the first time they have lived away from home. Bedwetting and severe depression are not uncommon; the advisors are trained to help students with these kinds of problems. Indigenous students do not appear to have more of this type of problem than the general student population.

Overall dropout is very low, not more than three to four students per year. Those who do leave generally do so for economic reasons, rather than for lack of interest or because of poor study habits. Even though all have scholarships, economic considerations have been significant in that some are able to afford nice wardrobes while others cannot. Those with few clothes feel inferior and have more than the average number of psychological problems.

The schools have different amounts of farm and grazing land, but all are able to raise vegetables, chickens, cattle, pigs, and rabbits. One problem voiced by all three principals was that any money earned from sale of produce, eggs, and meat, had to be given to the Ministry of Agriculture instead of remaining at the school. This creates further problems in that recent budget cuts have left the schools desperately short of supplies; earnings from sales could offset these budget shortages. Some income could also be used to help the poorest students buy clothing and pay for transportation home. Furthermore, the inability to use and reinvest earnings deprives students of the full benefits of production, marketing, and other entrepreneurial activities. If they were able to see the monetary fruits of their labors, they might be more disposed to maximize their efforts for even greater productivity and profit.

The agricultural schools have been equipped with modern food storage and preparation facilities. The latest model egg incubators and barn facilities have been installed at considerable expense. Many directors and teachers complained that much of this equipment was inappropriate for the students and was not in use, as it was too sophisticated for the basic-level course content and the cultural context. The incubators were foreign to the students' past and probable future experiences, and instead of using them, the instructors designed incubators out of cardboard boxes with lightbulbs, which is a more familiar local technology. The rabbit cages and chicken coops were made of cement and steel wire, again something few could afford in their home villages. One instructor had built next to the modern building a traditional wood and adobe structure to house small animals. He said it was important to show the students that you don't need the latest in sophisticated modern buildings and equipment to raise farm animals.

6.4...4 Catholic Schools. Table 6.9 lists the seven Catholic institutions to which visits were made. Colegio Seminario San Jose, and the Casa San Benito, give secondary education to indigenous males as preparation for subsequent seminary studies leading to the priesthood. In Coban, if a student decides not to become a priest, he must leave the school, while in Solola a student can remain and graduate from the Colegio. He is then encouraged to enroll at a university and pursue a professional career.

Table 6.9

ENROLLMENTS IN SEVEN RELIGIOUS SCHOOLS FOR INDIGENOUS STUDENTS

School	Department	Grade	Enrollment	Indigenous Enrollment	% Ind.
Casa San Benito (students attend normal school in Coban)	Alta Verapaz	1. Basico	8		
		2. Basico	7		
		3. Basico	7	ALL INDIGENOUS MALES	
		4. Bachil.	7		
		5. Bachil.	3		
		TOTALS	32		100%
Instituto Indigena Nuestra Senora del Socorro	Antigua	1. Basico	13		
		2. Basico	13		
		3. Basico	12	ALL INDIGENOUS FEMALES	
		4. Magist.	41		
		TOTALS	124		100%
Instituto Indigena Nuestra Senora del Socorro	Guatemala	3-6 Prim.	100	ALL INDIGENOUS FEMALES	
		TOTALS	100		100%
Instituto Indigena Santiago	Guatemala	1-3 Basico	80		
		4-6 Magist.	110	ALL INDIGENOUS MALES	
		TOTALS	190		100%
Casa Indigena (all take their classes at the Colegio La Salle)	Huehuetenango	1-3 Basico	9		
		4. Magist.	51		
		5. Magist.	38	ALL INDIGENOUS MALES	
		6. Magist.	31		
		Perito Cont.	21		
		TOTALS	150		100%
Colegio La Salle	Huehuetenango	All	1,000	approx. 200	20
		TOTALS	1,000	100	20
Colegio Seminario San José	Solola	1. Basico	22	15	68
		2. Basico	31	23	74 ALL
		3. Basico	31	21	68 MALE
		4. Bachil.	23	13	57
		5. Bachil.	22	13	59
		TOTALS	129	85	66

SOURCE: Compiled by author from school registry data, 1985.

The Instituto Indigena Nuestra Senora del Socorro in Guatemala City and Antigua, and the Instituto Santiago in Guatemala City, provide basic level education and teacher training to females and males, respectively. The Instituto Indigena Nuestra Senora del Socorro offers primary education in Guatemala, and secondary in Antigua.

The Casa Indigena in Huehuetenango is a residential school with a small farm, located on the edge of the city. Resident males take basic and diversified courses in the morning at the Colegio La Salle and receive agricultural training on the farm in the afternoon.

The Colegio Seminario San Jose has been in operation since 1962 and has a capacity enrollment of 129 students; 66 per cent are indigenous males. The curriculum consists of the standard basic cycle and the upper-secondary program in science and letters; theology, philosophy, and ethics supplement the otherwise secular curriculum.

After completing the three basic years, students must decide if they wish to go to the seminary. Some are told by the teachers that they are not suitable for the priesthood and should pursue other academic careers. Among the graduates are 26 fully ordained priests, the majority indigenous. In 1977 there were only four indigenous priests in Guatemala. Ten graduates are studying in the seminary now, and seven have graduated from the Universidad San Carlos with medical degrees. One of the physicians was offered a faculty position at the university when he graduated, but he chose instead to return to his village and practice. Other graduates have become dentists and optometrists, and many are secondary-school teachers; five former students teach at the Colegio.

Admission is by examination of candidates recommended by the different Catholic dioceses. Resident priests at the Colegio interview prospective students and their parents. Every candidate takes a battery of aptitude and achievement tests prepared by the branch of the Rafael Landivar University in Quetzaltenango. These tests measure intelligence, personality, vocational orientation, and social adaptability. The priests do take urban versus rural origin of the candidates into consideration. For this year's class, 100 came for testing and 50 to 55 were accepted for the first year of basic as well as openings in the upper classes.

It costs Q950 per year to attend the Colegio Seminario San Jose, but students only pay what they and their families can afford; very few can pay the full price. Some students receive financial support from local priests and wealthy individuals.

The Spanish-language teachers hold a special class for indigenous students. Some are asked to attend by their teachers while others sign up voluntarily. Very few drop out of the Colegio. Last year only four left because of low grades and one with a behavior problem. If a student is caught stealing, even just a piece of bread, he is immediately expelled. Cheating is usually treated on the spot in the form of a zero on the exam in question, and the offender is usually allowed to stay in school. Overall there are very few cases of stealing and cheating.

The priests, teachers, and students we spoke to did not mention any special problems for the indigenous students except for language deficiencies. Students work very closely with faculty and can receive as much extra help as is needed. On the whole it is a very well-disciplined and highly motivated student body, where two to three hours of study every night is the norm.

The Casa San Benito in Coban, A.V., is a residential house for indigenous males aspiring to the priesthood. The capacity of the house is 32, but the Diocese of Alta Verapaz would like to construct a larger facility. The students range in age from 12 to 27. The selection of candidates is done by the Benedictine Brothers who operate the house; recommendations are forwarded by parish priests in both Alta and Baja Verapaz. Many students come from a primary school operated by the same order in neighboring San Juan Chamelco. Here, special efforts are made to help those with problems in Spanish. Few of the students require further help, once they are in the Casa San Benito. The students take all their coursework for both basic and upper secondary at the normal school in Coban. The director there said that many of the San Benito students needed to improve their Spanish and develop better study habits. It was not possible for us to determine if his statements had any basis in fact.

The Our Lady of Help Indigenous Institute (Instituto Indigena Nuestra Senora del Socorro) in Antigua and Guatemala City includes secondary and primary schools operated by the Sisters of Bethlehem. The school in Guatemala City offers the upper primary grades, and has a full residence capacity for 100. In Antigua there are 124 students distributed between basic, normal school, and science and letters programs.

The resident students in Guatemala are all indigenous and range in age from 8 to 17. Some 50 per cent are orphans from areas of recent conflict, including Huehuetenango, Solola, Quiché, San Marcos, Petén, and Quetzaltenango. None can afford the Q15 monthly charge, which covers room and board. To help finance the residential operations, the Sisters have sought out wealthy Guatemalan families who are willing to sponsor a child and pay what the parents cannot afford; sponsors often pay the entire Q15 per month. In addition to financial support, the sponsors (padrinos) come for visits and take the girls out for the weekend. The Sisters are constantly looking for additional sponsors and have recently expanded their effort to the United States.

The girls who come to the Institute are recommended by parish priests throughout the Highland departments. After completing the primary program, most go back to their villages. A few remain in Guatemala City to work as domestic servants. Even fewer continue their education. Last year, 32 finished the 6th grade and 2 went on to secondary school. One went to the Institute in Antigua and the other received a scholarship to a private school in the capital.

In addition to the standard primary-school curriculum, the girls are taught cooking, nutrition, manual crafts, painting, weaving, and household hygiene. The students do all their own cooking, cleaning, and dormitory maintenance. The Institute receives food contributions from Catholic Relief Services and several private individuals who own large farms. Meat and fish are provided by sponsors with butcher shops and fish markets; another provides fresh vegetables.

When the girls first arrive at the school, many are very frightened; they have frequent nightmares and problems doing their schoolwork. Orphans were often witness to the brutal murders of their parents, brothers, and sisters. The Sisters have heard numerous accounts of the extensive suffering and horror suffered by many of the girls. With time, however, most adjust to the Institute routine and overcome their problems. Many lack self-confidence when they arrive, but the Sisters put strong emphasis on developing feelings of self-esteem and pride; their position is that the Maya are the original inhabitants of Guatemala who have nothing to be ashamed of and deserve as much respect and consideration as everyone else. All of the girls we saw and talked to appeared alert, intelligent, and lively. Everyone greeted us with bright faces bearing no sign of shame, embarrassment, or shyness. The Sisters said that as a group they were very intelligent and worked very hard. All the girls we saw, perhaps 50, wore their traditional skirts (cortes) and blouses (huipiles), which is important for the maintenance of identity and pride.

The director said the Institute is filled to capacity. The girls sleep in one large room filled with 100 beds and very little space to walk around. She went on to say that they need a plot of land to build a larger building to house more girls in less crowded conditions. She was hopeful that someone would contribute land and that funds would be forthcoming for the building.

The Instituto Indigena de Nuestra Senora del Socorro in Antigua, with 124 indigenous females in a basic and diversified teacher-training curriculum, is operated by the same Sisters of Bethlehem as the one in Guatemala City. It is a residential institution with students from all the departments of the Western and Northern Highlands.

The curricula in both basic and diversified levels are the standard government versions. Although all the girls speak one of the Mayan languages, there are no language courses other than Spanish and English. The students do, however, participate in numerous extra-curricular activities that reinforce their native culture, language, and values. The school also has one of the best stocked libraries of the 26 schools we visited.

Most of the students who enroll in the diversified teacher-training program come from other institutions, many from rural cooperative schools. At the end of the three-year basic program, the Sisters hold a vocational week and many decide not to become primary-school teachers.

The selection procedure is similar to that of the other Catholic institutions. Financial support is provided by parish priests and private donors; Caritas is a major contributor of food and cooking oil.

The student body is organized into four residential groups, covering all grades, with separate dormitory, dining, cooking, and study areas. Each group presents theatrical performances, art competitions, and crafts displays. A number of activities are also coordinated with the boys and faculty from the Instituto Santiago; a number of marriages have taken place. One couple started a school in San Antonio Aguascalientes, offering the first two years of the basic secondary curriculum; they receive some financial aid from the Christian Children's Fund.

Because of a strong sense of community, few students have serious problems, except for those whose families were killed during the violence. A number of students cannot return to their communities and spend vacations with friends.

This school, like so many others, is having trouble placing graduates. Those who have taken the bilingual teaching exam have not done well due to the lack of courses in Mayan language literacy; plans have been made to develop such courses. A number of graduates have gotten good non-teaching jobs, and a few have enrolled at universities. One is working at the Ministry of Education in rural development and another is with IGER, developing educational radio programs. The Sisters hope those who find jobs will open the door and help other graduates.

The Santiago Indigenous Institute (Instituto Indigena Santiago) is located on the outskirts of Guatemala City, on the road to Antigua. It has an enrollment of 190 indigenous males and is operated by a group of Salesiano Brothers. The school offers basic-level, normal school. The Brothers take great pride in the success of their graduates: eight physicians, eight lawyers, five agronomists, one philosopher, two education experts, and thirty secondary-school teachers. The faculty consists of five Brothers of La Salle and fifteen lay teachers.

The remarkable feature of this school is its orientation toward the formation of cooperatives. In the afternoons, both students and faculty participate in the Maya School Cooperative (Cooperativa Escolar Maya), with production and marketing activities in vegetable gardening, mechanical repair, farm animals, shopkeeping, musical groups, sports, and tailoring. Income is received from sales, annual dues from members, and outside donations. Profits from all operations go toward the financial independence of the Institute with the eventual goal of complete self-sufficiency. Graduates of the Institute, particularly those who become teachers in rural areas, have leadership and organizational abilities to form functional agricultural cooperatives in the villages where they work.

The selection of students, as in the other Catholic institutions, is based on the recommendations of parish priests, catechists and former graduates. The cost of room and board is Q20 per month, to be paid by the student, his family, or a sponsor. Often parish priests contribute from donations made by village residents.

In addition to the academic program in the morning and the cooperative-commercial activities in the afternoon, every Saturday is spent on Mayan language and cultural studies. A trained linguist comes to give the courses. One of the Brothers complained that many of the available grammars, especially in Quiché and Cakchiquel, written by North Americans, are not well prepared or accurate. On the other hand, a Quiché grammar recently published by Lic. Luis Enrique Sam Colop is considered by the Brothers to be the best available.

The Brothers are in the process of expanding the Institute by adding a program to train rural development promotores and change agents. The program, called the Higher School of Integral Rural Education (Escuela Superior de Educacion Integral Rural), is designed to train indigenous graduates with normal-school degrees to organize and operate production cooperatives. The training program will last for one year, but with two years of academic and practical content. After graduation the teachers will resume their school activities and organize and administer a cooperative in the afternoons and weekends; part of the cooperative profits will be used to pay the teacher.

Currently the Brothers are applying for funds to construct a building for the new program. They have already received the use of a 50-acre farm at an altitude of 2,000 meters just outside Guatemala City; the farm is considered to be very important for providing agricultural experience in an ecological setting similar to most of the Central Highlands. The eventual goal is to train 200 teacher-cooperative developers over a period of five years.

The Casa Indigena in Huehuetenango is another secondary and agricultural school operated by the Christian Brothers. It has resident facilities in the center of Huehuetenango for 150 indigenous males, who take academic work in basic, teaching, and accounting at the Colegio La Salle. In the afternoons, the students work on the school farm, the Finca San Jose, located just outside the city.

The object of the curriculum is to train rural teachers who will return to their home villages and teach at the primary level, as well as help stimulate agricultural production by introducing improved technologies and marketing procedures. Also, students from Solola, Nahuala, and Patzun have enrolled in accounting, with the goal of working to improve the financial operations of rural production and marketing cooperatives. The students from the Casa Indigena make up 150 of the 200 indigenous students at the Colegio La Salle. The other 50 come primarily from Huehuetenango and the surrounding areas and have parents or sponsors who can afford to pay the fees at the Colegio.

The Casa Indigena has been in operation for twelve years. Its original mandate was to train indigenous leaders who could help resolve problems in their native communities. The stimulus for the Casa came from a Guatemalan Brother who studied in the United States in the late 1960s. He became convinced of the power of the people, when properly organized, to bring about social change and greater economic and social equity. Events over the past ten years, however, have served to dampen some of the early idealism and high hopes. Students are now taught

skills with a greater emphasis on production and agricultural marketing and less-on-political activism; seven graduates have in recent years been murdered or disappeared.

Admission is based on recommendations from local parishes with an emphasis on identification with indigenous culture; fluency in native language; intelligence and promise to finish secondary school; fluency in Spanish; and a desire to return and help people in the home village. Of all the criteria, the last is critical; special efforts are made to ensure that the candidate will want to return home. The selection has been careful, and most have indeed returned.

Once admitted to the program, the students from the Casa Indigena generally do well academically at the Colegio La Salle; very few leave because of academic failure. Fees are waived but Q15 per month is charged for room and board at the Casa. About 60 per cent are able to pay the monthly charge; 10 per cent pay more, because they can afford it, and 30 per cent pay less or nothing. Of the 150 students, 25 are orphans whose parents died or disappeared during the violence. A number of parish priests pay the expenses for students from their villages. The Casa Indigena is filled to capacity with no plans for expansion.

The afternoon agricultural activities at the Finca San Jose are designed to simulate a village cooperative, although the program is less structured than that at the Instituto Indigena Santiago. The goal is for agricultural and animal product sales to meet the Casa food needs and generate some extra income. This has not been accomplished yet, but production and income are steadily increasing.

Students are taught the entire production process, from soil preparation, planting, the use of fertilizers, and harvesting techniques, to storage, marketing, and reinvestment. A valuable lesson to be learned is the relationship between the costs of production, particularly the high price of inputs such as chemical fertilizers, the market price of produce, and the generation of profit or loss. Students experiment with new cultivation techniques and do cost-benefit analyses. Others also work in carpentry, equipment maintenance, and tailoring. The raising of farm animals, including dairy cows, chickens, hogs, and rabbits, is increasing in scale with the promise of improved income generation in the near future. Emphasis is placed on the study of market strategies, especially to avoid overproduction of commodities that may only temporarily bring good profits; market saturation and subsequent price drops are always possible and must be taken into consideration when planning production strategies.

6.4.2.5 Private Schools. Indigenous enrollments at private secondary schools, according to most school directors and teachers, are extremely low. We were only able to visit one private school, the Private Coeducation School Verapaz (Colegio Particular Mixto Verapaz) in Coban, A.V., an institution with 258 students from pre-primary through diversified.

	Enrollments	Indigenous Enrollment
Pre-Primary	35	0
Primary	170	2
Basic	50	2
Bachillerato	20	1
Secretariado	23	0
Totals	298	5 = 1.7%

The five indigenous students all come from relatively well-off families who run stores and transportation businesses in Coban and nearby San Juan Chamelco. All five identify with native culture and continue to speak Kekchi at home.

6.4.2.6 Totonicapan Normal School Evaluation. The normal school in Totonicapan received a new director last January. He is a graduate of the school who became alarmed at the state of the curriculum, student apathy, low teacher morale, and the poor employment prospects for new graduates. He decided to do a study of student and teacher attitudes towards course content and curricular goals. Although the study was not complete at the time of our visit in June, we were given a series of very revealing and interesting results. Because this normal school has an 86 per cent indigenous enrollment, we decided to present the data in a separate section, because they can give some valuable information on indigenous attitudes toward education in Totonicapan. It is also our belief that the conclusions of this study may have relevance beyond Totonicapan, and could serve as a model for similar studies elsewhere. The complete study and data analysis will be available from the school director by the end of July.

A primary purpose of the evaluation was to consider restructuring and adding new curricula. The idea was not to abandon teacher education, a 33-year-old tradition, but rather to reinforce the rural orientation by adding and improving courses in community development, agricultural practices, and farm animal management. A new program in vocational training was also contemplated, although the capital investment for machinery and equipment would be considerable.

The enrollments for 1984 and 1985 were 514 and 607, respectively, and over 650 are expected for the 1986 school year. The physical plant has a capacity for 1,000 students. The study concluded that many more should be enrolled in school in accordance with the large 15 to 20-year-old age cohort in Totonicapan. This was especially the case for females. The average student enters the first year at the basic level between the ages of 14 and 16, and those who graduate from normal school are between 25 and 30 years old. The 1984 student body consisted of 440 students, of whom 73 per cent were males and 37 per cent, females. Fifty-eight per cent lived in the Totonicapan urban area, and the rest were from the aldeas and caseraos in the rural cantons.

During the first three years of basic, there were many dropouts:

1984	1st Year Basic	114
1985	2nd Year Basic	63
1986	3rd Year Basic	48 (projected)

Only 42 per cent remained for the third year of basico; more females dropped out than males. Forty-six per cent of the students said that they were not interested in getting teaching degrees and that they were not very satisfied with the courses, especially mathematics, English, and Spanish. Over 50 per cent were not satisfied or happy with being in school. Three-quarters of the students lived at home with their parents, and 54 per cent belonged to associations such as Scouts or church groups. One-quarter were happy with the teacher-training curriculum, while the rest would like vocational training in manual arts and crafts, mechanics, and shop.

The most frequent occupations of parents were shopkeepers, weavers, farmers, and tailors; and 66 per cent were self-employed. Sixty-two per cent of the fathers had some primary school; 14 per cent, secondary; and 3 per cent, some university training. Eighty-one per cent of the mothers were housewives and the rest were divided between shopkeepers and weavers. Forty-three per cent had some primary school, 8 per cent, secondary; and one had taken some university courses.

Forty-six per cent of the students work in addition to attending school. The most common work is in arts and crafts, followed by clerk in a store and agriculture. Forty-eight per cent are not satisfied with the economic situation at home, although 22 per cent of the families have an income greater than Q150 per month; 60 per cent make Q100 to Q150 per month, and the rest, less. Eighty-four per cent live in their own houses, 75 per cent of which are made of adobe and 20 per cent of cement block. Sixty-four per cent have latrines while 55 per cent have flush toilets. Separate kitchens and dining rooms are found in 84 per cent and 38 per cent of homes, respectively. Seventy-one per cent have running water and 80 per cent have electricity; 83 per cent have a radio and 47 per cent, a television.

Judging from family income, housing, and appliances, at least 75 per cent of the student body comes from the highest income sectors of the indigenous population. It should also be remembered that Totonicapan is a small, relatively homogeneous, and prosperous department which rejected all approaches made by the guerillas during the violence.

6.4.2.7 Adult Vocational Training. The Technical Training Institute (Instituto Tecnico de Capacitacion y Productividad, INTECAP) and the Community Development Office (Direccion de Desarrollo de la Comunidad, DESACOM) are two government organizations that give short training courses for adult men and women in a wide range of manual and commercial vocations. INTECAP is the largest; it operates out of central headquarters in Guatemala City and four regional centers in Escuintla, Quetzaltenango, Puerto Barrios, and Chiquimula. DESACOM performs similar activities on a smaller scale, primarily in the Northern and Western Highlands, with special programs in the development poles of Chaca, Ixil

Triangle, Chisec Acamal, and Playa Grande. INTECAP is a semi-autonomous institution-financed by a 1 per cent payroll tax and DESACOM is administratively part of the Secretariat of the Head of State (Jefatura de Estado) and gets funds allocated from the national budget.

INTECAP does short-term training lasting from one to two days, to several weeks in the following areas:

Agriculture and Livestock

Agriculture
Forestry
Fishing
Cattle

Manufacturing and Industry

Food Processing
Graphic Arts
Textiles
Wood Products
Energy
Mining

Business and Services

Transportation
Hotel Management
Banking and Insurance

Construction

Masonry
Carpentry
Plumbing
Electricity

Small Business

Shop Trades

Metal Working
Electricity
Auto Mechanics

Program for Handicapped

Textiles
General Programs
Electricity
Woodworking

In addition to regional centers, INTECAP has smaller centers with many located in areas with large indigenous populations:

San Martin Jilotepeque
Huehuetenango
Quiché
Solola
Coban
Franja Transversal del Norte

In 1984, INTECAP carried out 1,732 training courses for 28,760 participants with 230,947.5 hours of instruction, which is about 133 hours per course. INTECAP also provided technical assistance for 1,200 businesses involving 3,217 participants and 64,022 hours of instruction. Since 1981 the number of participating businesses has increased from 600 to almost 3,000.

The INTECAP training courses are given to functioning business enterprises and their employees to increase productivity, profits, and worker's incomes. In 1983 INTECAP carried out an evaluation of the effects of training courses and program participants. The sample consisted of 353 course graduates picked at random, 71 per cent male and 29 per cent female. Sixty-eight per cent were between 18 and 30 years old, 99 per cent were literate, 24 per cent had completed primary school, 38 per cent had also completed basico, and almost half had had one year of work experience when they took the INTECAP training course. Ninety-two per cent of those who finished the courses claim to use the new knowledge in their work. Only 3 per cent said the course made no difference.

In an operation as large as INTECAP, it is difficult to estimate the number of indigenous workers who benefit from training. INTECAP does not keep records of names and addresses of individual course participants, only the number and name of the business involved. We did note that in the Highlands, a number of businesses with indigenous owners, and presumably indigenous employees, received training courses and technical assistance. Their relative number, however, was small. Also, as can be seen from the random sample of beneficiaries interviewed, their high literacy rate and educational level would not include many poor indigenous rural residents. All the INTECAP courses were given in Spanish by urban-oriented technical personnel. The result could be that indigenous employees with poor Spanish would receive minimal course benefits. The informal collaboration between the Regional Center in Quetzaltenango and the Industrial Institute, with a large percentage of indigenous students, is a tangible benefit that is impossible to quantify. Possibly other INTECAP Centers are doing the same with some impact on indigenous students.

DESACOM is a much smaller organization with personnel of 646 in 1984 and a total budget of Q2,435,685. The organization has a central office in Guatemala City, two regional centers, five training centers, and 25 local offices.

Training Centers:

Rabinal, Baja Verapaz
Chamelco, Alta Verapaz
Chiantía, Huehuetenango
San Marcos, San Marcos
Totonicapan, Totonicapan

Local Offices:

Morazan, El Progreso
Chisec, Alta Verapaz
San Juan Ixcoy, Huehuetenango
Cubulco, Baja Verapaz
Solola, Solola
Cabrican, Quetzaltenango
Momostenango, Totonicapan

- San Miguel Uspantan, Quiché
  Chiché, El Quiché
  San Juan Chamelco, Alta Verapaz
  San Andrés Sajabaja, El Quiché
  Nebaj, El Quiché
  Tacana, San Marcos
  Playa Grande, El Quiché
  San Marcos, San Marcos
  Chiantla, Huehuetenango
  Cuilco, Huehuetenango
  La Democracia, Huehuetenango
  Rabinal, Baja Verapaz
  San Pedro Carcha, Alta Verapaz
  Sansare, El Progreso
  Jacaltenango, Huehuetenango
  San Lorenzo, San Marcos
  San Miguel Chicaj, Baja Verapaz
  Zacapa, Zacapa

The purpose of DESACOM programs is to create stable and self-confident rural communities with technical organization and attitudes necessary for community development. The beneficiaries are to be the majority of the marginal and poor who live in rural areas. Another important objective is to strengthen municipal governments and provide the means and training necessary for local initiatives in community development. DESACOM programs are intended to improve rural living with local participation in cooperative activities. During 1984, these programs were extended to include the development poles of Alta Verapaz, Huehuetenango, and Quiché. The poles are located in areas of intensive counter-insurgency activity, where about 30,000 indigenous people have been relocated into prefabricated standardized villages; in many cases new villages have been constructed on the sites of destroyed settlements. During 1984 special efforts were also made to involve women in development (Capacitacion Femenina para el Desarrollo) in cooperation with the World Food Program (Programa Mundial de Alimentos).

During 1984 the principal activities were carried out in Zacapa, Solola, El Quiché, Totonicapan, Huehuetenango, San Marcos, Alta and Baja Verapaz, Quetzaltenango, and El Progreso. Except for Zacapa and El Progreso, all are areas with overwhelming indigenous majorities. Intensive work was done in 125 rural communities, including 37 in the development pole areas.

DESACOM carried out training workshops for their personnel, conferences to promote cooperation with other organizations such as INTECAP, workshops with community organizations, village training courses, agricultural training, agricultural projects, workshops and projects in home economics, and adult education. Table 6.10 summarizes the village-level activities, number of courses and participants, and number of potential beneficiaries. The courses and the projects that have a direct potential of increasing participant incomes are in agronomy and arts and crafts.

Table 6.10

DESACOM VILLAGE TRAINING COURSES AND PROJECTS
1984

Type of Activity	No. of Courses or Projects	No. of Participants	No. of Beneficiaries
Courses in Community Development	495	27,838	140,144
Training in Agronomy	409	16,442	69,622
Projects in Agronomy	1,113	17,625	93,558
Training in Home Economics	462	25,417	130,452
Projects in Home Economics	74	3,605	19,656
Courses in Adult Education (Includes Adult Literacy)	459	15,505	60,849
Courses in Preventive Medicine and Hygiene	985	33,885	130,525
Courses in Arts and Crafts	14	270	
Training in Arts and Crafts	189	8,066	47,565
TOTALS	3,738	148,653	692,851

SOURCE: Memoria de Desarrollo de la Comunidad. 1984.

Agronomy projects and courses include: demonstration plots, fruit cultivation, community and family gardens, reforestation, aquaculture, composting, scientific animal management, cattle immunization, scientific agriculture, coffee cultivation, and cultivation of Morro trees.[1/] Arts and crafts projects and courses include: craft development, craft production, credit assistance, administration of workshops, marketing, learning a specific craft, development and production of crafts in Guatemala, small crafts businesses, small business administration, and craft cooperatives. The diverse crafts which are taught and marketed include ceramics, weaving, tailoring, carpentry, silversmithing, woodworking, rugmaking, shoemaking, artisan design, iron forging, leather working, flower making, and clothing design and production. DESACOM, together with the National Tourism Institute (INGUAT) and several foreign embassies, has been very active in advertising and marketing arts and crafts from the project areas in both national and international markets. During 1984 the total national sales in Guatemala were Q108,699.62; and Q92,901.00 was sold on the international market, for a total of Q201,600.62. These are very small sums in relation to the number of individuals involved. If 8,066 individuals have been trained, the return per person would be Q25 for 1984. Of course not all who have taken courses become active producers, so the income per producer must be higher.

1/ Cresentia alata, a tropical tree which produces a fruit with sweet aromatic pulp used for preserves and candy; also reputed to have medicinal qualities good for bronchial congestion.

It is safe to assume that at least 80 per cent of the 148,653 course and project participants for 1984 were indigenous. We seriously doubt the validity of the total number of beneficiaries, which appears to have been derived by multiplying the number of participants by 4.6. Perhaps this is the average number of children per participant family.

It is doubtful that the projects and courses reach the poorest sectors of the indigenous population. In view of the small budget allocations for materials, supplies, machinery, and equipment--Q344,858 or 14 per cent of the budget--and interview data, the project participants, in the case of agriculture, must have access to land, buy seeds, farm animals, and fertilizer. For craft projects the participants must pay for wood, metal, thread, silver, and other miscellanous supplies for production. Transportation and marketing costs are also considerable.

The Ministry of Education's Rural Socio-Educational Development Department operates a basic secondary and vocational training program, the National Program of Family Educational Nuclei (NUFED). It operates out of six centers in Chimaltenango, El Progreso, Escuintla, and Quetzaltenango, and is based on a French model used for relief efforts after the 1976 earthquake. This model relies heavily on community participation for determining priorities in development and education. Courses are given in the six centers to community residents on location, or to entire families in their homes, in such areas as agriculture, management, small industries, health, child care, and home improvement.

Table 6.11 summarizes NUFED activities in 1985. Of the 243 individuals who received courses at one of the six training centers, 79 per cent were indigenous; of the 421 who received training at home, 76 per cent were indigenous; and of 7,600 who attended community courses, 71 per cent were indigenous.

In adult vocational programs, like secondary vocational education, the cost of inputs and supplies discriminates against the poorest sectors of the indigenous population, and prevents them from participating. It is not that there are no benefits to these programs; but they are differentially distributed in a population with a high degree of inequality of wealth and land distribution. Obviously, many individuals have received courses and participated in demonstration projects who cannot farm for the lack of land and/or money to purchase inputs. The same is true for craft production and marketing.

Since many of the areas covered by DESACOM have large percentages of monolingual speakers of Mayan languages, problems of communication and understanding exist in both courses and demonstration projects. No obvious effort has been made to adapt content to the local languages.

Table 6.11

NATIONAL PROGRAM OF FAMILY EDUCATION NUCLEI (NUFED)
1985 ACTIVITIES

No.	Educational Centers	Courses and Projects: Center Men	Center Women	Center Total	Family Men	Family Women	Family Total	Community Total	Basic Curriculum	Educational Center Construction: Finished	In Progress	Percentage of Indigenous Participation
1	San José Chirijuyu Tecpan, Chimaltenango	42		42	20	50	70	1000	X	X		100
2	Sacala Las Lomas San Martin Jilotepeque, Chimaltenango				40	17	57	800			X	100
3	Ojer Caibal, San José Poaquil, Chimaltenango	24		24	35	35	70	800	X	X		100
4	Tulumajillo, El Progreso	27	25	52	28	40	68	1500	X		X	100
5	Caquta, Masagua Escuintla				35	33	68	1500			X	5
6	San José Chical, Quetzaltenango	90	35	125	50	38	88	2000	X	X		60
	TOTALS	183	60	243	208	213	421	7600				

SOURCE: Direccion de Desarrollo Socio-Educativo Rural, Ministerio de Educacion, 1985.

6.5 The Indigenous Population: Higher Education

6.5.1 Introduction

No quantitative data exist on indigenous enrollments at any of the five Guatemalan universities. Furthermore, these institutions have made an effort not to ask for ethnic affiliation or Mayan languages spoken on applications and registration forms. Our only recourse in the short amount of time available was to count indigenous last names on registration lists, and where possible, to interview heads of faculties and academic departments for semi-quantitative estimates of the number of indigenous students enrolled in university courses.

6.5.2 Indigenous Enrollments

Table 6.12 shows an indigenous enrollment at the University of San Carlos of 2,628, in a university-wide population of 48,283, equalling 5.4 per cent. The faculties of Agronomy, Pharmacy, Odontology, and History have the highest percentages of indigenous enrollment: 8, 8, 10, and 10 per cent, respectively. The Faculty of Agronomy is the only one that has shown a significant increase in new indigenous students for 1985, from 8 to 12 per cent. The campus in Quetzaltenango has only 10 per cent indigenous students and registers a one-point decrease for 1985 incoming students.

Table 6.13 shows indigenous enrollments at the University Mariano Galvez and at Del Valle. The former had an indigenous student population of 249 out of 3,831 in 1983, the latest available figures, or 6.5 per cent. The latter had 4 per cent indigenous, with 13 students enrolled in Saturday education courses; an equal number are also enrolled in computer science and mathematics.

The Rafael Landivar University Campus in Quetzaltenango, as shown in Table 6.14, has the highest indigenous enrollments of all five institutions, with an overall percentage of 20. Most are enrolled in Saturday education courses for secondary teacher certification, pedagogy, and guidance counselling. Ten per cent of the 267 indigenous students have full scholarships.

Table 6.15 shows the indigenous enrollments in six Faculties at the Rafael Landivar University campus in the capital. From a sample of 948 students, 57 or 6 per cent are indigenous. The Faculties with the highest indigenous enrollments are Agricultural Sciences and Humanities. The combined Landivar University sample is 2,292 students, about one-third of the total 1985 enrollment, with 324, or 14 per cent, indigenous students.

Based on an incomplete sample of six Faculties at the Francisco Marroquin University, 36 of 384 students were indigenous, resulting in a percentage of 9.4. As shown in Table 6.16, the Humanities Faculty with 14 per cent has the highest indigenous enrollment, followed by secondary education and computer operation.

Table 6.12

UNIVERSITY OF SAN CARLOS: INDIGENOUS ENROLLMENTS
1985

Faculty	Location	New 1985	No. Ind.	% Ind.	Returning Students	No. Ind.	% Ind.	Total	No. Ind.	% Ind.
1. Agronomy	Capital	209	25	12.00	1,442	114	8.00	1,651	139	8.00
2. Architecture	Capital	141	7	5.00	1,608	82	5.00	1,749	89	5.00
3. Economics	Capital	2,470	117	5.00	10,226	558	5.00	12,696	675	5.00
4. Law & Soc. Sci.	Capital	1,211	50	4.00	4,969	191	4.00	6,180	241	4.00
5. Medicine	Capital	486	31	6.00	3,220	145	5.00	3,70	176	6.00
6. Chem. & Pharm.	Capital	262	21	8.00	1,027	83	8.00	1,289	104	8.00
7. Humanities	Capital	1,259	71	6.00	3,716	155	4.00	4,97	226	5.00
8. Engineering	Capital	1,182	49	4.00	4,875	219	4.00	6,057	268	4.00
9. Odonthology	Capital	117	11	9.00	690	69	10.00	807	80	10.00
10. Vet. Medicine	Capital	127	8	6.00	7	47	7.00	827	55	7.00
13. Psychology	Capital	302	14	5.00	1,327	68	5.00	1,629	82	5.00
14. History	Capital	76	7	9.00	449	45	10.[illegible]	525	52	10.00
15. Social Work	Capital	242	12	5.00	841	43	5.00	1,083	55	5.00
16. Communications	Capital	188	1	0.50	391	11	3.00	579	6	1.00
Centros Universitarios										
12. CUNOC	Quezaltenango	1,029	94	9.00	2,530	275	11.00	3,559	369	10.00
17. CUNOR	Alta Verapaz	26	0	0.00	90	0	0.00	116	0	0.00
19. CUNORI	Chiquimula	19	0	0.00	56	0	0.00	75	0	0.00
20. CUNOROC	Huehuetenango	15	2	1.00	26	0	0.00	41	2	5.00
21 CUNSUR	Escuintla	22	1	5.00	49	0	0.00	71	1	1.00
22. CUNSUROC	Mazatenango	122	4	3.00	199	1	0.50	321	5	2.00
23. CUNSUO	Jalapa	18	0	0.00	26	1	4.00	44	1	2.00
25. Sec. San Marcos	San Marcos	94	0	0.00	209	2	1.00	303	2	0.70
TOTALS		9,617	525	5.46	38,666	2,109	5.45	48,283	2,628	5.40

SOURCE: Compiled by author from university registry data, 1985.

Table 6.13

UNIVERSITIES MARIANO GALVEZ AND DEL VALLE: INDIGENOUS ENROLLMENTS

1983

Universidad Mariano Galvez:

Total number of students	3,831
Indigenous Students	249
Percentage	6.5%

Universidad Del Valle de Guatemala:

Major	Number of Indigenous Students
Natural Sciences	2
Computer Science	6
English	2
Language and Literature	1
Learning Disabilities	7
Electrical Engineering	2
Special Education	6
Agronomy	3
Master's Program in Electrical Engineering	1
Biology and Chemistry	1
Mathematics	7
Psychology	1
History and Social Sciences	3
Nutrition Science and Engineering	1
Linguistics	1
Mathematics and Physics	1
Civil Engineering	1
Electives	1
Total Indigenous Students	47 = 4% of Total
Total Number of Students	1,198

SOURCE: Compiled by author from university registry data, 1985.

Table 6.14

RAFAEL LANDIVAR UNIVERSITY, QUETZALTENANGO CAMPUS
INDIGENOUS ENROLLMENTS
1985

Weekday Courses Faculty	Number of Indigenous Students
Social Work	11
Law	26
Business Administration	23
Accounting	29
Tourism	10
Subtotal	99
Saturday Courses **Faculty**	
Secondary Education	112
Pedagogy	14
Psychology	10
Guidance Counselling	7
Plant Technology	10
Agricultural and Production Cooperatives	15
Subtotal	168
Total	267
Total campus enrollment	1,344
Total percentage of indigenous students	20

SOURCE: Compiled by author from university registry data, 1985.

Table 6.15

RAFAEL LANDIVAR UNIVERSITY, CAPITAL CAMPUS
INDIGENOUS ENROLLMENTS (PARTIAL SAMPLE)
1985

Faculty	No. of Students	No. of Indigenous	% Indigenous
Law	63	5	8
Agricultural Sciences	42	6	15
Humanities	151	18	12
Architecture	91	5	5
Engineering	169	6	3.5
Economics	432	17	4
TOTAL	948	57	6

SOURCE: Compiled by author based on data from university registry, 1985.

Table 6.16

FRANCISCO MARROQUIN UNIVERSITY
INDIGENOUS ENROLLMENTS (PARTIAL SAMPLE)
1985

Faculty	No. of Students	No. of Indigenous	% Indigenous
Clinical Psychology	86	5	6.0
Business Administration	46	3	6.5
Secondary Education			
Math and Physics	18	2	11.0
Theology	88	10	12.5
Humanities	80	11	14.0
Computer Operation	28	3	11.0
Systems Analysts	38	2	5.0
TOTAL	384	36	9.4

SOURCE: Compiled by author based on data from university registry, 1985.

The highest indigenous enrollments were at the Quetzaltenango campus of the the Rafael Landivar University. These and others can be summarized as follows:

Rafael Landivar University	
Capital	6.0%
Quetzaltenango	20.0%
Capital and Quetzaltenango	14.0%
Francisco Marroquin University	9.4%
Mariano Galvez University	6.5%
University of San Carlos	5.4%
University Del Valle	4.0%

6.6 Indigenous Professionals

6.6.1 Membership in Professional Organizations

Guatemala has 15 to 20 professional organizations that keep updated membership lists. We were able to obtain nine lists with a total membership of 13,265 professionals. Using the same methodology as with university registration lists, the indigenous members of each association were determined. Table 6.17 shows the results. Public accountants, physicians, veterinarians, and agronomists have the highest percentages of members with indigenous last names: 4.0, 3.9, 3.8, and 3.7 per cent, respectively. The total number of indigenous members is 418, or 3.2 per cent.

Table 6.17

INDIGENOUS MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

ASSOCIATION	TOTAL MEMBERSHIP	INDIGENOUS MEMBERS	% INDIGENOUS
Architects	363	9	2.5
Pharmacists	755	13	1.7
Chemical Engineers	285	7	2.5
Agronomists	652	24	3.7
Public Accountants	1,167	47	4.0
Civil Engineers	2,271	39	1.7
Physicians	4,967	196	3.9
Lawyers and Notaries	2,389	67	2.8
Veterinarians	416	16	3.8
TOTAL	13,265	418	3.2

SOURCE: Compiled by author based on data from directories of the different associations, 1985.

6.7 Summary and Conclusions

Indigenous access to secondary, vocational, and higher education is primarily conditioned by cost and by entrance examinations.

Government normal schools which prepare teachers for urban areas and have no entrance examinations, have nearly 50 per cent indigenous students in the city of Quetzaltenango. Both these large urban schools, one for males and the other for females, have indigenous students from the urban area and nearby rural zones within commuting distance. The percentage of indigenous students from marginal rural areas is well under 5 per cent. The normal schools in San Marcos, Alta Verapaz, and Huehuetenango follow with 30 per cent, 17.4 per cent, and 6 per cent, respectively. Again, most of the indigenous students are from urban and nearby rural areas.

The normal schools in Baja Verapaz, Chimaltenango, and Totonicapan train teachers for service in rural areas, and in addition to the standard curriculum also have courses in the indigenous languages of the region they serve. The purpose of these courses is for students to become literate in their own native languages, rather than for Ladino students to learn a Mayan language.

Except for the normal school in Salama, Baja Verapaz, both "Pedro Molina" in Chimaltenango and the Normal School in Totonicapan have indigenous majorities of 75 and 86 per cent, respectively. The school in Totonicapan carried out a student survey and course evaluations. The results show that half the students did not want to be teachers. This supports findings from other schools that many indigenous students go into normal schools for the lack of any other viable alternative; they are prevented from going to private schools because of entrance exams and high tuition costs.

Indigenous enrollments at trade and vocational schools present a varied picture. Training in a practical trade is a high priority for many indigenous students; the results of the student survey in Totonicapan support this conclusion. But, again, cost and exams provide obstacles to indigenous candidates. The experimental school in San Marcos uses an entrance exam, and the resulting indigenous enrollment is under 1 per cent. Similar schools in Quiché and Baja Verapaz have higher indigenous enrollments, 70 per cent and 54 per cent, but for different reasons. In Quiché, it is because of better indigenous primary preparation; and in Baja Verapaz, no entrance exam will be used until the phasing out of the basic program at the normal school is completed in two years.

The Instituto Femenino and the Instituto Industrial de Varones in Quetzaltenango are both filled to capacity and neither uses entrance exams. Any indigenous student can enter as long as he or she can afford it. Trade schools are more expensive, because of the high price of raw materials such as cloth, metal, and wood.

The nursing school in Quetzaltenango and the three agricultural schools were the only government institutions encountered which had made special efforts to recruit indigenous students. Both had problems finding qualified candidates who could pass the entrance examinations; in both cases, some of the qualified students could not come because of economic reasons.

The music school had 50 per cent indigenous enrollment, because the ability to play an instrument, particularly the marimba, and to be part of a musical group was considered to be a good living. The large number of "fiestas" in both rural and urban areas has created a constant demand for marimba and other musical groups.

The three basic-cycle agricultural schools (Escuelas de Formacion Agricola) have modern facilities with a total enrollment of 400, of which 39 per cent is indigenous. Much of the machinery and equipment is not appropriate for the basic level of training. The use of entrance exams and the ever-present "hidden" costs, even in schools with "full" scholarships, limit access to poor rural indigenous primary-school graduates. Here, as in other institutions that use entrance exams, relatively few indigenous students pass because of the Ladino-urban bias of the testing instruments.

The seven Catholic institutions visited all recruit students through a network of parish priests. Most, but not all, use entrance exams. Some financial support is given to those who cannot pay. The San José Seminary in Solola and the Instituto Indigena Santiago in Guatemala City have most probably been responsible for sending a large percentage of indigenous students to the University of San Carlos for professional training, particularly in medicine, law, and dentistry. Both the Casa Indigena and the Instituto Indigena Santiago have agricultural programs that train students who will go back to their villages and form production and marketing cooperatives; some are also potential community leaders.

None of the schools visited had made any adaptations of the official curricula to meet the needs or address problems specific to indigenous students. In some schools, particularly the agricultural and Catholic schools, extra help was available on an individual basis after regular class hours. The assigned advisor system at the agricultural schools seems to be a particularly good innovation.

Private schools enroll a miniscule percentage of indigenous students. The high cost and the entrance examinations are the primary reasons. One private school visited did have five indigenous students from well-to-do families.

Adult vocational training programs present a picture similar to that of the secondary vocational schools: the cost of inputs limits the participation of the rural poor. Also, there appears to be some degree of overlap between INTECAP and DESACOM. Both DESACOM and NUFED have very high percentages of indigenous participation, 80 and 75 per cent, respectively.

Indigenous enrollments at the universities are extremely low compared to the indigenous percentage of the general population. The University of San Carlos has an overall indigenous percentage of 5.4, with agronomy, economics, and engineering being the most popular fields of study. The University Mariano Galvez has 6.5 per cent, and the University Del Valle, 4 per cent; Rafael Landivar, 14 per cent; and Francisco Marroquin, 9.4 per cent. Out of 13,265 members of nine professional associations, 3.2 per cent are indigenous.

6.8 Recommendations

These recommendations are intended to improve access to and quality of educational programs for the indigenous population.

Secondary Schools

1) Mechanisms should be designed to identify promising and talented indigenous students at the primary-school level by:

   a) Designing culturally appropriate testing instruments that take into account indigenous language and rural experience; and/or

   b) Training bilingual teachers at the primary-school level to recognize talented youths who would be good candidates for academic, vocational, or agricultural training.

2) Special efforts should be made to recruit primary-school graduates from more remote rural areas who are the most under-represented in all secondary schools.

3) Special magnet primary schools should be designated, to provide more intensive preparation for students who wish to enter secondary schools. Magnet schools would specialize according to academic, vocational, or agricultural orientations.

4) Studies should be made to identify the availability of space at both the basic and diversified levels in academic, vocational, and agricultural schools. Available places should then be coordinated with the number of candidates selected, so as to achieve a balance between selection, placement, and an increase in the available places for indigenous students.

5) Once students have been selected, they should be provided with adequate funds to pay living expenses away from home, including transportation, supplies, and clothing.

6) Residential centers for secondary students should be established in major urban centers such as Coban, Huehuetenango, Quiché, Quetzaltenango, and San Marcos, under the administration of indigenous organizations that are currently being organized and that operated University Residential Centers during the 1960s and early 1970s. Enough land should be available for food cultivation.

Vocational Training

In order to benefit more marginal rural indigenous residents, the activities of INTECAP, DESACOM, and NUFED should be supported in the following ways:

7) INTECAP should extend its activities into more remote rural areas by using mobile or portable educational centers. Materials used by students in the courses should be provided by the program.

8) DESACOM's courses and technical assistance should receive financial support to expand into more marginal areas, with an emphasis on courses in agricultural intensification, craft production, and marketing. Less emphasis should be put on those areas of training offering little or no economic potential.

9) NUFED should expand its activities beyond Chimaltenango and Quetzaltenango to cover areas in Huehuetenango and Quiché, where economic conditions are the worst.

10) In vocational courses involving agronomy given by INTECAP, DESACOM, and NUFED, efforts should be made to coordinate activities with the three basic-level agricultural schools in Alta Verapaz, San Marcos, and Solola. The extension course capabilities at these three institutions are now underutilized, and they could be used to complement the activities of the three vocational organizations.

11) Studies should be done to determine the cost-effectiveness of bringing students to vocational training centers versus providing training and technical assistance in the communities using mobile or portable facilities.

Universities

12) Residential centers should be re-established in Guatemala and Quetzaltenango. These should have linkages with the secondary centers to provide guidance, support, and continuity. It is important for first-year basic students to know the possibilities and see the continuity of opportunities available through vocational and professional education.

13. The residential centers, at both the secondary and university levels, should have programs, discussion groups, and seminars in Mayan culture and language, as well as investigations into economic problems and opportunities for indigenous students. Such centers would provide a focus for cultural and social identification by students away from their homes. Funds should be available to help the poor students meet daily expenses and cover transportation costs between home and school.

Indigenous Personnel, Language, and Cultural Policies

14) Efforts should be made to establish indigenous language and Mayan Cultural Studies programs at the university level for secondary-school teachers. These programs should be both for new students and offered as continuing education for established secondary and vocational school teachers.

15) Efforts should be made to recruit more indigenous students to secondary teacher-training programs at the university level. Special attempts should be made to recruit graduates from the Santiago and Nuestra Senora del Socorro Indigenous Institutes. Funds should be made available to cover school, living, and transportation costs.

16) Studies should be made to determine the number of available secondary and vocational school teachers who speak indigenous languages. The available teachers should then be employed in their appropriate linguistic regions.

17) Adult vocational training programs should attempt to employ bilingual personnel. Translators would be invaluable in remote villages served by INTECAP and DESACOM extension courses and technical assistance programs.

18) Although no plans exist for the creation of full-degree secondary and vocational bilingual programs, existing organizations such as IGER and PRODEB should be contracted to translate study guides and course notes into the four major indigenous languages: Quiché, Cakchiquel, Mam, and Kekchi. These guides would benefit the graduates of the expanded bilingual primary programs, who will enter secondary schools and vocational programs in increasing numbers.

CHAPTER 7

VOCATIONAL AND TECHNICAL EDUCATION

This section of the Assessment examines Guatemala's current vocational and technical training activities, offered through the public formal education system, other government ministries, and the private sector. Because of their relative importance to the development of Guatemala's industrial and commercial sectors, special emphasis has been given to diversified-cycle technical education and to the non-formal, skills-upgrading program of the Technical Training and Productivity Institute (Instituto Tecnico de Capacitacion y Productividad, INTECAP).

7.1 Status of Vocational and Technical Education in Guatemala

Vocational training, as examined here, refers to the two or three-year school programs that are oriented primarily toward "entry-level" skill development. In the context of the Guatemalan formal education system, and in order to better categorize different programs according to the levels of the system, the vocational training programs have been divided into three levels:

* Level 1 - arts and crafts
* Level 2 - vocational orientation/preliminary career education
* Level 3 - industrial arts training

It should be pointed out that these programs are all at the lower secondary, or basic level. There is frequently some overlap between levels from one program to another. However, these divisions serve to differentiate program purposes and objectives among different levels, and allow a more accurate interpretation of the basic function of various training courses at selected grade levels.

Technical education, on the other hand, refers to upper-secondary, or diversified level, and post-secondary skills-training programs, of both short and long duration, aimed at post-entry academic and occupational training, and/or skills upgrading at the higher levels of technical and vocational aptitude. Apart from the diversified-cycle, formal school programs to the "skilled craftsman" (perito) level, technical education is comprised of various organized activities sponsored by government and the private sector.

Table 7.1 illustrates this hierarchy of definitions and roughly relates them to the major formal and non-formal training programs studied in this section.

Table 7.1

VOCATIONAL AND TECHNICAL EDUCATION IN GUATEMALA, ILLUSTRATED AS A FUNCTION OF ORGANIZATION, AND PROGRAMS

Industrial Centers Attached to Primary Schools (12 schools)	Level 1
Work Schools (PEMEM) (Basic Level Experimental) (20 schools)	Level 2
Industrial Institutes - Ocupational Skill Diploma (2 schools)	Level 3
Agricultural Formation Schools (EFA) (3 schools)	
Vocational Technical Institutes - Industrial Bachiller - Technician (380) schools) 7 technical/vocational (5 public/2 private)	Entry Level
INTECAP Non-formal, Adult Skills Upgrading (5 regional centers)	2nd level occupational training re-entry (middle managers & executives)

7.1.1 Organizations

Technical education in Guatemala is served by a variety of public, quasi-public, and private organizations. These organizations, in turn, have developed a network of formal and informal training institutions designed to deliver technical training to youth, young adults, and middle-aged men and women throughout the country, in a wide range of skill areas.

The Ministry of Education is charged with responsibility for providing vocational training to upper-primary and secondary-level students. The primary-level programs are geared toward very basic skills, with minimum residual value. These programs, referred to by the Ministry of Education as "industrial centers attached to primary schools," function primarily in the Guatemala City area, and serve some 1,000 young boys and girls. This level of technical training has not been included in this review. These schools may provide some economically valid survival skills for poor youth; school-site visits led to the conclusion that they provide a minimum level of vocational training in everyday, life-related activities.

The truly viable vocational/technical skills training programs for youth in Guatemala rest within the Ministry of Education's basic and diversified cycle secondary education levels.

7.1.1.1 Basic Cycle. Using the taxonomy of skills training levels established in Table 7.1, basic vocational skills training, including the all-important components of career education and vocational orientation, takes place in 42 work schools, commonly referred to as experimental schools. These schools, with their more comprehensive curriculum and modern facility designs, were developed and constructed in the late 1970s and early 1980s through an IDB loan. They were to serve a special purpose within the Guatemalan education system, as described in the proposal to establish them:[1/]

> The Escuelas para el Trabajo subprogram must be considered as a priority educational mechanism that will help increase and make more effective the educational effort at the basic secondary level, and provide vocational education opportunities for the country's development.
>
> The Escuelas para el Trabajo will be located in the rural and urban areas of the country, according to the regionalization already established, with at least one school in each region. The occupational areas will be the following: agriculture, handicrafts, industry, commerce, and arts. Both men and women will have access to the schools.

1/ Plan Nacional de Desarrollo, 1979-82: Sector Educativo, Consejo Nacional de Planificacion Economica, Guatemala, p. 94.

The objectives of the work schools include the following:

1) To create schools with technical options that include both urban and rural requirements.

2) To add opportunities to the national education system with more options for occupational training.

3) To use the natural and human resources related to occupational training and productivity, according to the aspirations of the students and the characteristics of different regions of the country.

4) To improve the quality of teaching in the basic sciences.

Unfortunately, these schools, their curriculum, and their vocational education capacity, fell far short of the purposes and goals established above. They are well designed, architecturally; there are adequate workshop areas. The administrative organization and faculty are fairly well trained and oriented toward the notion of the comprehensive high school curriculum, and guidance counselors and vocational teachers are in place. However, missing is the basic equipment in the trade/industrial and commercial skills areas that would permit teaching and learning on the entry-level scale of vocational skills.[1/]

7.1.1.2 Diversified Cycle. Within the formal education system, the diversified training programs follow the basic-cycle secondary program. They are typically three years in duration, and geared for youth in the 16-18 age group.

The MOE has established five principal "vocational training tracks" within the diversified cycle: trade and industry; agriculture; commercial; computer science; and teacher education. This section deals with only the first four of these, leaving teacher education to Chapter 8 of the Assessment.

7.1.2 Enrollment

Available at the level of diversified cycle are some 29 vocational training areas:

1/ There are two major exceptions: home economics and agriculture. The three experimental schools visited did have adequate home economics laboratories and the three EFA schools are well equipped with both small and large equipment, for their agriculture-oriented curriculum.

Bookkeeping
Secretary and Office Clerk
Bilingual Secretary
Management Technician
Marketing Specialist
Marketing and Advertising Technician
Industrial Specialist
Specialized Technician
Industrial Technician
General Mechanics Specialist
Construction Specialist
Tourism Specialist
Communications Specialist
Municipal Administration Specialist
Computer Specialist
Occupational Science and Guidance Specialist
Agricultural/Industry Management Technician
Community Development Techniques Technician
Police Techniques Technician
Commercial Management Technician
Administrative Management Technician
Executive Secretary
Executive Bilingual Secretary
Communications Technician
Business Administration Technician
Executive Bilingual Secretary in Marketing and Advertising
Commercial Accounting and Computing Technician
Agricultural Technician
Optometry Technician

According to Table 5.4 in the chapter on secondary education, there were 66,272 students enrolled at the diversified level in 1983, including the enrollment at the technical institute administered by the Ministry of Agriculture. Subtracting these 500 students, the 7,125 students in the science and letters programs, and the 17,407 teacher-training students, there were ,240 students enrolled in the technicial-training programs, public and private, leading to both the skilled craftsman certificate and secondary-school diploma. This represents 62.2 per cent of all students enrolled at this level.

In terms of enrollment by gender, Table 5.4 shows that females are strongly represented in pre-primary teacher training, home economics, and secretarial fields; they make up less than 4 per cent of the trade and industry program enrollments. The distribution between private and public schools is even, with 50 per cent enrolled in each sector.

Table 7.2 divides the number of technical enrollments into three groups: commercial/business; trade and industry; and other. Some 36,872, or 89.4 per cent, of the students are enrolled in commercial/business administration programs; only 3,455, or 8.4 per cent, are in industry; and 913, or 2.2 per cent, are enrolled in other programs.

Table 7.2

STUDENT ENROLLMENT, DIVERSIFIED LEVEL, CATEGORIZED BY THREE SUBGROUPS: COMMERCIAL/BUSINESS, TRADE AND INDUSTRY, AND OTHER TECHNICAL EDUCATION STUDENTS, 1985

Technical Education Category	No. of Students Enrolled	Percentage of Students Enrolled
TOTAL	40,640	100.0
a. Commercial/Business	36,872	89.4
b. Trade and Industry	3,455	8.4
c. Other	913	2.2

SOURCE: Constructed by author from USIPE data.

Table 7.3

ENROLLMENT RATES OF YOUTH 13-19 IN SECONDARY EDUCATION: BY AGE GROUP COHORT AND BY CYCLE, 1983

Age Group	Population[1/] Estimated	Enrollment		Percent of Age Group Enrolled	
		Basic	Diversified	Basic	Diversified
13-15	530,330	124,144	---	23.4	
16-18	479,416		66,772		13.9

1/ Proyecciones Regionales de Poblacion, 1980-2000, SEGEPLAN, 1985.

SOURCE: USIPE, Departamento de Educacion, SEGEPLAN, 1983.

Enrollment of secondary-school students by cycle and age-group cohort is shown in Table 7.3. While it is estimated that there are 530,330 youth between the ages of 13 and 15, only 124,144, or 23.4 per cent, are enrolled at the basic-cycle level, which corresponds officially to this age cohort. The percentage of age-group attending upper-level secondary programs declines to 13.9 per cent, as students apparently elect to drop out in favor of work or other activities. Some 66,772 students remain at the diversified-cycle level, as compared to the estimated age-group population of 479,416. Less than 1 per cent of the age group is enrolled in industrial programs.

7.1.3 Goals and Strategies

The vocational/technical training programs in the Ministry of Education have evolved from a strong policy base. Guatemala's goals

and strategies for this important educational area have been set forth in some detail in national planning for the education sector.[1]

The diversified cycle is described as a two-track system, intended to prepare students for higher studies on the one hand, and to train technical personnel to meet economic needs, on the other. In fact, the technical training is seen as the "connector" between the education system and the economy. A recognized goal is the need to reduce the number of students enrolled in the teacher-training programs, while increasing registration in the technical-education areas.

7.1.4 Description of Industrial Institutes

Entry-level skills training is provided by Guatemala's six Institutos Industriales. Five are for men only, with the sixth reserved for women (Tecnico Femenino). In response to a questionnaire addressed to the administrators in each school regarding the purpose they serve, one school prepared the following statement.[2]

Technical Vocational Institutes as specialized industrial training centers have the following objectives:

1) The production of useful and responsible citizens.

2) The utilization and stimulation of the vocational interests and skills of Guatemala's youth, in order to create the greatest possible number of industrial professionals.

3) The modernization of production and maintenance procedures for national industry, to a high technical standard.

4) The improvement of the professional quality and educational level of the nation's industrial personnol.

5) The satisfaction of specialized labor demands as required by the development of professional industries.

To achieve its objectives, the Technical Vocational Institute carries out the following programs:

1) Standard professional training programs, for students who have completed the pre-vocational cycle.

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[1] Consejo Nacional de Planificacion Economica, op. cit., pp. 8-11.

[2] Statement prepared by the administrator and faculty at the Instituto Technico Vocacional "Dr. Inrich Fischmann."

2) Professional extension programs, targeted to industrial personnel who have not had access to a professional level of systematic training. This program is carried out in Guatemala City and in the departments.

3) Flexible, short-course programs for students who have completed the primary level but are unable to enter the pre-vocational cycle.

4) Professional training programs for industrial arts teachers and industrial/vocational education teachers.

5) Occupational training programs to satisfy the immediate needs of local industries.

6) Miscellaneous cooperative occupation programs, carried out in accordance with regulations.

The standard professional training program for students who have completed the pre-vocational cycle has the following characteristics.

1) According to the plan of Bachillerato teaching studies, students obtain an Industrial Bachiller diploma after fulfilling all requirements.

2) In terms of the technical training, students will be awarded the professional diploma for the specialized course followed, after fulfilling all requirements established for that purpose. The graduation examination will include theory and practice, and must be given in accordance with the specific regulations of the Ministry of Education.

3) As part of the professional training process, during the last year of schooling, students must complete a supervised practice period in industry, in order to adapt to labor conditions and forge a relationship between the educational institution and local industry.

7.1.4.1 Curriculum. The Assessment team was able to visit three of the four industrial institutes: The Instituto Vocacional Tecnico "Dr. Inrich Fischmann"; the Instituto Industrial para Varones of Quetzaltenango; and the Instituto Tecnologico Industrial "Dr. George Kerchesteiner," in Mazatenango. Table 7.4 shows the variety of programs at each of these schools.

Although the institutes offer different training programs, the sequence of general academic preparation offered by all three is the same, as it is established by the Guatemalan Education Code.

Table 7.4

PROGRAMS IN THREE INDUSTRIAL INSTITUTES, DIVERSIFIED CYCLE

Vocational Training Area "Perito" Level	Fischmann	Quetzaltenango	Mazatenango
1. Drafting	x	x	
2. Electricity	x	x	x
3. Automobile Mechanics	x	x	x
4. Machine Shop	x	x	
5. Diesel Machanics	x		
6. Radio and Television	x	x	
7. Regrigeration/Air Conditioning	x		
8. Industrial Machine Maintenance	x		
9. Graphic Arts	x		
10. Carpentry	x		x
11. Metal Construction	x		
12. Body Shop and Painting	x		
13. Small Tools/Small Engines			x
14. Construction/Masonry			x
15. Welding	x		x

SOURCE: Constructed by author from information obtained in interviews with directors of industrial institutes.

At the conclusion of the basic cycle, diplomas are awarded in general secondary education, and basic training certificates are issued for such vocational areas as art, graphic arts, automotive mechanics, welding, carpentry, electricity, tailoring, and shoe manufacture.

Table 7.5

PLAN OF STUDIES AT INDUSTRIAL INSTITUTES
BASIC CYCLE CURRICULUM

First Grade	Second Grade	Third Grade
Spanish	Spanish	Spanish
Mathematics	Mathematics	Mathematics
Social Studies	Social Studies	Social Studies
Natural Science	Natural Science	Natural Science
English	English	English
Shop	Shop	Shop
Physical Education	Physical Education	Physcial Education
Music	Music	Music
Art	Art	Art
		General Accounting
		Typing

Table 7.5 (continued)

DIVERSIFIED CYCLE CURRICULUM

Industrial Bachillerato or Specialized Technician

Fourth Grade

1.	Shop Practice	1st Course
2.	Vocational Technology	1st Course
3.	Mathematics	4th Course
4.	Social Studies	4th Course
5.	Psychobiology	
6.	Physics	
7.	Foreign Language	1st Course
8.	Basic Technical Drafting	
9.	Professional Ethics and Morals	
10.	Physical Education	
11.	Music	

Fifth Grade

1.	Shop Practice	2nd Course
2.	Vocational Technology	2nd Course
3.	Mathematics	5th Course
4.	Social Studies	5th Course
5.	World Literature	
6.	Chemistry	
7.	Foreign Language	2nd Course
8.	Political Economy	
9.	Public and Labor Relations	
10.	Physical Education	

Sixth Grade

1.	Shop Practice	3rd Course
2.	Vocational Technology	3rd Course
3.	Introduction to Philosophy	
4.	Spanish-American Literature	
5.	Foreign Language	3rd Course
6.	Business Organization	
7.	Hygiene and First Aid	
8.	Supervised Practice	
9.	Seminar	

SOURCE: Based upon information collected by author during site visits to three industrial institutes.

Upon completion of the diversified cycle, an "Industrial Bachiller and Specialized Technician Diploma" is awarded in fields such as construction, drafting, radio and television, general mechanics, or electricity, according to the student's major field of study.

7.1.4.2 Qualitative Assessment. These industrial institutes are typical of vocational schools found in the U.S. Since students receive a secondary-school diploma as well as the Perito certificate in their specialty, the institutes have regular classrooms as well as instructional areas devoted to technical training. They do not have science laboratories.

Table 7.6 illustrates the qualitative dimensions of these institutes as observed during the site visits.

7.1.5 Agricultural Training

Formal middle-level agriculture training is provided in four schools: three basic-cycle agriculture training schools and one technical institute of agriculture at the diversified level.

7.1.5.1 Basic Cycle. The three agricultural training schools are new, and were developed under an IDB loan to respond to Guatemala's need for agricultural training at the early secondary-school level. they are boarding schools, each with a capacity of 150 students. Their objectives are:

1) To expand educational opportunities for rural youth who have completed primary school.

2) To provide a short technical-training course, lasting three years, to meet the needs and aspirations of poor, rural Guatemalan youth for an agricultural career.

3) To give area farmers the training and knowledge necessary to preserve the renewable resources of the country.

4) To provide technical, social, and cultural education to mothers and housewives in the region, so that they can raise their standard of living over a short period of time.

The schools focus their program of studies around three curriculum areas: basic cultural studies, agricultural science, and animal science. They operate under the Human Resources Development Division of the Minister of Agriculture. Applicants are given rigorous admission tests, and graduates receive an "Agriculture Aide" diploma from the Ministry of Agriculture. This entitles them to continue on to the diversified cycle in any secondary school, if they wish.

7.1.5.2 Diversified Cycle. The upper-secondary national training center, the Technical Institute of Agriculture, is located just outside Guatemala City, in Barcenas. The school has excellent laboratories and farm land to support some 500 residential students. The objectives of this school are:

Table 7.6

QUALITATIVE ANALYSIS OF THREE INDUSTRIAL INSTITUTES
GUATEMALA, 1985

Area of Analysis	Qualitative Analysis Good	Aver.	Poor	Comments
1. Basic equipment (machines and equipment available to the students in the workshops)			XX	For the most part the equipment is old, and many machines are inoperative. The government does not provide capital development monies for equipment problems.
2. Small tools		XX		Each school has a few tools available for each of the shops, but the student need far exceeds the number available. This has a significant negative effect on both the quality of instruction (degree of practical experience) and the internal efficiency of the programs (utilization factor of technical teachers).
3. Work Space	XX			Although the total number of student spaces available is far fewer than the number of students who would like to enroll, workshops are not especially crowded. There are adequate work space stations for all students.
4. Student texts, work sheets, manuals, study guides, etc.			XX	One of the most serious areas of concern. Texts and/or manuals are simply not available, and students have to copy from the chalkboard, teach worksheets, or other available material.
5. Audio-visual materials for teachers			XX	An area of serious concern. Teachers have extremely limited access to basic instructional materials.

Table 7.6 (cont'd)

QUALITATIVE ANALYSIS OF THREE INDUSTRIAL INSTITUTES
GUATEMALA, 1985

Area of Analysis	Qualitative Analysis Good	Aver.	Poor	Comments
6. Physical science instructional capacity (biology, physics, & chemistry laboratory teaching materials)			XX	Given the fact that these students receive the Bachillerato diploma, as well as the certificate in a skills/trade area, they need to have the same level of education in all secondary-level courses as other students. None of the schools visited had even a semblance of physical science laboratory materials, and texts, manuals, and teacher materials were not available.
7. Practical training experience in work-related establishments outside the school	XX			In all of the schools, it was common practice to locate out-of-school practical training experiences for sixth-course students.
8. Structure, relevance, and level of curriculum		XX		Although students seemed to be learning the basics in their specialty areas, none of the workshop teachers had an organized competency-based curriculum format from which to work. It was impossible to qualify a student's level of performance or skill acquisition without having him demonstrate it; none of the programs were on top of new technologies in their fields; all practical/instructional experiences were based on skills relative to the 1950s.
9. Student morale and general overall instructional learning environment	XX			Students showed enthusiasm in their learning experiences, and teachers as whole seemed to work well with them, to the degree that this kind of interaction can be observed.

Table 7.6 (cont'd)

QUALITATIVE ANALYSIS OF THREE INDUSTRIAL INSTITUTES
GUATEMALA, 1985

Area of Analysis	Qualitative Analysis Good	Aver.	Poor	Comments
10. Library resources			XX	Much can be done here, at very little cost per student.
11. Administration		XX		The school directors and their administrative staffs seemed to be well prepared for their functions, except for the fact that they were not versed in technologies in this area. Each school had an organizational structure which facilitated the overall instructional program.
12. Instructional practice		XX		Workshop teachers are fairly well prepared; most are secondary-school, technical/industrial course graduates and do know the basics in their teaching areas. They have not had any in-service education for years, however, and are not using new, proven techniques of instruction.
13. Student personnel services (guidance and counseling, course evaluation)		XX		Although each school gives rigorous entrance exams to new students, the quality of discrimination and career guidance is minimal. Entrance tests are heavily weighted in the verbal aptitude areas, and there is little programmed opportunity for career exploration before a student is put into a vocational track.

SOURCE: Information collected by author during site visits.

1) To prepare skilled specialists (peritos) in agriculture with the professional knowledge and practical skills to contribute to the development of the nation's agricultural resources.

2) To place graduates throughout the rural communities so that they can provide leadership to other, less well-prepared agriculture workers.

3) To prepare agriculture technicians who have the economic and social ability to know and understand the problems of rural life.

The program lasts three years and ends with a bachillerato and a title of perito in agriculture. The curriculum of studies is divided among six semesters of practical and academic coursework. In the upper grades, approximately 80 per cent of the student's time is devoted to the development of practical skills, with the remaining 20 per cent given to academic studies. The formal program of studies is as follows:

FIRST SEMESTER

Tropical Soil Culture and Fertilization
Vegetable Production
Animal Health I
General Practical Mechanics
Biology
Mathematics I
Ecology

SECOND SEMESTER

Water Studies
Fruit Production
Animal Health II
Entomology
Genetics
General Botany
Mathematics II

THIRD SEMESTER

Sylvaculture
Crops I
Physics
Agricultural Mechanics
Plant Pathology
Systemic Botany
Mathematics III

FOURTH SEMESTER

Forest Production
Crops II
Pasture and Forage
Machinery and Agri. Mechanization
Animal Anatomy and Physiology
Chemistry I
Mathematics IV

FIFTH SEMESTER

Topography
Irrigation and Drainage
Cattle Diseases
Sheep and Goats
Chemistry II
Agricultural Industrialization
Economic Background

SIXTH SEMESTER

Rural Sociology and Agricultural Extension
Statistics
Rural Construction and Installation
Natural Resources and Soil Conservation
Rural Administration and Agricultural Accounting
Agricultural Research
Animal Nutrition

7.1.6 Qualifications of Technical Teachers

Most of the teachers in the schools visited were graduates of a technical institute, such as the one in which they were teaching. They had continued on to the university to get their secondary teaching credential. A few were normal-school graduates who had been able to specialize in a skilled trade area after completing their normal-school studies. Only a few had received any in-service training within the past ten years.

This is considered to be a minimal level of training. Teacher-training techniques for shop activities are not taught in the university; thus, whatever trade skills a teacher learns in secondary school determine the extent of his teaching tools in that area. It was not possible to determine to what extent technical teachers have had industrial work experiences beyond that required for graduation from secondary technical institutes. This of course raises questions about the relevance of what they teach to the needs of Guatemalan industry.

In the early 1980s, INTECAP, through an IDB loan program, gave a series of workshops for vocational teachers in the PEMEM schools. In the process, they introduced the concept of instructional modules. Although the evidence shows that the workshops were highly successful, the residual effect has been minimal, simply because these teachers do not have the equipment necessary to apply their newly acquired training.

7.1.7 Equipment and Facilities

No data are collected on classroom utilization in the vocational/technical schools, but observation and interviews suggest that the utilization rate is about 80 per cent in the technical workshops of the four industrial schools. With the exception of the "Inrich Fischmann" in Guatemala City, the schools do not use their workshops in the evenings or on weekends. Underutilization of space is considerable at the PEMEM schools, since they have little or no equipment to complement their workshops.

The major workshop areas in the four technical schools are old, but adequate. All need more and newer equipment: small tools, student work stations, and basic audio-visual/instructional aids. The most serious problem with respect to facilities is in the area of science laboratories. There are none in the schools, and yet the students are expected to learn the basics of chemistry and physics before they graduate.

Overall classroom space in the technical schools at the diversified level falls far short of student demand. Every school reported that they can only admit about 25 per cent of the students who want to enroll for the first time each year. Interviews suggest that up to 4,000 young people are turned away each year from the vocational/technical institutes. Since these schools are, for the most part, the only educational institutions in the region where this kind of training

is available, a large percentage of youth is denied the opportunity to learn a trade. Some technical training does take place outside of the formal education system, through industrial apprenticeships. However, information on the extent of this training is difficult to obtain and, in fact, is beyond the scope of this Assessment.

7.1.8 Curriculum and Materials

Except for access, the most serious educational problems in the technical/vocational schools relate to the lack of texts and teaching materials, and to the fact that curriculum used in the workshops is antiquated, inadequate, and not particularly relevant.

The MOE does have an established curriculum for use in the schools, which seems to be adequate and appropriate; but it is seldom applied in as comprehensive a manner as it is described. There is a gap between what is written as the curriculum and what actually happens on a day-to-day basis in the classrooms and workshops.

None of the schools has an adequate library, although two were trying to gather some basic materials and set up their own. None of the schools has adequate science materials or equipment. Just as serious is the dearth of texts, student guides, and teaching manuals. The schools do not have media centers where materials might be produced and almost all teaching is done by lecture. Students have to copy their work from the lectures or from the two or three texts loaned to them by the teacher, if he is fortunate enough to have any.

There are no published courses of study in the technical workshop areas. The teachers were not aware of methodological innovations such as competency-based curriculum, open-entry and open-exit programs, instructional modules, etc. It was difficult to discern levels of teaching ability from observing workshop instruction.

The schools have supply budgets which are inadequate to purchase even the basic raw materials for workshop instruction. Table 7.7 shows the current budget of the Institute in Quetzaltenango, a basic and diversified school program with 1,100 students and 5 major shop areas.

All of the school directors said that because of the rate of inflation, price increases for raw goods and small tools, and the devaluation of the Quetzal, it was becoming more and more difficult to keep shop programs in operation, even at the low levels of cost to which they have become accustomed.

7.1.9 Summary

The diversified technical training schools provide only a portion of the quality of service they could be rendering, given more and better equipment and materials, curriculum programs that reflect the state-of-the-art in technical education, and teachers with recent in-service training to upgrade their skills. In short, this education

subsector has not been given the institutional support necessary to develop and maintain a high degree of quality and effectiveness.

Table 7.7

ALLOCATED BUDGET FOR CURRENT EXPENSES
FOR THE INSTITUTO INDUSTRIAL PARA VARONES,
QUETZALTENANGO, 1985

Budget Item	Allocated By MOE	
	Basic Level	Diversified Level
	Q	Q
Salaries	49,052	112,666
Electricity		1,500
Misc. Costs		700
Maintenance	700	
Supplies:		
Paper		3,165
Cardboard		
Material		1,000
Books, magazines, newspapers		500
Texts	300	300
Gas, oil, lubricants		2,000
Small Tools	600	1,000
Misc. Materials	400	150
TOTAL	Q 51,052	Q122,975

SOURCE: Data supplied by Instituto Industrial para Varones, Quetzaltenango, 1985.

The internal and external efficiency costs to Guatemala for this negligence are considerable. From the standpoint of internal efficiency, teachers render only a small portion of their instructional capabilities because their technology is tied to inefficient and relatively ineffective teaching modes; i.e., having to put material on chalkboards over and over again, not having visual or concrete materials to help explain basic concepts, designs, etc. These barriers affect communication; thus, the quality of education and the actual success rates of teaching and learning are negatively influenced.

In terms of external efficiency, it can be concluded that trained students will perform below their expected levels of competence in the workplace, thus requiring additional resources to become employable. Although no definitive data were available in this regard, interviews conducted by the Assessment team suggested that secondary graduates from

the technical schools were only minimally qualified to assume traditional entry-level positions in representative industrial occupations.

7.1.10 External Efficiency

Follow-up data on a random sample of 300 students who have graduated over the past three years were provided by the Office of Industrial Coordination for the large technical institutes in Guatemala City. Of the 300 graduates, 12, or 4 per cent, went directly into the university and became full-time students; 63, or 21 per cent went directly into the labor force and were gainfully employed in occupations closely associated with their areas of study. The rest of the students, 225, or 75 per cent, pursued a higher degree but worked either full or part time in the process. Some 70 per cent of those working full time were in occupational areas closely associated with their technical-training programs.

Administrators and teachers at the other schools visited confirmed these data with respect to their graduates. Most graduates want to continue on to higher education but also want to become gainfully employed. Their technical training seems to permit them to get jobs relatively easily.

In 1984, INTECAP carried out a study of 353 of its graduates representing all types of training modes. This sample represented 28.3 per cent of all participants in these programs. The findings were as follows: in 92 per cent of the cases, the graduates utilized their new skills/knowledge in their work situation, and 4 per cent used their new skills/knowledge to improve their own small enterprise. Only 3 per cent said that the courses had made no positive impact upon their professional lives.

As inconclusive as these data may be, they are consistent with what was observed in this area:

1) Students at the secondary level are able to use their skills to gain employment, especially if they can demonstrate high levels of performance and show a record of good work habits, punctuality, etc.

2) INTECAP, because it works so closely with the private sector and because it has such a flexible program format, can tailor its courses to the needs of its students. This in turn provides the quality of training necessary to help them maintain and improve their performance and thus their productivity.

There are no data which can be used to determine the degree to which training is useful in terms of dollars invested, from either a private or social standpoint. To the extent that technical training is used as a route to the university, either directly or as a way to earn tuition and room and board, society benefits only temporarily or not at all from the industrial arts learned. This suggests consideration of ways in which terminal technical training can be made more desirable, through

enhancement of occupational prestige and higher wages. An analysis of labor market needs would be necessary, along with efforts to ensure that technical training is both responsive and relevant to the available opportunities.

7.1.11 Internal Efficiency

The internal efficiency of vocational/technical training programs is a function of student entry into and flow through the programs; adequacy of instruction and availability of competent teachers; utilization of available facilities and equipment; and coordination among the various training programs. While these factors are discussed here, a detailed presentation of issues is contained in Section 7.3.4.2.

In all of the various vocational training programs, enrollment has increased during the past 15 years. However, demand continues to exceed the level of opportunity to enroll. Except for the recent construction of classrooms and laboratories in INTECAP, and the building of PEMEM schools at the basic-cycle level, there has been no physical expansion of the industrial training areas. The four or five major institutions have not been renovated since their construction 20 to 25 years ago. On the other hand, approximately 20 per cent of public school classroom/ workshop space is underutilized, due to program schedules, school calendars, lack of furniture, and shortages of equipment and supplies. This figure soars to 60 per cent if the experimental schools and INTECAP classrooms/workshops are included.

The lack of adequate texts and teaching materials affects internal efficiency as well. It is estimated that instruction could be made at least 30 per cent more efficient, if sufficient numbers of appropriate materials were available to both teachers and students.

Coordination among the training and certification programs has yet to be developed. For example, the technical-training schools do not use the student manuals developed by INTECAP. There is only limited sharing of classroom space. Furthermore, there is no unified plan at any level of administration for the development of integrated activities. For that matter, there is no development plan for vocational/technical education at the diversified level at all.

Unfortunately, data on cohort flows for technical education students over time were not available. It was possible to analyze failure rates by program for the year 1983, however. Table 7.8 shows the rate of students who failed two or more subjects, in all grade levels, by technical education program. Failure rates ranged from a low of 30 per cent in the computer programs, to a high of 79 per cent in administration. The average failure rate for the public schools was 52 per cent; for the private, 45 per cent.

A sampling of individual schools shows that the largest number of failures takes place at the level of the first course. By the time students reach the third and final course, the failure rate is relatively low.

Table 7.8

PERCENTAGE RATE OF FAILING STUDENTS PER PROGRAM
BACHELLERATO VOCATIONAL, DIVERSIFIED CYCLE:
PUBLIC, PRIVATE, 1983

Program and School Type	Failure Rate
Public	
Perito en Administracion	79%
Bachillerato en Mercadotecnia	21%
Perito en Mercadotecnia y Publicidad	38%
Bachillerato Industrial y Perito en una Especialidad	49%
Perito Industrial	45%
Bachillerato en Mecanica General	40%
Bachellerato en Construccion	66%
Bachillerato en Computacion	39%
Perito en Administracion de Empresas	58%
Average	52%
Private	
Perito en Administracion	42%
Bachillerato en Mercadotecnia	53%
Perito en Mercadotecnia y Publicidad	43%
Perito en Administracion de Agroindustria	37%
Perito en Tecnicas de Desarrollo Comunitario	61%
Perito en Administracion Comercial	74%
Secretariado Ejecutivo	71%
Secretariado Ejecutivo Biligue	46%
Average	45%
OVERALL AVERAGE	50%

SOURCE: Constructed by author using data from USIPE, Ministerio de Educacion, Guatemala, 1983.

A second way to look at internal efficiency is to compare the number of graduates with enrollments in the first course. Table 7.9 presents these data for a series of selected programs in 1983. With the exception of programs in administration, technical training, and marketing, 50 to 60 per cent of all students enrolling in a program actually finished the program in three years.

Table 7.9

PER CENT OF GRADUATES COMPARED WITH NUMBER OF STUDENTS ENROLLED IN THE FIRST COURSE OF PUBLIC VOCATIONAL TRAINING PROGRAMS

Training Program	No. of Students[1] Enrolled in First Course	No. of[2] Graduates	Graduates as % of First-Year Students
Administration	312	79	25%
Marketing & Publicity	190	15	08%
Technical Training	802	313	39%
Industrial Training	37	22	60%
General Mechanics	91	52	57%
Construction	224	115	51%
Computer Training	93	48	52%
Business Administration	40	22	55%

1/ First-year enrollments were estimated to be 45 per cent of total students enrolled in program for that year.

2/ Actual number of graduates for 1983.

SOURCE: Constructed by author using 1983 data from USIPE.

The availability of qualified teachers depends on both the quality and quantity of graduates from teacher-education programs. Although there has been a substantial effort over the past few years to upgrade teacher training in Guatemala, that part of the system that deals with the training of vocational teachers has been left untouched. Moreover, since there has been no expansion of the MOE diversified cycle, there are very few young technical-training teachers. Almost all of the workshop teachers have been with the program for fifteen to twenty years. These teachers have had no in-service training in up-to-date metholodogies. Most of them are limited in their approach and experiences, simply because they have used the same outdated techniques for years.

7.1.12 Access and Equity

Only 25 per cent of students who seek vocational training are actually able to enroll. INTECAP, mandated to serve those workers who are already employed, has little space and fewer programs for the untrained. There are insufficient numbers of technical-training opportunities available to aspiring students.

Moreover, the training programs of the Ministry of Education are almost completely oriented to the urban areas. Except for the three basic-cycle agricultural schools, and one diversified-level agriculture school run by the Ministry of Agriculture, vocational training facilities are all located in major urban centers. There are no facilities for

developing outreach or extension programs. If a student doesn't get a dormitory space, he must find housing on his own if he wishes to attend school. In Mazatenango, there are dormitory facilities for some 165 students; the director said that he has a demand of over 500 students annually.

With respect to gender equity, the technical-skills program in Guatemala has traditionally been targeted to males. However, more females have entered the system during the past five years, as the private sector has expanded program opportunities to include secretarial, bookkeeping, and computer training areas.

7.1.13 Costs and Financing

Public vocational and technical education in Guatemala is financed by public monies; students are not charged tuition. The cost figures from the one industrial institute for which financial data were available showed that of the total Q174,027 allocated for 1985, some Q161,718, or 93 per cent, is used for teachers' salaries. This implies financial shortfalls for maintenance and replacement of equipment, purchasing of raw materials for use in the workshops, etc., which is in fact borne out by observations during site visits to the schools.

Another way to look at costs is to study school budgets on the basis of unit cost, or cost per student per year. The most sophisticated data available in this area were prepared by the administration at Quetzaltenango. The annual operational budget of Q174,027, which includes both secondary cycles, is compared to an enrollment of 1,100. This translates into an annual per-student cost of approximately Q158. The basic level, with 700 students, shows a unit cost of Q73. At the diversified level, there are approximately 400 students and total budget of Q122,975, for an average cost per student of approximately Q308.

Based on rough data from the Ministry of Education, budgets by program were compared with student enrollment figures. Table 7.10 illustrates the wide range of cost figures derived by this method. The Bachillerato Industrial program shows a unit cost of more than Q670, while the computer training unit cost is Q10. A large number of programs show costs that range between Q150 and Q300 per student per year. Not included in these data, however, are per-student capital costs.

7.1.14 Donor Support

The primary external support for technical/vocational education in Guatemala has come from the IDB, especially at the INTECAP program level.

At the lower secondary vocational training level, some 42 schools were built under two World Bank loans, with funds totalling $8 million. Three of these schools were intended to prepare rural youths in agriculture, with their programs complemented by development and expansion of the Agricultural Training Institute. The 39 middle-level

Table 7.10

COST PER STUDENT AND PER BACHILLERATO PROGRAM
VOCATIONAL, DIVERSIFIED CYCLE:
PUBLIC, PRIVATE, AVERAGE COST 1983

Program and School Type	Cost per Student	Cost per Program
Public		
Perito en Administracion	96	66,720
Bachillerato en Mercadotecnia	264	46,320
Perito en Mercadotecnia y Publicidad	155	31,750
Bachillerato Industrial y Perito en una Especialidad	671	177,540
Perito Industrial	254	23,876
Bachillerato en Mecanica General	292	28,928
Bachellerato en Construccion	187	45,484
Bachillerato en Computacion	10	2,230
Perito en Administracion de Empresas	176	18,656
Average	234	49,056
Private		
Perito en Administracion	131	5,539
Bachillerato en Mercadotecnia	208	7,548
Perito en Mercadotecnia y Publicidad	186	13,590
Perito en Administracion de Agroindustria	88	3,080
Perito en Tecnicas de Desarrollo Comunitario	149	9,256
Perito en Administracion Comercial	230	9,600
Secretariado Ejecutivo	285	4,845
Secretariado Ejecutivo Bilingue	285	34,770
Average	195	11,029
TOTAL	215	30,042

SOURCE: Constructed by author from Resultados Finales de Evaluacion y Presupuesto Ejecutado. Niveles: Preprimario, Primario y Medio. Ciclo Escolar. USIPE, Ministerio de Educacion, Guatemala, 1983.

schools were built to provide a comprehensive industrial-arts program with strong emphasis on career guidance. The potential of these programs was never realized, because the schools were not able to equip their industrial arts classrooms.

Other international donors are shown in Table 7.11.

Table 7.11

INTERNATIONAL PARTICIPATION
IN VOCATIONAL/TECHNICAL EDUCATION
1975-1985

DONOR	TYPE OF ASSISTANCE
IDB	Financing for INTECAP.
UNESCO/International Labor Organization	Technical assistance for developing a system of training and development programs for industry.
AID and Pan American Foundation	Technical assistance and the donation of tools and equipment for the INTECAP centers.
German Government	Technical assistance in curriculum development (INTECAP and secondary technical schools), and donation of heavy-duty machine shop equipment for the INTECAP centers.
Argentina-National Council for Technical Education (CONET)	Technical cooperative contract for the transfer and exchange of technology in productivity and manufacturing.
Chile-National Institute for Training (INACAP)	Cooperative agreement for bilateral assistance in fishing.
Colombia-National Service for Apprenticeship Training (SENA)	Cooperative agreement for bilateral technical assistance to implement occupational certification programs.
Spanish Government	Technical assistance in developing training programs in construction, textiles, and tourism.
Israeli Government	Cooperative agreement for bilateral assistance in transportation and cooperatives.
Italian Government	Technical assistance in training for manufacture and repair of electric motors.
Brazilian Government	Cooperation in developing alternative sources of energy.

Table 7.11 (cont'd)

INTERNATIONAL PARTICIPATION
IN VOCATIONAL/TECHNICAL EDUCATION
1975-1985

DONOR	TYPE OF ASSISTANCE
Peru-National Training Service (SENATI)	Cooperative agreement for training and technical assistance in welding and foundry work.
Swiss Government	Technical assistance in heavy-duty farm machinery.
Venezuela-National Institute for Apprenticeship Training (INAPEI)	Technical assistance in curriculum development and training programs in energy.

7.2 Technical Training at INTECAP

Many of Guatemala's ministries are involved in some type of training activity, as public policy permits the decentralization of administrative authority to create and implement training programs. For instance, the Ministry of Agriculture confers the diploma and perito certificate to the graduates of the Agricultural Training Institute. Other training institutions offering similar credentials in different fields include the Ministry of Health, the Ministry of Labor, and the military. There seems to be little collaborative sponsorship of programs and activities among ministries; but institutional leaders seem not to be threatened by the possibility.

One particular institution outside of the Ministry of Education merits discussion: the Technical Institute for Training and Productivity (INTECAP), the Ministry of Labor's relatively new skills-training organization.

7.2.1 INTECAP's Organization

Founded in 1972, INTECAP is a nonprofit training center funded by a 1 per cent payroll tax on all firms with 10 or more employees that do not provide training programs approved by the government. No firms have qualified for exemption from the tax. In the mid-1970s INTECAP received an IDB loan of $14 million, intended to expand and reinforce its infrastructure. The loan financed a major expansion of the plant and equipment available to INTECAP in all parts of the country, specifically:

1) Construction and equipping of a large headquarters building in Guatemala City, to house the central administrative and technical services of INTECAP, together with a Managerial Training Center and offices of the Guatemala Regional Unit.

2) Construction and equipment of five Training Centers located at the administrative seats (cabeceras) of the following departments: Quetzaltenango, Escuintla, Chiquimula, Santo Tomas de Castilla, and Guatemala City. Each center includes an area of 3,000 to 4,000 square meters in equipped workshops, classrooms, and offices, and the offices of the INTECAP regional unit.

   Until shortly before the Loan Agreement was signed, the projected number of centers was six, with two located in Guatemala City; and the average floor area was closer to 3,000 square meters. Removal of one center was justified by a simultaneous commitment of West German assistance toward construction, equipmont, and operation of a major training center in the capital (Centro de Capacitacion Industrial Guatemalteco-Aleman)

Today, INTECAP stands out among the government's other training programs. It is the best equipped and most modern, as well as being substantially strong from an administrative, organizational, and infrastructural viewpoint. The IDB evaluation report gives the institution high marks for its ability to implement the loan in such an efficient manner.[1/] The INTECAP centers, their workshops, classrooms, libraries, and equipment, are far superior to anything at the diversified level in the secondary schools. Its administrative, planning, evaluation, and technical assistance offices at the central headquarters suggest an organizational ability of great potential.

7.2.2 INTECAP's Objectives

INTECAP has six principal program objectives:

1) To be the government's technical agency for serving the nation and, with collaboration from the private sector, being responsible for the development of human resources and increasing productivity without posing a threat to other organizations.

2) To collaborate with the government on development programs that have special components for skills upgrading and training of workers.

1/ Inter-american Development Bank, Project Performance Review: Technical Educational Project of the "Instituto Tecnico de Capacitacion y Productividad," December 1983.

3) To serve as a vehicle for bringing the private and public sectors together in action programs that complement the needs and resources of each entity.

4) To promote and increase productivity at all levels and in all its aspects, and give special attention to the development of human resources.

5) To collaborate with other entities that promote social and economic development of the country, as a special agency designed to assist in increasing productivity and in developing human resources.

6) To provide assistance and advice to the government and to the private sector when asked to do so, within the function and activities of the policy framework under which INTECAP was founded.

INTECAP serves a variety of clients throughout its five centers, working in a number of program areas that contribute to many development-related activities. Table 7.12 illustrates this integrated pattern of goals, clients, programs, and training areas.

Table 7.12

THE INTEGRATED PROGRAM OF INTECAP

ACCELERATED PROFESSIONAL DEVELOPMENT DIRECTED TOWARDS:

* Unemployed, so that they may find work.
* Part-time employees, so that they will become full-time employees.
* Employed workers, so that they will be promoted both socially and economically.
* Handicapped, so that they will become productive.
* Youngsters who reach the working age, so that they will become productive.
* Urban and rural women, so that they may be incorporated into the mainstream of social and economic life.

THROUGH THE FOLLOWING PROGRAMS:

* Urban and rural professional skills training.
* Integrated technical assistance, for the establishment of small and medium-sized enterprises.
* Distance education for occupational training.
* Upgrading of skills in centers and through mobile programs.
* Professional certification of workers.
* Short technical courses.
* Upgrading skills of employed workers.
* Training of middle managers and executives.
* National self-teaching service.
* Selection, evaluation, and other personnel services.
* Preparation for small, entrepreneurial enterprises.

Table 7.12 (cont'd)

THE INTEGRATED PROGRAM OF INTECAP

CONTRIBUTING TO:

* Popular participation.
* Income distribution.
* Employment creation.
* Satisfaction of basic needs.
* Improvement of income.
* Lowering cost of living.
* Stopping inflation.
* Gradual substitution of imports.
* Increase in exports.
* Improvement of GNP.
* Participation of labor organizations and socially interested groups in public and private sectors.

BRANCHES OF ECONOMIC ACTIVITY:

Farming and Animal Husbandry Sector

* Agriculture and horticulture
* Major and minor cattle
* Forestry and fishing
* Administrative and mechanized agriculture

Industrial and Artisanal Sector

* Fine arts
* Food
* Textiles
* Metal/Mechanics
* Wood and furniture
* Building materials
* Civil and housing construction
* Diesel and gasoline mechanics
* Electric motor installation

Commercial and Service Sector

* Hotel and tourism
* Health
* Land transportation
* Banking and insurance

Table 7.12 (cont'd)

THE INTEGRATED PROGRAM OF INTECAP

OCCUPATIONAL LEVELS:

Operative: Directed towards persons who wish to receive full or complementary training for the development of their own abilities and skills in determined occupations such as mechanics, warehouse managers, etc.

Means: Directed towards personnel in medium-level jobs.

Executive: Directed towards managers, directors, and owners of enterprises.

INTECAP's program has grown rapidly in the recent past. In 1984 it trained 28,760 participants in more than 1,732 courses, offering some 230,947 hours of instruction. Table 7.13 shows how these courses were distributed among the various clients. Apart from these courses, INTECAP provided technical assistance to 3,217 firms throughout the country.

Table 7.13

INTECAP TRAINING COURSES BY OPERATIONAL UNITS, COURSES, PARTICIPANTS, AND HOURS OF INSTRUCTION

Operative Units	Courses	%	Participants	%	Teacher Hours	%
INTECAP TOTAL	1,732	100	28,760	100	230,947.5	100
Agricultural Sector	455	26	7,131	25	45,791	19
Manufacturing Sector	473	27	7,538	26	82,614	36
Service Sector	498	29	9,331	32	19,616	9
Small Industry	9	1	268	1	3,474	1
Handicapped	56	3	816	3	6,154	3
C.C.2	241	4	3,676	13	73,298.5	32

INTECAP's annual budget is approximately Q600,000, and it employs 750 persons, 500 on a full-time basis. It has developed an extensive set of curriculum materials which are presented in modular format. Apart from its regular programs in the centers, INTECAP operates mobile units and delivers 25 distance-education courses by radio.

7.3 Analysis

This section examines those issues which relate to Guatemala's need to improve the internal and external efficiency of its vocational and technical education system. These issues are addressed within a discussion of needs, plans, and constraints.

7.3.1 Needs

The basic needs in Guatemala in the area of vocational/technical education are:

1) To improve the level and quality of technical education at all levels of the public secondary school system.

2) To link training programs at the upper-secondary level and the production of skilled workers more closely with the demands of the labor market.

3) To provide adequate texts and other instructional materials to schools and programs throughout the system.

4) To provide an institutional base for production of materials at the secondary-school level.

5) To institutionalize a comprehensive program evaluation system that would include systematic studies to follow up graduates of the technical-training programs.

7.3.2 Plans

There are no specific short or long-term plans for the development or expansion of secondary vocational/technical education in Guatemala. Almost all of the formalized planning in this area has been done by INTECAP over the past eight years.

7.3.3 Constraints

Constraints to optimal development of vocational/technical education in Guatemala include:

1) The capacity of the nation's schools to carry out high-quality technical-training programs, because of the lack of materials, modern equipment, well-trained teachers, and appropriate curricula.

2) The absence of any official development policy in this area.

3) The high costs of program development.

4) The current state of the physical plant, including classroom space and workshop facilities.

5) The lack of data to identify specific labor demands in selected vocational areas.

7.3.4 Issues

This section identifies areas which must be considered if the vocational/technical system in Guatemala is to fulfill its mission as a contributor to the country's social and economic development.

7.3.4.1 External Efficiency. Any increase in external efficiency can only be realized if these factors are considered: linking manpower supply to manpower demand; creating appropriate incentive systems to encourage graduates of training programs to seek and retain employment in skilled and semi-skilled areas; and, involving business and industry in the form and function of vocational/technical training, at both the level of policy and implementation.

7.3.4.1.1 Use of Demand Data. The vocational/technical education subsector is now supply-driven. There are few data available and little attention given to actual demand for graduates in either urban or rural areas. This poses a serious problem for educational planners; without such information, meaningful decisions about where current resources should be targeted or how expansion of the technical educational system should be directed are reduced to guesswork.

To use demand data effectively in educational planning, the data should exhibit at least two characteristics. First, they should identify both the skill and occupation areas that are needed and the level of skill attainment necessary for workers to respond effectively to the shortage. Second, the demand data must be developed on a regional as well as a national scale.

7.3.4.1.2 Creating Incentives to Work in the Sector. Lacking good follow-up data in this area, little information is available to determine if students seek, obtain, and stay in jobs for which they were trained; and, their motivational levels for working in the skilled and semi-skilled occupational areas upon graduation. An analysis of what few data exist in this area suggests that most students view these programs as a step towards continuing their education at the university. Many use their skills only temporarily, as they seek to finance their post-secondary education. It is known that when vocational/technical education programs select students early in the training cycle who have high aptitude and motivation levels for this type of training, external efficiency rates are greatly increased. This has significant implications for qualified industrial arts training, career guidance, and comprehensive aptitude testing.

7.3.4.1.3 Better Articulation with Business and Industry. Except for the fact that most third-year students receive some practical, on-the-job training in industries or factories, there is little or no qualitative involvement or dialogue between the public technical schools and the private sector. Building on the nascent relationship that has

been developed through the internship programs, the schools should establish trade-advisory committees that are program-specific. The MOE could form a national council of business, industrial, and labor leaders to provide direction and guidance in this endeavor.

7.3.4.2 Internal Efficiency. The issues of internal efficiency center on attracting the best students possible into the programs; providing a level of instruction that will challenge them while adequately preparing them for the work world; having the kinds of teachers who will gear their instruction to the needs of their students; and applying a curriculum that is competency-based, provides for open-entry, open-exit teaching/learning modes, and has the proper balance between academic emphasis and practical experience.

7.3.4.2.1 Selecting the Best Students. Although the vocational-training schools have entrance examinations that purportedly screen out 75 per cent of all applicants, these tests are heavily weighted toward academic aptitude and verbal skills. Moreover, they have never been standardized to the student-profile of the basic-cycle graduate. They tend to discriminate against rural youth, especially those who are indigenous.

It is difficult to tell just what set of criteria is used to select students for entry. Administrators admit that they have inadequate data on both groups of students--those admitted, those rejected--to support their decisions strongly. And, if first-year failure rates are any reflection of the quality of the selection process, the procedures must be poor: nearly half of the students at that level do not proceed to the next.

Two factors characterize the selection process: (a) there are too many candidates for a limited staff to evaluate; and (b) admission tests are inadequate for the task. Complicating the procedure is the fact that because the basic-cycle industrial arts programs are so inadequate, students who arrive at the technical institutes to be screened for admission have not had the opportunity to test their vocational aptitude in the technical skills area.

7.3.4.2.2 Quality of Instruction. One of the most discouraging experiences students can have in a technical-training program is to get ready to learn a skill and then find that there is not enough material to work with, or that the machines do not work or are inadequate for the job. When students are busy in well-equipped workshops with sufficient materials, building or crafting out products, they not only learn the necessary skills but also receive great personal satisfaction from the fruits of their labor. Moreover, technical education is the one area in which student products can help meet the economic needs of the courses. However, this requires the materials and equipment necessary for production, a good system of cost accounting, an instructional orientation toward learning by producing, and a sense of entrepreneurship. There are some programs where this level of

instruction is being realized. These classes show that it can be done; that schools can generate work; and that the products serve a useful purpose both for those who purchase them and the students who produced them.

Another area of great concern is the inadequate instructional support system for the sciences and math. Highly specialized skill training--as opposed to a good foundation in technology and science--produces workers who have difficulty learning new technologies. A recent World Bank study has shown that specialized, secondary-school technical graduates do less well in the labor market than do academic graduates, after five years.

The unit cost of vocational/technical education is relatively high. In order to extend access to more students, it will have to be made more efficient and of higher quality. This will require more than money, equipment, materials, and supplies. It will take a new orientation to this level of teaching; it will take a more rigorous administrative supervision program; it will take vision and the willingness to build upon the traditional strengths of the schools and the needs of the community. It will require increased attention to basic science and mathematics, and less to manual skills. In short, it requires a total commitment to excellence in education.

7.3.4.2.3 Competency-Based Curriculum. The simplest of the issues deals with the area of competency-based curriculum. The technology of breaking skill and knowledge areas down into smaller, sequentially paced tasks--from simple to complex--in graphic representation has been developed. With a minimum amount of technical assistance and a fair amount of research and development money to design and produce materials that are culturally appropriate to particular regions of the country, the overall curriculum program could be modernized.

7.3.4.3 Administration and Supervision. The issues surrounding administration and supervision have both an internal and external dimension. The internal dimension refers to the need to learn and apply a whole new set of leadership skills to the school's instructional programs. This requires a transfer of technology, a technology that supports a strong competency-based, technical education program, complemented by rigorous academic preparation in mathematics and the sciences. It has implications for staff development, program evaluation, instructional supervision, and leadership.

The external dimension is the need for more and better inter-institutional planning and collaboration, and for outreach activities that would bring key business and industry leaders into the schools to assist in curriculum planning and project development.

7.3.5 Conclusions

The preceding analysis has identified issues that confront the development of vocational/technical education. In this section, these issues form the basis for primary conclusions. These conclusions relate to specific recommendations set forth in the final portion of this chapter.

* Future expansion and development activities at the diversified cycle should link vocational/technical training to the demand for skilled labor. To date, vocational/technical education at the secondary level has been tied to traditional models of the industrial trade skills training program. Although no adequate data are available, there is evidence that new skills may be needed for tomorrow's labor force. The government simply cannot afford to waste money in expensive training programs where learned skills are either obsolete or not needed.

* The internal and external efficiency of the vocational education system can be greatly improved by a renewed emphasis on educational quality and excellence in instruction and leadership. It is fair to say that the quality of education throughout the nation's technical schools has improved little over time, although there are exceptions in selected classes and programs. Because of the lack of financial resources to maintain and replace equipment, or to buy basic material, texts, and student manuals, educational quality has been adversely affected to the extent that students are failing or dropping out in large numbers. Buildings and equipment are in poor condition, and teachers and administrators are discouraged and perplexed by the situation.

* A national development plan for vocational/technical education would greatly improve the allocation of resources in this subsector. The Ministry of Education must address the overall problem generated by lack of access for a large proportion of secondary youth, coupled with inadequate information about the need for skills training and, in many instances, competing programs run by INTECAP. The rational response is to develop and implement a systematic, integrated planning effort, where technical-training institutions, INTECAP, government, business, and industry carefully research the needs, study alternatives, and integrate resources where possible.

* Phasing out of technical skills training at the upper-secondary level will be required if the Ministry is not able to bring these programs up to the necessary standard of quality. The task could be handed over to the private sector or INTECAP, and the MOE could concentrate on improving the comprehensive curriculum format of the basic-cycle PEMEM schools.

The low level of internal efficiency and the day-to-day realities of instruction in the technical institutes makes it imperative that the MOE take action. This is within the control of educational leaders in the system, although it will require hard decisions about priorities, resource allocation, staff development, and curriculum and materials development. The MOE will need both financial and technical assistance to carry out what is needed. However, evidence suggests that there are agencies, organizations, and leaders in the private sector who are willing to help. A well-developed plan along with a demonstrated commitment to excellence would provide the impetus for other interested groups to lend their support.

7.4 Recommendations

The recommendations for vocational and technical education are discussed in relation to the main conclusions above.

7.4.1. First Priority

Improve the internal efficiency of vocational/technical programs at the level of the diversified cycle.

The following four recommendations follow from the conclusion that both the internal and external efficiency of vocational/technical training will be enhanced by an emphasis on increasing educational quality.

7.4.1.1 Recommendation 1. Establish a policy action plan at the highest level within the MOE, designed to make vocational/technical education a short-term program priority.

Possible Action Steps: A MOE program emphasis on quality at this level might take several forms. One strategy would be to have the Minister of Education officially designate vocational/technical training as a high priority for investment over a short period, perhaps three to five years, just long enough to raise it to the level of quality it is capable of attaining.

The first component of this action plan would be to get official, national commitment at the presidential cabinet level, for the improvement of vocational/technical education. The Minister of Education would have to inform colleagues that this subsector will be the focus of attention, and that significant resources will be allocated in order to upgrade all aspects of it. The consensus of other ministries is important, but not imperative.

A second critical component of this type of action plan would be a year-long comprehensive analysis and dialogue with local citizens through a series of regional meetings, regarding what they see as possible problems and solutions for the schools involved. This activity could be led by Ministry staff, but the report must reflect the interests of the citizenry: business and labor leaders, teachers, administrators, students, and parents.

The third component is to summarize in report form the thoughts and feelings of those persons interested and involved at the community level. This report would be published under the authority of the MOE, but would be entitled, "A National Action Plan for Excellence in Vocational/Technical Education--The Guatemalan Citizen Speaks Out."

7.4.1.2 Recommendation 2. Link training at the diversified level to the demand for skilled labor in Guatemala.

Possible Action Steps: Because so little information is available about the demand for skilled labor, a comprehensive study of labor needs could be undertaken in order to identify both the occupational areas and the skill levels within those areas in which demand is expected. This analysis would provide a basis for expansion and modification of the present trade-training system. This study could go on simultaneously with the activities suggested in Recommendation 1, above.

7.4.1.3 Recommendation 3. Increase involvement of employees.

Possible Action Steps: Trade-advisory councils composed of skilled craftsmen/tradesmen and leaders in business and industry, from both labor and management, could assist in an advisory role in curriculum development and program review. This would serve both to further reflect employer entry-level skill needs as a function of the curriculum, and to let the private-sector leaders share their experiences and concerns with the system. In addition, opportunities for more students to gain work experience associated with their trade as a part of their formal schooling could be expanded beyond what exist today.

7.4.1.4 Recommendation 4. Reallocate resources to emphasize educational quality.

Possible Action Steps: There are a number of different ways in which improvements in quality could be realized. A systematic approach designed to affect all aspects of the school program is required. One approach could be the following:

1) Administration and Supervision: design and develop a series of leadership training courses for school administrators, especially geared for directors and administrators of vocational/technical schools. Emphasis should be put on organization, curriculum, teacher development and evaluation, pupil personnel and guidance, and program evaluation.

2) Competency-based Curriculum: redesign courses of study to reflect a competency-based format, using the recommendations of the industry/education advisory council mentioned above.

3) Staff Development: comprehensive in-service teacher training programs to upgrade teaching skills and introduce the faculty to competency-based curriculum would help ensure that teachers would be able to carry out their responsibilities in the program improvement effort.

4) Equipment upgrade and modernization: using the recommendations of the advisory council, recapitalize principal workshops with machines and equipment that are recommended, and repair older, still usable ones.

7.4.1.5 Recommendation 5. Upgrade and modernize all science and mathematics classrooms and laboratories.

One of the overriding goals of the schools, since they have such relaxed selection procedures, is to provide the best academic and technical-training programs possible. To achieve this goal in the academic areas of math and science, texts have to be purchased, curriculum has to be developed, and laboratories have to be built and equipped.

7.4.2 Second Priority

Improve industrial arts training programs in the PEMEM schools.

With the physical infrastructure already in place in some 42 basic-cycle secondary schools, a program phased in over six years to properly equip these schools would complete the educational design for this level, and extend the basics of an industrial arts training program to a large number of youth who are currently not reached by this kind of education.

CHAPTER 8

TEACHER EDUCATION AND TRAINING

Teacher education and training in Guatemala is carried out at two levels. Teachers for the pre-primary and primary schools are trained in normal schools at the diversified cycle. Secondary-school teachers receive post-secondary training at the universities. In-service training is provided without regard to educational level and may be offered by an individual school, through the Ministry of Education, or at the universities.

As each of these activities is quite extensive, and has special problems as well as different purposes, each will be treated separately.

8.1 Status of Training of Primary-School Teachers

The first normal school was established in Quetzaltenango in 1872, and is still carrying out its mission to train urban primary school teachers. There are five other normal schools which have been in operation for over a century. In all, there are 30 public and 79 private normal schools in Guatemala, as shown in Table 8.1. The names and locations of the public normal schools are included in Table 8.2. Site visits to 57 per cent of these schools were carried out during this Assessment.

Table 8.1

NUMBER OF SECONDARY SCHOOLS WHICH HAVE NORMAL SCHOOL PROGRAMS PUBLIC AND PRIVATE BY TYPE OF PROGRAM, 1983

Type of Program	Total	Public	Private
03 Pre-Primary	12	1	11
04 Primary	3	3	-
05 Urban Primary	82	20	62
06 Rural Primary	3	3	-
07 Music	2	1	1
08 Physical Education	1	1	-
09 Home Economics	6	1	5
TOTAL	109	30	79

SOURCE: USIPE, Ministry of Education, Guatemala, 1983.

Table 8.2

PUBLIC NORMAL SCHOOLS

No.	NAME OF SCHOOL	LOCATION
1.	Normal para Senoritas Centro América*	Guatemala City
2.	Normal Central para Senoritas Belén*	Guatemala City
3.	Normal Mixto Rafael Aqueche*	Guatemala City
4.	Normal para Senoritas Centro América	Guatemala City
5.	Mixto Esc. Normal de Educacion Fisica	Guatemala City
6.	Normal Mixto	Guatemala City
7.	Escuela Normal para Maestros de Educacion Musical J.M. Alvarado	Guatemala City
8.	Escuela Normal Central para Varones*	Guatemala City
9.	Escuela Normal Je Maestras de Educacion para el Hogar Marion G. Bock	Guatemala City
10.	Escuela Normal de Maestras para Parvulos Dr. Alfredo Carrillo	Guatemala City
11.	Normal para Senoritas Olimpia Leal*	Antigua Guatemala
12.	Normal para Varones Antonio Larrazabal*	Antigua Guatemala
13.	Escuela Normal Rural N-1 Pedro Molina*	Chimaltenango

Table 8.2 (cont'd)

PUBLIC NORMAL SCHOOLS

No.	NAME OF SCHOOL	LOCATION
14.	Mixto Esc. Normal Rural Regional de Occidente*	Sta. Lucia Utatlan
15.	Escuela Normal Rural N-2*	Totonicapan
16.	Normal para Varones de Occidente INVO*	Quetzaltenango
17.	Normal para Senoritas de Occidente INSO*	Quetzaltenango
18.	Normal Mixto Carlos Dubon	Retalhuleu
19.	Normal Mixto Justo Rufino Barrios, Ciclo Diversificado	San Marcos
20.	Normal Mixto Alejandro Cordova	Huehuetenango
21.	Normal Mixto Juan de Leon	Sta. Cruz del Quiché
22.	Escuela Normal Rural N-4*	Salama
23.	Normal Mixto del Norte Emilio Rosales Ponce*	Coban
24.	Esc. Normal Rural Julio E. Rosado Pinelo*	Flores
25.	Normal para Varones de Oriente*	Chiquimula
26.	Normal para Senoritas de Oriente INSO*	Chiquimula
27.	Normal Centroamericano para Varones	Jalapa

Table 8.2 (cont'd)

PUBLIC NORMAL SCHOOLS

No.	NAME OF SCHOOL	LOCATION
28.	Instituto Normal C.A. para Senoritas	Jalapa
29.	Esc. Normal Regional de Oriente Lic. Clemente Marroquin Rojas*	Monjas
30.	Instituto Oficial Mixto de Educacion Media Rafael Landivar (Seccion de Normal Primaria Urbana)	Mazatenango

* Schools visited during preparation of Assessment.

SOURCE: USIPE, Ministry of Education, Guatemala, 1983.

8.1.1 Conditions of the Teaching Environment

All of the normal-school programs are operated at the upper-secondary level. All, except for three, begin with the diversified cycle; students must have completed the basic cycle of secondary school. Except for four programs, all take place during the last three years of secondary school: the fourth, fifth and sixth years. The music program is of four years' duration, and includes a seventh year.

In 1983 the total enrollment in these normal school programs was 17,407, as shown in Table 8.3.

The three public normal schools which have a different mode are boarding schools They accept students directly from primary school and include both the basic and diversified cycles of secondary school. Two of these programs are on a semester basis and are of five years' duration. There were 782 students enrolled in these programs in 1983, as shown in Table 8.4. There is also one school which has a six-year program, enrolling 398 students in 1983. Table 8.5 provides data on the total enrollment by sex and years for this school.

Table 8.3

GUATEMALA

INITIAL ENROLLMENT OF STUDENTS IN THE DIVERSIFIED CYCLE OF SECONDARY NORMAL SCHOOLS PUBLIC AND PRIVATE SECTORS, BY MEN AND WOMEN, 1983, PROGRAMS ON ACADEMIC YEAR ONLY[1]

Type of Program[1]				4th Year			5th Year			6th Year			7th Year		
	Total	M.	W.	Total	M.	W.	Total	M.	W.	Total	M.	W.	Total	M.	W.
03 Pre-Primary															
Total	1303	2	1301	476	-	476	405	2	403	422	-	422			
Public	415	-	415	144	-	144	136	-	136	135	-	135			
Private	888	2	886	332	-	332	269	2	267	287	-	287			
05 Primary Urban															
Total[2]	14087	5734	8353	5121	2095	3026	4174	1623	2551	4781	2012	2769	11	4	7
Public	8437	3775	4662	3234	1413	1821	2424	1039	1385	2779	1323	1456			
Private[2]	5650	1959	3691	1887	682	1205	1750	584	1166	2002	689	1313	11	4	7
06 Primary Rural[1]															
Total	703	380	323	238	133	105	211	106	105	254	141	113			
Public	703	380	323	238	133	105	211	106	105	254	141	113			
07 Music[4]															
Total	262	184	78	155	114	41	52	35	17	31	21	10	24	14	10
Public	216	150	66	137	102	35	38	25	13	23	14	9	18	9	9
Private	46	34	12	18	12	6	14	10	4	8	7	1	6	5	1

Table 8.3 (cont'd)

GUATEMALA

INITIAL ENROLLMENT OF STUDENTS IN THE DIVERSIFIED CYCLE OF SECONDARY NORMAL SCHOOLS PUBLIC AND PRIVATE SECTORS, BY MEN AND WOMEN, 1983, PROGRAMS ON ACADEMIC YEAR ONLY[1]

Type of Program[1]	Total	M.	W.	4th Year Total	4th Year M.	4th Year W.	5th Year Total	5th Year M.	5th Year W.	6th Year Total	6th Year M.	6th Year W.	7th Year Total	7th Year M.	7th Year W.
08 Physical Education[3]															
Total	318	217	101	139	92	47	121	88	33	58	37	21			
Public	318	217	101	139	92	47	121	88	33	58	37	21			
09 Home Economics															
Total	734	-	734	251	-	251	181	-	181	302	-	302			
Public	397	-	397	168	-	168	105	-	105	124	-	124			
Private	337	-	337	83	-	83	76	-	76	178	-	178			
Total All Programs															
Total	17407	6517	10890	6380	2434	3946	5144	1854	3290	5848	2211	3637	35	18	17
Public	10486	4522	5964	4060	1740	2320	3035	1258	1777	3373	1515	1358	18	9	9
Private	6921	1995	4926	2320	694	1626	2109	596	1513	2475	696	1779	17	9	8

1/ All of the programs are designed and offered on an academic year basis, from January to October.
2/ The 7th year program was a night-school program which has been discontinued.
3/ There are no private normal-school programs for primary rural or physical education teachers.
4/ Music normal schools have a four-year program and therefore require a 7th year of study.

SOURCE: USIPE, Ministry of Public Education, Guatemala.

Table 8.4

INITIAL ENROLLMENT OF STUDENTS IN THE REGIONAL NORMAL SCHOOLS, ON SEMESTER PROGRAM SCHEDULE, PUBLIC SECTOR ONLY, BY MEN AND WOMEN, 1983
GUATEMALA[1]

Regional School Department	TOTAL			1st Sem.			3rd Sem.			5th Sem.			7th Sem.			9th Sem.		
	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W
Type: Normal Primary																		
Total	782	491	291	187	122	65	171	120	51	154	87	67	145	84	61	125	78	47
Santa Lucia Solola	341	226	115	98	71	27	82	62	20	65	36	29	57	27	30	39	30	9
Monjas, Jalapa	441	265	176	89	51	38	89	58	31	89	51	38	88	57	31	86	48	38

1/ These two programs are designed for ten semesters, which are taken in five years. Students enter upon completion of primary school. Odd numbered semesters are offered in the first half of the academic year and even numbered semesters are offered in the second half of the academic year.

SOURCE: USIPE, Ministry of Public Education, Guatemala, 1983.

Table 8.5

INITIAL ENROLLMENT OF STUDENTS IN THE RURAL NORMAL SCHOOL "PEDRO MOLINA" CHIMALTENANGO, A SIX YEAR PUBLIC SECTOR PROGRAM BY MEN AND WOMEN, 1983 1/
GUATEMALA[1]

Location of School	TOTAL			1st Yr.			2nd Yr.			3rd Yr.			4th Yr.			5th Yr.			6th Yr.		
	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W
TOTAL	398	251	147	187	118	69	67	37	30	41	19	22	45	31	14	32	26	6	26	20	6

1/ This is the only normal school program of six years. This program is offered on an academic year basis, from January to October. Students enter this program upon completion of Primary School.

SOURCE: USIPE, Ministry of Public Education, Guatemala.

Table 8.6

TOTAL NUMBER OF STUDENTS ENROLLED IN THE DIVERSIFIED SECONDARY SCHOOL CYCLE OF NORMAL SCHOOLS, PUBLIC AND PRIVATE, BY TYPE OF PROGRAM INITIAL ENROLLMENT, 1983 GUATEMALA

Type of Program	TOTAL			PUBLIC			PRIVATE		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
03 Pre-Primary	1,303	2	1,301	415	--	415	888	2	886
04 Primary[1/]	1,180	742	438	1,180	742	438	--	--	--
05 Urban Primary	14,087	5,734	8,353	8,437	3,775	4,662	5,650	1,959	3,691
06 Rural Primary	703	380	323	703	380	323	--	--	--
07 Music	262	184	78	216	150	66	40	34	12
08 Physical Education	318	217	101	318	217	101	--	--	--
09 Home Economics	734	--	734	397	--	397	--	--	--
TOTAL	18,587	7,259	11,328	11,666	5,264	6,402	6,921	1,995	4,926

1/ These programs are five and six years long, and include the basic and diversified cycles of the secondary school. Therefore the number of students in public schools includes all of these students since they cannot be identified as only Basic or diversified-cycle students.

SOURCE: USIPE, Ministry of Public Education, Guatemala, 1983.

Table 8.6 provides a summary of the normal schools, showing that the total number of students initially enrolled in 1983 was 18,587. This represents more than one-fourth of the students in the diversified cycle of secondary schools in Guatemala, as shown in Table 8.7.

Table 8.7

ENROLLMENT OF STUDENTS IN THE DIVERSIFIED CYCLE OF SECONDARY SCHOOL, NORMAL SCHOOL PROGRAMS, PUBLIC AND PRIVATE, COMPARED WITH THE OVERALL ENROLLMENT IN THE DIVERSIFIED CYCLE 1983

	Total Initial Enrollment in Diversified Cycle	Total Initial Enrollment in All Normal School Programs	Percent of Total Enrollment in Normal Schools Compared to All Secondary Schools
TOTAL	65,971	18,587[1]	28%
Public	32,612	11,666[1]	36%
Private	33,359	6,921	21%

[1] This amount includes 782 students enrolled at two schools on a semester mode for five years and 398 students studying on an annual basis for six years, all starting at the basic cycle of secondary school.

SOURCE: USIPE, Ministry of Education.

There were 575 teachers, including classroom teachers and special teachers for music, physical education, home economics, etc., in the public normal schools in 1983. Data are not available on the number of teachers in private normal schools, as teacher training is usually just one of a number of programs offered in a private school. The number of teachers is reported for all of the programs taught at the school. However, it is estimated that there are more than 230 teachers who are involved in the private normal school programs, on the basis of one teacher for each thirty students. (See Table 8.8.)

Table 8.8

NUMBER OF TEACHERS IN NORMAL SCHOOLS, PUBLIC AND PRIVATE, BY TYPE OF PROGRAM, 1983

Type of Program	Public Schools[1]	Private Schools
03 Pre-Primary	14	Data Not Avail-
04 Primary	76	able
05 Urban Primary	374	
06 Rural Primary	44	"
07 Music	21	"
08 Physical Education	18	"
09 Home Economics	28	"
		"
Total	575	230[2]

[1] Number of teachers includes classroom and specialized teachers.
[2] Estimate based on one teacher for each thirty students.

SOURCE: USIPE, Ministry of Education, Guatemala, 1983.

Table 8.9

NUMBER OF GRADUATES BY PROGRAMS OF STUDY FROM ALL NORMAL SCHOOLS, PUBLIC AND PRIVATE, 1983

Type of Program	Total	Public	Private
Pre-Primary	411	132	297
Primary	140	140	--
Urban Primary	4,194	2,357	1,837
Rural Primary	243	243	--
Music	27	20	7
Physical Education	49	49	--
Home Making	291	114	177
TOTAL	5,355	3,055	2,300

SOURCE: USIPE, Ministry of Education, Guatemala, 1983.

There were 5,355 graduates from these 109 normal-school programs in 1983, 3,055 from public schools and 2,300 from private schools (Table 8.9). These graduates had their first opportunity to compete for teaching positions in both public and private schools in 1984.

Only 906 new teaching positions were created for 1984 by the Ministry of Education, as shown in Table 8.10. There is no information available on the number of new positions in the private school sector, nor is it known how many teachers were hired to fill vacancies created by teachers who left the service. (Efforts to obtain this datum from the Ministry were unsuccessful.) A reasonable assumption would be a turnover rate of 3.5 per cent per year, as teachers can retire after 30 years of service. There were 25,862 teachers in public and private primary schools in 1983. It can be assumed that about 900 left the service and had to be replaced.

In summary, in 1983 an estimated 605 teachers, plus administrators, support personnel, and service personnel, worked in 109 schools, training 5,355 primary teachers. The average cost per student for all public programs is esimated to be Q343. These graduates competed for a total of 1,806 teaching positions, 906 of which were newly created in 1984 with the remaining 900 becoming available through attrition.

8.1.2 Goals and Strategies

The goal of the normal-school program has been to train the teachers which the educational system, public and private, requires to sustain and expand educational offerings at the pre-primary and primary school levels. To achieve this goal, the strategy has been to establish public normal schools and to authorize the creation of private normal schools, in order to offer programs leading to teacher certification.

8.1.3 Structure

The normal-school curriculum is structured on a subject-matter discipline concept. There are two major areas on which the curriculum is centered: the General Cultural Academic Subject Area and the Teacher-Training Subject Area. The average time spent in each area depends upon the program. The range is from 5 per cent in the academic area for music teachers, with 95 per cent in the teacher training subjects area; to 59 per cent in the general academic area for primary-school teachers, with 31 per cent in the teacher training subjects area. Across all programs, the average is 37 per cent on general subjects and 63 per cent in teacher training, as shown in Table 8.11.

Table 8.10

NUMBER OF STUDENTS ENROLLED IN NORMAL SCHOOL PROGRAMS, 1983, NUMBER OF GRADUATES FROM NORMAL SCHOOL PROGRAMS, 1983, AND NUMBER OF NEW SPACES CREATED BY MINISTRY OF EDUCATION FOR PUBLIC PRIMARY SCHOOL, 1984 BY TYPE OF PROGRAM GUATEMALA

	Type of Program	Total Enrolled in Public & Private Normal Schools, 1983	Total Graduates from Public and Private Normal Schools, 1983	Total New Primary School Spaces Created by MOE, 1984
03	Pre-Primary	1,303	411	29
04	Primary	1,180	140	0
05	Urban Primary	14,087	4,194	24
06	Rural Primary	703	243	820
07	Music	262	27	3
08	Physical Educ.	318	49	30
09	Home Economics	734	291	0
	TOTAL	18,587	5,355	906

SOURCE: USIPE, Ministry of Education, Guatemala.

Table 8.11

ANALYSIS OF CURRICULUM OF THE NORMAL SCHOOL PROGRAMS IN RELATION TO THE PERCENTAGE OF TIME SPENT IN STUDYING GENERAL CULTURAL ACADEMIC SUBJECTS AND TEACHER TRAINING SUBJECTS

Normal School Program	Percentage of Time for General Cultural Academic Subject Area	Teacher Training Subject Area
Pre-Primary	28%	72%
Primary	69%	31%
Primary Urban	31%	69%
Primary Rural	29%	71%
Music	5%	95%
Physical Education	18%	82%
Home Economics	16%	84%
Average all programs	37%	63%

SOURCE: Ministry of Education, Guatemala.

Some innovative techniques are used at the various schools. These include group dynamics, individual and group research assignments, group discussions, role-playing, problem-solving, panel discussions, observations, seminars, and conducting socio-economic studies of a local or national problem. These techniques all help to reinforce the teaching-learning process.

8.1.4 Programs

Curriculum, courses of study, and hours required are prescribed by the Ministry of Education, so that the programs are the same in both the public and private normal schools. Each of the teaching specialties emphasizes different subject areas, with some common academic subjects such as language, mathematics, and science. In the teacher-training subject area, the didactic courses are essentially the same; they are designed to equip the student to teach the course content required by the curriculum of the Ministry of Education. Some programs are heavily oriented to the mastery of special skills, such as music, physical education, and home economics. The eight rural normal schools require students to take an indigenous language for three years. The regional normal school at Santa Lucia Utatlan requires the knowledge of an indigenous language for entrance into the program.

All of the programs include practice teaching, with most devoting one semester to this component. At the regional boarding schools at Santa Lucia Utatlan, Monjas, and Chimaltenango, the practice-teaching component takes one academic year. In the semester program, the actual time during which the student teacher is completely in charge of the class is only one week. The rest of the semester, the student observes, supervises students in clean-up or at recess, organizes activities, etc.

Practice teaching is done under the supervision of professors from the normal schools who are specially trained for this important aspect of teacher education. Some normal schools have a demonstration school on the same campus or nearby, which also serves as a practice teaching site. The urban normal schools usually assign several student teachers to large primary schools; in the rural areas, students are generally assigned on the basis of one per school.

The most successful practice-teaching components are those lasting a year, found in the three regional normal schools with boarding facilities. The students are assigned to a rural school, where they actually manage a classroom during their practice-teaching assignment. They are well supervised by the professors from their normal school and receive support from them. In addition, the students are required to do community development work while living in the area where they complete their practice teaching. They receive a salary for their maintenance amounting to approximately half that of a certified teacher; this is paid in the form of a scholarship from their normal school. In this way, the Ministry of Education receives the services of a student teacher at reduced cost; and the student benefits from real hands-on experience.

In most normal schools, students are required to maintain a log of their activities at the practice-teaching site, including lesson plans, exams, and materials. This is taken into consideration for their final grade. Also, they are rated by the classroom teacher where they are assigned and by the practice-teaching professors.

8.1.5 External efficiency

One measure of external efficiency is the employment rate of graduates. In order to evaluate this factor, a systematic follow up of graduates is required. None of the normal schools has any formal follow-up system, although in one school visited, an informal study of graduates had been carried out.

This informal system, consisting of graduates telling about themselves and what they knew of others, was used at the regional normal school in Santa Lucia Utatlan, Solola. The guidance counselor had been in contact with some of the 1984 graduates and was assured that they were all going to be hired as teachers in 1985. If this is true, then it reflects a radical change in hiring practices. This is the one normal school in the country which serves only indigenous students, preparing them to teach in the bilingual education program. According to an evaluation of the first five graduating classes made in December 1983 by International Resource Development, Inc., only 29 per cent of the graduates were hired as teachers, and not all of them were placed in the bilingual program. According to the guidance counselor, 67 per cent of the sixth class, and 96 per cent of the seventh, were hired by the Ministry of Education. The guidance counselor did not know how many were teaching in the bilingual program. She indicated that the change in hiring practices may have been the result of a visit by the Minister of Education, who talked to the students, teachers, and staff, assuring them than an effort would be made to hire graduates of the school.

For the most part, employment opportunities in teaching are few. Administrators were asked by the Assessment team what graduates do when they are unable to obtain teaching positions. Their answers were only opinions, since there are no formal follow-up studies. Among the opinions offered were that many graduates went on to the university, others took positions in business, banking, and other commercial enterprises; some married and did not work; and others were employed in industry.

In all fields of education, many more graduates have been produced than new positions created. And the number of positions vacated through attrition is relatively small. It is estimated that the normal rate of attrition is approximately 3.5 per cent per year, according to a study of normal schools made by USIPE, UNDP, and UNESCO in 1979. This study projects that even if the entire 7-14 age group were in school by 1989, less than 50 per cent of the normal-school graduates would be hired as teachers, at the rate of production in 1979, which was less than that in 1985.

Administrators were asked if there were examples of outstanding graduates, or if private-school principals expected their graduates to be hired in private schools. In only one instance was there a positive response: one public-school principal indicated that several students obtained teaching positions in the private school where they did their practice teaching.

8.1.6 Internal Efficiency

Repetition rates were not available at the normal schools visited. Grading practices indicate that a student can pass a course with a score of 61. Make-up exams are authorized two months after an exam is failed, with no apparent limit to the number of times such an exam can be taken. The practice, as explained by several normal-school principals, is that if a student fails a subject, he continues in the program and takes make-up exams until he passes or gives up and drops out. If more than three courses are failed, then the student generally drops out; if possible, he enrolls in a private normal school, where it is supposed that the requirements are less stringent. Eventually, he may graduate.

Five cohorts were tracked through graduation from an initial enrollment in the fourth year of the diversified cycle. Results are presented in Table 8.12. The highest drop-out rate was 32 per cent and the lowest 21 per cent, with an average of 26 per cent. In some normal schools the drop-out rate for one year was as high as 50 per cent. One explanation put forth for this was the opening of a new secondary school, which offered other career programs. Many students transferred to the new school. In two of the regional normal schools where there are boarding facilities and all students are on scholar- ships, the drop-out rate was close to zero after the first year. Even during the first year, it was less than 10 per cent. In the third regional normal school, also a boarding school, the drop-out rate was considerably higher than in the other two; however, this school is located in the Highlands, and during the height of the conflict many students left their studies.

The schools visited had an average of 40 students in the fourth year, and 36 students in the fifth and sixth years. When the normal schools were in session, classrooms in most schools were used over 80 per cent of the time, and up to 100 per cent. The same utilization rates applied to the laboratories. In many of the schools, there are basic cycle and other programs underway while the normal school is in operation. With all of these programs, the school is usually utilized to its fullest capacity when it is open. The problem is that many schools close after one session, which runs from 7:30 a.m. to 1:00 p.m.; there are no classes in the afternoon or in the evening.

Table 8.12

AVERAGE GRADUATION AND DROPOUT RATES FOR PUBLIC NORMAL SCHOOLS, FIVE YEAR PERIOD [1]

Year Cohort Group [2] Enrolled	Graduated	Percentage Graduates	Percentage Dropouts
1978	1980	79%	21%
1979	1981	78%	22%
1980	1982	68%	32%
1981	1983	72%	28%
1982	1984	73%	27%
FIVE-YEAR AVERAGE		74%	26%

[1] Based on data provided by normal-school administratorsinterviewed at 17 of 30 official normal schools, June 1985

[2] Data on graduation and dropout rates were taken from initial enrollment each year starting in 1978 and following that cohort through graduation starting in 1980.

During their work day, teachers are involved full time with teaching or other educational activities. Most have a teaching load of 20 hours per week. During the school year, there are certain authorized national holidays; however, in addition to these, most schools are closed on local holidays, as well as on special days when the administration feels classes should be suspended.

8.1.7 Administration and Supervision

The public normal schools visited were administered by a Principal and Vice Principal. Most schools also have some auxiliary teachers who supervise practice teaching, take over a class when a teacher is absent, maintain discipline, etc. These auxiliary teachers were all graduates of secondary-school teacher training programs and held the same status as the classroom teacher.

The question of using para-professional personnel in the normal schools and in schools within their area of influence was discussed with several administrators. In every instance, the opinion was that with so many graduate teachers unemployed, it was better to use these teachers

than to seek new positions for less qualified persons. Respondents also felt that given the current economic situation, any additional financing for para-professionals would be difficult to obtain.

Although the departmental supervisor occasionally visits the schools, supervision is generally limited to internal visits by the administrators. In only one normal school was there a formalized system of supervision of teachers' performance in the classroom, along with a checklist for classroom visits. This supervision was done by the Vice Principal.

8.1.8 Costs and Financing

A 1983 study attempted to determine the operational costs for each of the normal-school programs, both public and private, based on the costs reported in the final statistical report from the normal schools for 1983. The results of this study are contained in Table 8.13.

At the three boarding schools, the Ministry of Education provides full scholarships for all of the students; therefore, these schools have the highest per-student cost. The Ministry also provides a small scholarship for all other schools. An average of 5.5 per cent of students received this scholarship in the schools visited.

In all secondary schools, students are required to pay three fees at the time of enrollment: Q1 for the right to register; Q1.50 for school furniture (Operacion Esculea); and between Q5 and Q70 for supplies and maintenance. The first two fees are sent to the Ministry of Finance and the third is retained by the school for its own use. Except for these fees, all of the financial support for the public normal schools comes through the budget of the Ministry of Education.

Table 8.13

AVERAGE REPORTED OPERATIONAL COSTS OF NORMAL SCHOOL PROGRAMS, BY TYPE OF PROGRAMS, PUBLIC AND PRIVATE, 1983

(In Quetzales)

Type of Program	Public	Private
Pre-Primary	190	425.00
Primary	780[1]	-0-
Urban Primary	242	339.00
Rural Primary	288	-0-
Music	287	24.00
Physical Education	228	-0-
Home Economics	386	138.00

[1] Boarding Schools.

SOURCE: USIPE, Ministry of Education, Guatemala, 1983.

8.2 Analysis

8.2.1 Needs

Based on a study of seventeen public normal schools, the following needs were identified:

1) Teaching materials, laboratory equipment, and tools for shops.

2) Textbooks, library books, professional educational journals, magazines, and other research materials.

3) In some schools, principally the older ones, audio-visual equipment.

4) In the older schools, maintenance and renovations.

5) In-service training for classroom teachers, teachers in charge of practice teaching, laboratory teachers, and school administrators.

6) Specialized training in student selection for admission and in following up graduates.

8.2.2 Plans

Most of the normal-school principals interviewed have made plans to satisfy some of the needs identified above and have forwarded their requests to the Ministry of Education for action. Some have taken the initiative to have seminars with their teachers to resolve identified problems and to take the necessary action to implement recommendations made during the seminars.

8.2.3 Constraints

The principal constraint to action in the normal schools is the lack of economic resources to implement any program or recommendation which requires additional financial inputs. A secondary constraint is one of inertia, of acceptance of the status quo and fear of change. Where there are dynamic leaders in the top administrative positions, many of the problems can be solved or at least alleviated by their resourcefulness and willingness to make changes. For example, in the Normal School at Monjas, Jalapa, graduates are not finding employment as teachers. The Vice Principal and staff have designed two new programs, together with USIPE. The first is to train teachers as educational promoters to work in the community in adult education/literacy, and to carry out other educational activities, such as working and traveling with itinerant families to provide education to their children. The second is to train teachers as community development promoters. These two new career programs are under study in the Ministry of Education for possible implementation in the 1986 school year.

8.2.4 Issues

8.2.4.1 External Efficiency. There are a number of issues regarding external efficiency, including the following.

8.2.4.1.1 Follow-up System on Graduates. There is no system to follow up graduates, and thus there is no way to determine if graduates were hired in their field of training, or if they performed well in their work. At this time, only global information is available regarding the number who took the Ministry of Education's teacher exam in order to compete for a determined number of jobs. This gives an idea of the number of positions available relative to the number of graduates, and what chances a graduate has of obtaining a job in the public sector. An effective follow-up system would provide information to improve the program.

8.2.4.1.2 Overproduction of Primary-School Teachers. It is obvious that there is an overproduction of primary-school teachers by the normal schools in all specialties, in relation to the number of positions to be filled each year. In 1983 there were over 5,000 graduates in all normal-school programs and in 1984 less than 2,000 teachers were hired by the Ministry of Education. It has been estimated that there exists a manpower pool of over 20,000 graduate teachers who are unemployed or employed in other professions.

8.2.4.2. Internal Efficiency. Issues relating to internal efficiency include the following.

8.2.4.2.1 Use of Data as an Administrative Tool. Data exist at the school level, but administrators do not seem to be aware of their value as tools. In some schools visited, it took up to 90 minutes for a member of the administrative staff to locate data required to determine dropout and graduation rates for a five-year period. This indicates that although data exist, they are not used in decision-making.

8.2.4.2.2 Selection Process. In only five schools was a selection process used to screen prospective students. In these schools, the administrators felt that they were admitting a better student; therefore, the graduate and future teacher should be more effective. Also, the drop-out rate was much lower in the schools where a selection process was applied.

8.2.4.2.3 Use of Physical Plant. Many of the schools visited were used only in the morning, for one session per day. There were few activities scheduled in the afternoons or evenings. The investment in physical plant is substantial and generally financed through loans from international development agencies. A study should be made of the existing physical plant, and how more use could be made of it. No new construction should be approved.

8.2.4.2.4 Evaluation of Teachers. In a few schools visited, students had a minor role in the evaluation of their professors. If this practice could become a policy, it should result in more effective teaching.

8.2.4.2.5 Make-up Examinations. All schools visited adhere to the Ministry of Education policy of authorizing make-up examinations every two months after an examination is failed. It is doubtful that this practice is effective in producing quality teachers. This policy should be reviewed, with the intention of developing a new one.

8.2.4.2.6 Feedback on Practice Teaching. In several schools visited, it was reported that insufficient time is spent on face-to-face practice teaching. Although a semester is allocated for the practice-teaching experience, only one week is spent in charge of a classroom. Other reports indicate that the student teacher is not effective. In one school, the staff studied the problem and within their own authority took action to remedy the situation. In three schools, the practice-teaching experience is for a full academic year, under supervision of the professors at the normal school. The other schools should follow this example and extend the duration of the practice-teaching experience.

8.2.4.3 Administration and Supervision. Issues relating to administration and supervision include the following.

8.2.4.3.1 Classroom Supervision. Little or no supervision of classroom teachers takes place within the normal schools. Only one school visited reported a regular, formalized classroom supervision program. Supervision of normal schools by departmental supervisors is sporadic, at best.

8.2.4.3.2 Outreach Program. Normal schools should be organized as centers of innovation and change, conducting seminars, workshops, conferences, and serving a network of schools within their area of influence. In this way, they could provide services to professional staff in upgrading skills and improving instruction.

8.2.5 Summary of Conclusions

1) Six of the normal schools have been in operation for over 100 years. This attests to the long history and tradition of normal schools in Guatemala, which must be considered in any attempt to reorganize the national teacher-training program.

2) There is no relationship between the number of teachers being produced and the capacity of the system, public or private, to employ them. No formal or informal system exists to follow up graduates of the normal schools. The private-sector normal schools produce approximately one-third of all graduates, who compete with the public-school graduates for very few teaching positions.

3) Many of the schools visited are used for only one session a day. Given the costs of construction, and the number of students who do not have access to education, these schools should be used to the maximum possible extent. Especially in the larger cities, there are many rented buildings used for schools; the normal schools could accommodate them instead. Funds now used for rent could be applied to maintenance, supplies, equipment, books, etc.

4) In only five normal schools are examinations used to select students. An efficient, comprehensive student selection process results in lower drop-out rates and graduates who are more qualified teachers. The regional boarding schools have a one-week student selection process, which includes a battery of examinations; interviews; sample classes; presentations by the candidate of a cultural activity such as playing an instrument, giving a talk, or reciting a poem; and a chance to live on campus during the week.

5) In the three normal schools which have boarding facilities, students enter the first year of secondary school, at the basic-cycle level. At the other normal schools, students enter the fourth year, in the diversified cycle. The age of 13 is too early for a youngster to make a full commitment to the teaching profession. Those who enter at the diversified level have the advantage of being three years older, and thus more mature. There seems to be no logical reason for having two normal schools with semester programs, lasting five years and starting at the basic-cycle level; and one school requiring six years. The rest of the normal schools start at the fourth year of secondary school, are on an academic-year basis instead of a semester basis, and require successful completion of the basic cycle prior to admission.

6) Indigenous students sometimes have difficulty with Spanish. Although most speak Spanish when in school and in Ladino communities, they speak their mother tongue at home. Because primary education is low in quality, students are not always as capable in the use of the Spanish language as they should be. This is reflected in their practice teaching. On the other hand, indigenous students may be discriminated against by the use of urban-based tests which are more a measure of facility with Spanish than of general knowledge or intelligence.

7) Although practice teaching is part of the normal-school program, the amount of time given to face-to-face teaching in most schools is insufficient. This training component should extend over a full academic year, and both public and private schools should be used as practice-teaching sites.

8. Innovations in the normal-school program can be introduced, where staff and faculty are dedicated, interested, and oriented to change. At the school in Monjas, Jalapa, students make school furniture for rural communities, which provide the materials. This saves funds and gives the students experience in using tools and materials. At the Chiquimula Normal School for Boys, sixth-year students were asked to examine alternatives to normal-school training. Their study became the basis for recommendations regarding changes in the offerings at Chiquimula, passed by the staff and faculty to higher authorities.

9. The normal school in Quetzaltenango suffered a 50 per cent drop-out rate during the year when the new experimental secondary school was opened nearby. This is is an indication that where alternatives to normal school exist, many students opt for them.

8.3 Recommendations

1) Allocate additional funding to purchase teaching materials, laboratory equipment and supplies, textbooks, and library books and other publications, and to purchase or repair audio-visual equipment.

2) Allocate funds for maintenance and/or renovation of the older buildings at normal schools.

3) Carry out a study to determine common needs for in-service training of teachers and staff of normal schools.

4) Design a process for screening prospective normal-school students to select the best of the candidates: those who are interested in teaching and have a vocation to teach. Special consideration should be given to indigenous candidates, because of their cultural differences and deficiencies in the use of the Spanish language.

5) Design a system to follow up graduates, and organize workshops to train key personnel from the normal schools in the design and implementation of the system. Design workshops for key staff in the collection of data and their use as an administrative tool.

6) Study on a regional basis what careers are needed for regional and national development, so that new programs can be offered for students at the diversified level as alternatives to entering normal schools.

7) Explore ways in which the physical plant of normal schools, currently used for only one session a day, could be utilized effectively for up to three daily sessions. A study should be made to see if some schools, currently in rented buildings, could be moved into underutilized normal schools. The savings in rent could be used for other educational expenses.

8) Studies should be made of student participation in the evaluation process, to determine if a policy should be instituted making this a practice for all normal schools.

9) Studies should be made regarding make-up examinations, to determine if the present system is effective in producing high-quality graduates.

10) Practice teaching should be extended to one full school year after graduation, as a supervised professional experience required to obtain a license to teach. Workshops on techniques of effective supervision should be designed for normal-school supervisors, to improve the quality of instruction.

11) Studies should be made to determine how the normal schools could serve the professional educational community within their area of influence, through outreach programs. The two programs designed at the Regional Normal School at Monjas, to train educational promoters and community development workers, should be approved and implemented in January 1986.

12) Continue the policy of not authorizing the creation of new private normal schools, and even consider phasing them out.

13) Start all normal-school programs with the fourth year of secondary school, at the diversified cycle. This would require a change at the three regional normal schools, which begin at the first year of secondary school. These normal schools would then be admitting an older, more mature student. The Ministry of Education would save the costs of boarding students for three years at La Alameda and for two years at each of the other two regional normal schools. These schools should be converted to a three-year prgram, with an additional year for supervised teaching experience. Student teachers could receive compensation equal to half the salary of a starting teacher, to defray living costs in the community where their practice teaching takes place.

14) One semester in the sixth year should continue to be devoted to classroom experience, as this gives the student an opportunity to observe the classroom teacher. Upon completion of the sixth year, the student would receive the secondary-school diploma; however, this would not grant a license to teach. That certification would be conferred only upon completion of the supervised professional experience during the seventh year, as recommended above.

Those graduates who choose not to participate in the seventh year, practice-teaching component would be able to continue their studies at the university, look for other employment, or carry on any of the activities now pursued by normal-school graduates who are unable to find employment as teachers.

15) In the interest of producing teachers who are more mature and of higher professional caliber, the present normal-school program should be terminated by authorizing no new enrollments in either public or private normal schools. Those students now in the program should be allowed to complete their course of study and graduate under existing conditions. To replace the current program, a system of "superior normal schools" should be established.

The process of designing this network of institutions should include a review of experiences in other countries--e.g., Costa Rica, Chile, Mexico--which have taken steps to upgrade the training of primary-school teachers. These higher education normal schools, under the auspices of the Ministry of Education, would train all teachers for both primary and secondary schools. This would include classroom teachers, as well as specialized teachers for academic subject areas, and for industrial arts, technical and vocational education, home economics, commercial education, physical education, music, etc.

To preserve the long tradition and history of the normal school in Guatemala, these new schools could be opened in the cities where the existing normal schools are now located. They would be tied to the regionalization plan for education, which is to be implemented in four regions in the near future. Eventually there should be a superior normal school to serve each of the seven regions. The current physical plants would be used and the programs consolidated, where possible. For example, in Antigua, Jalapa, Chiquimula, and Quetzaltenango, there are now separate normal schools for boys and girls. These schools could be consolidated, and the second physical plant could be used for another purpose.

The regional normal schools at Monjas and La Alameda could be used to train educational and community development promoters as has already been recommended for the school at Monjas. The regional normal school at Santa Lucia Utatlan could become one of the new superior normal schools, and could also assume an additional role as a new center or institute for indigenous studies.

The rural normal schools would also continue their current functions, although on a higher education level. In the case of the normal school at Totonicapan, it would become a branch of the new Superior Normal School at Quetzaltenango.

In Guatemala City, one school--possibly the new Normal Central--would be designated as the Superior Normal School, offering classes to both men and women. Specialized subjects in such areas as home economics, music, and physical education would continue to be presented at the site of the current normal school. Two other institutions, possibly the Technical School and the Commercial School, would be used to provide technical training for industrial arts, vocational, and commercial arts teachers. This would be a transitional arrangement until new faculty is installed.

Implementing this recommendation would provide each region with a center for educational change, offering pre-service as well as in-service training to the educational community in the region. Each center would also conduct educational research, test experimental practices, develop innovations, and disseminate findings, much as DIGESA and ICTA do within the Ministry of Agriculture.

Under this reorganization, the role of the universities would be to provide opportunities for members of the educational community to earn degrees at both the undergraduate and graduate levels. The staff and faculty for the superior normal schools would be trained at the university level. During a transition period, the skills of those involved in the educational process at these new institutions would be upgraded.

Many studies would be required prior to implementation of this plan. These include examining the costs of these programs including the salary scale for new teachers who emerge from the Superior Normal Schools; assessing the administrative practices and management of the parent institution and any branches; defining the outreach program, student selection, and grading practices; conducting studies of demand for teachers so that the majority could look forward to employment following graduation; and designing effective and appropriate curricula.

8.4 Status of Secondary School Teacher Training

Until the early part of the 1960s, secondary-school teachers were graduates of the San Carlos University (USAC); trained abroad; or normal-school graduates who later became qualified to teach at the normal-school level. The impetus for training teachers specifically to teach at the secondary level came with the advent of the private universities in Guatemala and with the availability of international financing.

8.4.1 Programs

The first program specifically intended to train secondary-school teachers was initiated in 1962 at the Rafael Landivar University. In 1968, the Faculty of Humanities of the USAC founded its secondary-school teachers program. The physical plant for this USAC initiative was financed by the World Bank as part of a loan to the Guatemalan government for the improvement of secondary education.

Today, all of the universities in Guatemala have programs to train secondary-school teachers. These are offered on their principal campuses in Guatemala City. Three of the universities also have programs at sites throughout the county, as indicated in Table 8.14. The largest in terms of enrollment is at the USAC. Initial enrollment at all sites in 1985 is estimated to be 6,031, as shown in Table 8.15.

The programs offered vary at the different institutions. Table 8.16 presents the list of offerings of each university. Some offer a number of different specialties. No university offers teacher training in industrial arts, agriculture, or technical-vocational education. The duration of each program varies from one institution to the other. This factor may influence a student to choose one university over another in order to complete his studies as soon as possible.

At the USAC, programs are offered at the principal campus from Monday through Friday, starting at 4:00 p.m., and at the branch campuses on Saturdays only. At the main campus, students carry a full-time load with several courses during the same week. At the sites, students take two courses at a time for eight weeks, completing ten courses by the end of the year. At all of the other universities, the Saturday program is offered on a semester basis, except for Mariano Galvez University, which has a two-month format. At all of the universities, secondary-school teacher training is a diploma program and, therefore, less than a complete undergraduate program. Each institution also has programs leading to a complete undergraduate degree, as well as graduate-level programs.

Table 8.14

LOCATION OF SITES OF PROGRAMS OF GUATEMALAN UNIVERSITIES FOR SECONDARY-SCHOOL TEACHERS

San Carlos University (USAC)

Guatemala City	Escuintla	Zacapa
Antigua	Barberena	Solola
Jutiapa	Jalapa	Chiquimula
Retalhuleu	Quiché	Coatepeque
Huehuetenango	Morales	Poptun
Panzos	Chimaltenango	

Rafael Landivar University

Guatemala City
Antigua

Del Valle University

Guatemala City

Mariano Galvez University

Coban	Rabinal	Salama
Puerto Barrios		San Marcos

Francisco Marroquin University

Guatemala City

SOURCE: Interviews with directors of schools of edcuation, June 1985.

Table 8.15

ESTIMATED ENROLLMENT IN THE SECONDARY SCHOOL TEACHER-TRAINING PROGRAMS IN GUATEMALAN UNIVERSITIES 1985

University	Enrollment (Est.) Guatemala City Campus	Branches	Total
San Carlos de Guatemala	150	4,200	4,350
Rafael Landivar	90	20	110
Del Valle	571	--	571
Mariano Galvez	180	220	400
Francisco Marroquin	600	--	600
Total	1,591	4,440	6,031

SOURCE: Interviews with directors of schools of education, June 1985.

Table 8.16

PROGRAMS OF STUDY OFFERED AT THE GUATEMALAN UNIVERSITIES FOR TRAINING SECONDARY-SCHOOL TEACHERS

University	Program	Length of Program
SAN CARLOS	Guatemala City	
	Mathematics	7 semesters
	Physics	7 semesters
	Biology	7 semesters
	Chemistry	7 semesters
	Departmental Branches	
	Commercial Science	7 semesters
	Pedagogy	7 semesters
	New Programs to Start in 1986 Replacing the Above Programs in Guatemala City	
	Language-Literature	6 semesters
	Physics-Mathematics	6 semesters
	Biology-Chemistry	6 semesters

Table 8.16 (cont'd)

PROGRAMS OF STUDY OFFERED AT THE GUATEMALAN UNIVERSITIES FOR TRAINING SECONDARY-SCHOOL TEACHERS

University	Program	Length of Program
RAFAEL LANDIVAR	Guatemala City and Antigua	
	Pedagogy-Psychology	6 semesters
	Mathematics-Physics	6 semesters
	Literature-Spanish Language	6 semesters
	Commercial Science	6 semesters
	Philosophy	2 years
	New Program to Start in 1986	
	Primary Urban	
DEL VALLE	Biology-Chemistry	8 semesters
	History-Social Studies	8 semesters
	English	8 semesters
	Language-Literature	8 semesters
	Mathematics-Physics	8 semesters
	Special Education	8 semesters
	Learning Problems	8 semesters
MARIANO GALVEZ	Pedagogy	4 years
	Plastic Arts	4 years
	New Program to Start in 1986	
	Bilingual	4 years
FRANCISCO MARROQUIN	Social Science-Language	6 semesters
	Mathematics-Physics	6 semesters
	Pedagogy	6 semesters

SOURCE: Interviews with directors of schools of education, June 1985.

8.4.2 Goals and Strategies

The goal of these programs is to train secondary-school teachers at the university level in order to sustain and expand the educational offerings at the private and public schools in Guatemala. The universities' strategy has been to offer those programs for which there is the strongest student demand.

8.4.3 Structure

The programs for secondary-school teacher training are structured on a subject-matter concept. There are two major areas of the curriculum: general cultural academic subjects and teacher-training subjects. The ratio between these two depends on the program specialty.

8.4.4 Programs

There are some specialties offered in the secondary schools for which there are no available university or normal-school programs. These include industrial arts, agriculture, and technical-vocational education. Teachers in these fields are either self-taught or have some skill training but little teacher training.

All of the other subject areas in the secondary schools are offered either in university programs or at the normal schools. The length of time required to complete a university program varies according to the institution. Some programs offer training in a single field and others, in two fields. All universities require a practice-teaching component.

8.4.5 External Efficiency

There are no formal or informal systems at any of the universities to follow up the graduates of their teacher-training programs. The majority of students are primary-school teachers who are interested in obtaining a certificate to teach at the secondary level; the salary of a secondary-school teacher is higher than that of a primary-school teacher. Without a follow-up system, it is not possible to evaluate external efficiency, either from the standpoint of employment among graduates or on the basis of quality and effectiveness in the workplace.

8.4.6 Internal Efficiency

There are some data on which to base measurements of the internal efficiency of secondary-school teacher training programs in Guatemala. Based on these factors, the internal efficiency of the program is good. For example, the average drop-out rate for all of the programs is estimated to be 25 per cent. Class sizes range from 30 to 50 students. Professors teach by the course; therefore, teacher-contact hours cannot be measured. Grading practices establish a score of 61 as

passing. Most of the universities have a system of make-up examinations to give students the opportunity to reverse their failures. In the departments and at two institutions in the capital, space in public schools is used for classes and laboratories for the Saturday program, thus making more use of otherwise underutilized facilities.

The entrance requirement for all institutions is graduation from secondary school; at the Del Valle University, an admissions test is required as well. Each institution has essentially the same graduation requirements: successful completion of all courses, and passing a final examination. There have been 2,493 graduates to date, from all of the programs at all of the universities, as shown in Table 8.17.

Table 8.17

ESTIMATED NUMBER OF GRADUATES FROM GUATEMALAN UNIVERSITIES IN THE SECONDARY-SCHOOL TEACHER-TRAINING PROGRAM

(From Establishment of Program to Date)

University	Graduates
San Carlos de Guatemala	1,400
Rafael Landivar	70
Del Valle	290
Mariano Galvez	550
Francisco Marroquin	183
TOTAL	2,493

SOURCE: Interviews with directors of schools of education, June 1985.

8.4.7 Administration and Supervision

These programs are administered and supervised by university officials, such as the deans or directors of the schools. It is doubtful that much, if any, classroom supervision takes place. In one university, the staff and faculty have a workshop once every three years to review the results of their academic year and to make changes based on the findings. Former students, when they are available, take part in these evaluations.

8.4.8 Costs and Financing

Each of the universities charges tuition as well as a fee for registration. In some institutions, a library or laboratory fee is also assessed. The fees are reasonable; and given the supply of students, the private universities are able to offer the programs without incurring losses. The lowest costs to the students are at the USAC. In the past, Mariano Galvez University received some assistance from a firm (FYDEP) for their program in El Petén.

8.5 Analysis

8.5.1 Needs

During interviews for this Assessment, there were no needs expressed by the directors of these programs. However, at all of the institutions, textbooks, library books, and teaching materials are in short supply. In-service training for staff and faculty is also needed.

8.5.2 Plans

Most of the directors are planning to offer new programs to their graduates and to incoming students. For example, in the Mariano Galvez University, a new program leading to an undergraduate degree in educational planning was recently established. Another began this year at the Rafael Landivar University, in philosophy.

8.5.3 Issues

As the majority of students take the Saturday program, they have little or no contact with staff or faculty, except in the classroom. The students are interested in taking their classes and leaving as soon as possible; the faculty feels much the same. In the departments, the choice of fields is limited, due to the number of students taking the courses and the costs of bringing a professor from Guatemala City. There is little relationship between what may be needed in the secondary schools, what the student would like to study, and what is offered.

8.5.4 Conclusions

1) The public and private universities are attempting to provide educational services to those who want them. The major population areas are being reached through the departmental branches of the USAC and by the Mariano Galvez.

2) Many students are being served by the programs, which help them to increase their knowledge and skills as well as to upgrade their titles in order to teach at a higher level and earn a better salary.

3) Several fields are not covered by any of the programs: industrial arts, agriculture, and technical-vocational education. Perhaps these fields are not in demand; in addition, they require shops, which means an investment by the institution offering the program. The specialties which are available through the programs are taught with few materials, mostly chalk and a blackboard, so that they have very low operational costs.

4) There are no follow-up programs and therefore little feedback to be used for improvement and change.

5) There appears to be little relation between what programs are offered and what may be needed. It seems that what is offered is determined by what is most convenient for the institutions to give, based on staff and facilities.

8.5.5 Recommendations

1) All universities should design and implement a systematic program to follow up their graduates.

2) Workshops should be provided for professors teaching in these programs, to introduce innovations and help them to be more efficient in their teaching practices.

3) Funding should be made available for the purchase of teaching materials, textbooks, and library books.

4) Studies should be made to determine the real demand for secondary-school teachers so that programs can be designed to meet these needs.

8.6 Status of In-Service Teacher Training

In-service teacher training has depended largely upon dynamic leaders and the availability of international funding with counterpart support provided by the Ministry of Education. This important type of training was a component of the Cooperative Education Program, supported jointly by the government of Guatemala and the U.S. It has continued as an integral part of other projects financed by the Ministry of Education or by international agencies such as UNICEF, AID, World Bank, Inter-american Development Bank, and others. One of the recent programs was the PEMEP, supported by AID, which called for in-service training of over 3,000 teachers at the primary level. Under PEMEM, financed by the World Bank, secondary-school teachers were provided with in-service training at the San Carlos University, both at the main campus in Guatemala City and at the branch campuses in the departments.

During the production and distribution phases of the AID-assisted primary-school textbook program, in-service training was provided in orientation sessions held throughout the country. This consisted of training in the use of the teachers' guides and textbooks as teaching-learning resources. The same type of in-service training is also contained in the textbook projects financed by the World Bank and the IDB.

8.7 Analysis

The Ministry of Education, realizing the value of in-service training as an instrument of change, organized a seminar in June 1983 on "Policies and Strategies of In-Service Training." The purpose of the seminar was to examine the in-service activities of the Ministry of Education and recommend strategies for future training programs. It was held in Antigua, with participation by representatives of various sections of the Ministry of Education and the Non-Formal Education Program. During the seminar, participants gave brief presentations regarding their in-service activities. A summary is contained in Table 8.18.

Another function of the seminar was to identify the major problems in conducting in-service training. These can be summarized as follows.

1) Personnel must realize that in-service training is an additional function of their special responsibilities.

2) There is difficulty in coordination; and adjustments are required in time and activities, by those who conduct the in-service training as well as by those who receive it.

3) There is difficulty in follow-up of personnel trained.

4) The amounts authorized for per diem for training are low, and there are few vehicles for trips by those who have been trained.

5) There are no significant incentives for persons to participate in training sessions.

6) There is a lack of support from departmental and municipal authorities for training activities.

7) There exists a good deal of frustration due to the perceived gap between the results expected and the minimal results obtained.

One of the actions discussed during the seminar was the organization and implementation of a unit for In-service Training within the Ministry of Education. In 1984 an office was founded under the Administrative Development Division of USIPE, called Unidad de Capacitacion. It is a small unit with a modest budget for salaries, per diem, and materials. It has the following principal functions:

1) To establish guidelines for carrying out in-service training activities.

2) To coordinate and in some cases to manage in-service training activities.

3) To coordinate the participation of institutions outside of the Ministry of Education.

Table 8.18

SUMMARY OF IN-SERVICE TRAINING ACTIVITIES
OF THE MINISTRY OF EDUCATION

Institution	Purpose/Type	Participants	Results
Socio Educativo Rural	Orientation Reinforcement	Teachers Bilingual Promotors School Directors Parents	Concrete definitions of training programs for Rural Primary Education, Castellanizacion, Unitary School, Rural Family Education, Bilingual, Education, and Family nucleos for Development
Directorate of Pre-Primary and Urban Primary Education	Orientation relative to specific aspects	Nursemaids Janitors Pre-Primary Teachers School Directors Supervisors	Contributed to the improvement of the quality of education.
Improvement of Secondary Education Project (PEMEM)	In-Service Training Pre-Service Training	Secondary-School Teachers in Practical Areas Directors Guidance Counselors	Trained: 60 Professors of Practical Areas in Workshops 196 Professors in Pre-Service work 344 Guidance Counselors in Workshops 100 Supervisors and Directors in Workshops

Table 8.18 (cont'd)

SUMMARY OF IN-SERVICE TRAINING ACTIVITIES
OF THE MINISTRY OF EDUCATION

Institution	Purpose/Type	Participants	Results
Educational Administration Improvement Project 520-V-0259	Orientation Educational Administ. Curricular Development and Materials Curricular Planning Educational Research and Evaluation	Ministry of Education Officers High-Level Ministry of Education Officials Division and Program Chief, Ministry of Education	Formation of multiple teams Training at Master's level of MOE professionals of MOE in Guatemala and U.S. Training of Supervisors in four current areas Training of Chief of Divisions and Programs
Ministry of Education, Personnel Division	Development of two units Pre- and in-service	320 newly hired teachers	Conducted two workshops
Permanent Program for Training Training USIPE Project 520-V-029	Technical Orientation for Administrators in: Methods Guides and Textbooks Curricular Guides Evaluation Supervision Ed. Admin. Cooperatives	Admin. Technicians Supervisors Directors Teachers Bilingual Promotors	Workshops in: Problem-solving method, as a key to the educational process in practical areas, provided tools to all schools, established concept of continuous evaluation, elaborated programs of study, printed teachers' guides and textbooks, created two regional normal schools

Table 8.18 (cont'd)

SUMMARY OF IN-SERVICE TRAINING ACTIVITIES
OF THE MINISTRY OF EDUCATION

Institution	Purpose/Type	Participants	Results
Directorate of Secondary Education	Administrative Tech. Orientation in: Educational Legislat. Process of Documents Supervision Teacher Orientation Vocational Orientation Normal Schools and Bachelors' Programs Human Relations	Secondary School Supervisors	Conducted workshops for Supervisors, Directors of Secondary Schools (public and private), Secretaries, and Administrative Personnel.
Secretary of the National Non-Formal Education Board	Training in: Curriculum Research and Evaluation Information Radio and Educational Technology	Mid-Mgt. Personnel Technicians and Para-technicians Operative Personnel Volunteers Community Leaders New Personnel	Organized the Information, Documentation and Reference Educational System; Training of personnel; vertical and horizontal; Trained new personnel.

The unit is managed through a committee for training, made up of a representative from USIPE, the Director-General of Education, the Directors of Secondary and Primary Education, and others.

8.8 Recommendations

1) This new unit for in-service training is rather small for such an important activity and it should be strengthened, with staff and funding, in order to carry out its functions.

2) Advisory services should be provided to help organize this unit in an effective and efficient manner.

CHAPTER 9

HIGHER EDUCATION

9.1 Status of Higher Education in Guatemala

All universities in Guatemala are governed by constitutional regulations. The largest and most crowded is the single public institution, the University of San Carlos of Guatemala (USAC), which currently enrolls 48,283 students. The USAC campus was built in 1960 and, according to its Rector, Dr. Eduardo Meyer M., the university reached its enrollment capacity four years ago.

The other four universities are private institutions; all were founded in the last 23 years. Since 1966, the private universities have been governed by the Council of Private Higher Education (Consejo de Ensenanza Privada Superior), which is chaired by the Minister of Education and comprised of delegates from all the universities and two delegates not connected with higher education.

In addition to growth in enrollment, each of the universities has experienced an expansion of academic and professional program offerings, extension services, and capital construction. With the exception of the Rafael Land§var University (URL) and the Francisco Marroqu§n University (UFM), all of the other institutions are experiencing crowding. The reason for the exceptions is that the Marroquin University recently received a grant from the American Hospitals and Schools Abroad Program to build its campus, and the URL still has room for growth on a campus built recently with an IDB loan.

9.1.1 Goals and Strategies

Since 1970, all Guatemalans who graduate from the diversified cycle of secondary school, whether from one of the vocational tracks or the academic (bachillerato) track, are eligible to enroll in the public and private universities of the country. As previously only bachilleratos academicos were admissible, this was a significant change; and it contributed to a sharp increase in enrollments. Today, secondary graduates holding the academico or high school diploma--11 per cent of total diversified enrollment--comprise 20 per cent of the students admitted to the universities. The other 80 per cent come from vocational programs; i.e., teaching, technical programs, accounting, etc.

The goal of increasing access to university studies was achieved in a rather dramatic fashion, but not without some problems. A major concern of university educators is that too many first-year students enroll in the public university without adequate secondary-school preparation in math, language, and science. They lament the fact that unlike the "old days," most of the students now experience great difficulties passing subjects such as chemistry, calculus, and Spanish

literature. Despite the fact that the Guatemalan secondary system strongly emphasizes technical and vocational education of a terminal nature, as many as 70 per cent of secondary graduates go on to the university. The result is that the majority of students entering higher education in Guatemala today go into fields that have little or no relation to the preparation they received in the diversified cycle of the secondary school they attended.

In practice, access continues to be limited by the fact that the main campuses of all five universities are in the capital, available only to students who can afford to live in Guatemala City for the duration of their university studies. However, the main universities do operate centers in other cities in an attempt to reach more of the population.

Another problem about which many university administrators consistently express concern is that little has been done formally, at the planning level, to relate university enrollments to the development needs of the country. For example, 11.5 per cent of university students were enrolled in engineering and 24.6 per cent in business in 1983-84, but only 3.8 per cent in agriculture. The administrators point out that agriculture is Guatemala's principal source of foreign earnings. None of the universities appears to have made major efforts to correct this imbalance.

9.1.2 The Higher Education Institutions

The following offers a brief descriptive summary of each of the five universities, in terms of enrollment, degree programs, organizational structure, and other characteristics.

9.1.2.1 University of San Carlos. As noted previously, the USAC is the largest of the Guatemalan universities. It is also the largest and oldest university in Central America, having been founded on January 31, 1676.

The institution is state supported and currently receives 2.5 per cent of the operational budget of the government of Guatemala. It recently secured an increase to 5 per cent, which will become effective with the new constitution next year. The university justifies this increase on the basis of recent enrollment growth of approximately 5 per cent per year, as well as the central role it plays in serving the higher education needs of the country.

The university offers licenciatura or professional programs in seventeen areas. Most of these are of five years' duration, except for programs such as medicine, dentistry, veterinary medicine, and psychology, which require six years. A summary of the differences in duration of study among the university's programs is shown in Table 9.1. The university also offers 16 shorter term, intermediate programs (carreras intermedias). These are summarized in Table 9.2.

At the graduate level, the USAC offers Master's level programs in seven areas, and a doctoral program in clinical psychology.

Table 9.1

APPROXIMATE DURATION OF PROFESSIONAL PROGRAMS AT THE LICENCIATURA LEVEL
SAN CARLOS UNIVERSITY

PROGRAMS AT THE LEVEL	Years	APPROXIMATE DURATION (SEMESTERS AND YEARS)											
		1		2		3		4		5		6	
	Semesters	1	2	3	4	5	6	7	8	9	10	11	12
Agricultural Engineer in: Agricultural Production Systems, and Renewable Natural Resources		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Architecture		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Public Accounting and Auditing, Economy, Business Administration		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Law and Notary Public, Politician, Lic. in Sociology, Lic. in International Relations		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Medicine		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Chemistry, Bio-Chemistry, Pharmaceutical Chemistry, Biology		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Nutrition		XXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Licenciado in: Philosophy, Pedagogy and Educational Sciences, Library Sciences, Art		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											
Licenciatura in Applied Mathematics, Experimental Physics		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX											

Table 9.1 (cont'd)

APPROXIMATE DURATION OF PROFESSIONAL PROGRAMS AT THE LICENCIATURA LEVEL
SAN CARLOS UNIVERSITY

PROGRAMS AT THE LEVEL	APPROXIMATE DURATION (SEMESTERS AND YEARS)											
Years	1		2		3		4		5		6	
Semesters	1	2	3	4	5	6	7	8	9	10	11	12
Engineer: Civil, Chemical, Mechanical, Electrical, Industrial, Systems and Sciences	X	X	X	X	X	X	X	X	X	X		
Engineer: Mechanical/ Electrical, Mechanical/ Industrial	X	X	X	X	X	X	X	X	X	X	X	X
Dental Surgeon	X	X	X	X	X	X	X	X	X	X	X	X
Veterinary Medicine	X	X	X	X	X	X	X	X	X	X	X	X
Animal Science	X	X	X	X	X	X	X	X	X	X		
Psychology	X	X	X	X	X	X	X	X	X	X		
Licenciado in History, Anthropology, Archaeology	X	X	X	X	X	X	X	X	X	X		
Licenciado in Communication Sciences	X	X	X	X	X	X	X	X	X	X		

Table 9.2

APPROXIMATE DURATION OF PROFESSIONAL PROGRAMS AT THE INTERMEDIATE LEVEL
SAN CARLOS UNIVERSITY

PROGRAMS AT THE INTERMEDIATE LEVEL		APPROXIMATE DURATION (SEMESTERS AND YEARS)							
	Years	1		2		3		4	
	Semesters	1	2	3	4	5	6	7	8
Auxiliary in Library Sciences		XXXXXXXXXXXXXXXXXX							
Library Sciences in General		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Secondary Level Professor in: Philosophy, Language and Literature, Accounting Economy, English Language, French Language, Plastic Arts and History of the Art, Music, Educational Science		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Secondary Level Professor in Science, Specialization in Mathematics, Chemistry, Biology, Physics		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Technician in: Educational Graphic Design, Restoration of Goods, and the Study of Museums		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Secondary Level Professor in Psychology and Special Education		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Speech Therapist, Occupational Therapist, Vocational and Job Counselor		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							

Figure 9.2 (cont'd)

APPROXIMATE DURATION OF PROFESSIONAL PROGRAMS AT THE INTERMEDIATE LEVEL
SAN CARLOS UNIVERSITY

PROGRAMS AT THE INTERMEDIATE LEVEL		APPROXIMATE DURATION (SEMESTERS AND YEARS							
	Years	1		2		3		4	
	Semesters	1	2	3	4	5	6	7	8
Secondary Level Professor in History and Social Sciences		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Journalism		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Professional Photography, Professional Locution, Professional Publicity		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Social Worker		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Rural Social Worker		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Technician in: Business Administration, Financing, Business Administration in Farming, and Animal Husbandry		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Production Technician in: Agriculture, Fruitculture		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Technician in: Geology, Management of Forests		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							
Technician in: Agro-Industrial Processing, Food Processing		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							

Organizationally, the USAC is headed by a Rector who is responsible for carrying out the policy directives of the University Council (Consejo Superior Universitario), which he chairs. The Council is a broadly representative collegial body with substantial policy-making powers.

The university is organized into various academic units to which professors are assigned according to disciplinary specializations. The units have administrative responsibility for the curricula and the programs of study offered by the institution, and are divided into two types: faculties and schools. The faculties of USAC are the following:

1) Agronomy
2) Architecture
3) Economic Sciences
4) Juridical and Social Sciences
5) Medical Sciences
6) Chemistry and Pharmaceutical Sciences
7) Humanities
8) Engineering
9) Dentistry
10) Veterinary Medicine

The schools of the university include the following:

1) School of Psychological Sciences
2) School of History
3) School of Social Work

In addition to the above, there are also several adjunct schools (Escuelas Adscritas), each of which is affiliated with a regular faculty or school. These are post-graduate schools such as the School of Sanitary Engineering of the Faculty of Engineering, and the School of Nutrition of the Faculty of Chemistry and Pharmaceutical Sciences.

The USAC also operates eight regional centers. They are the Centro Universitario de Occidente in the city of Quetzaltenango, the Centro Universitario del Norte in the city of Coban, the Centro Universitario de Nor-Occidente in the city of Huehuetenango, the Centro Universitario de Oriente in Chiquimula, the Centro Universitario de Sur Oriente in Jalapa, the Centro Universitario de Sur Occidente in Mazatenango, and the Sea and Marine Studies Center in the Department of Santa Rosa. These centers were established in an attempt to make the public university more accessible.

The university has also been involved in preparing secondary-school teachers across the country. It operates programs in sixteen departments with an enrollment of over 4,000 students. Participants in this program are either primary teachers aspiring to obtain a secondary-teaching position, which pays more, or they are teachers with a primary certificate who are teaching at the secondary level on a provisional basis.

9.1.2.2 Rafael Landivar University (URL). The URL is the largest of the private universities, with a current enrollment of nearly 7,000 students. The institution was founded in October 1961 as the first private university in the country. It serves primarily upper-middle and upper-class students. Enrollment has increased by more than 75 per cent in the last ten years. Privately supported, URL derives most of its operational budget from tuition and fees. Although enrollments have increased, the institution has experienced some budget problems during the last few years.

The URL offers licenciatura or bachelor's degree programs in eighteen areas. Most are of five to five-and-one-half years' duration, except for engineering, information systems, and psychology, which are longer. Various secondary-teaching credential programs are offered, similar to those available through the USAC. URL also offers a number of shorter term programs which vary in length and are aimed at preparing technicians in high-demand, middle-manpower areas. At the graduate level, the URL offers master's degree programs in industrial management and education, and a post-graduate program in law. All of the various programs currently offered by the Universidad Rafael Landivar are shown in Table 9.3.

The administrative head of the URL is the Rector, who is responsible for carrying out the policies of the Board of Directors (Consejo Directivo). The main divisions of the university are the Academic Division, the Division of Administration, and the Division of Extension Services. The key Academic Division is made up of the five principal faculties of economic sciences, juridical and social sciences, humanities, engineering, and architecture. The Academic Division also administers the Political and Social Science Institute, a regional center called the Miron Munoz School, five other regional centers or Sedes Departamentales, and various student support units.

The Division of Administration oversees the financial and budget units, and the Division of Extension is responsible for university outreach and extension activities.

Under the Academic Division, the URL has the following departments within the facultades of the institution:

1) Economic Sciences Faculty

   a) Business Administration
   b) Accounting and Public Finance
   c) Economics
   d) Marketing

2) Juridical and Social Sciences Faculty

Table 9.3

PROGRAMS OFFERED BY RAFAEL LANDIVAR UNIVERSITY

Intermediate Degrees

University Diplomas

* Political and Social Sciences

Professorate

* Language, Philosophy, and Social Studies
* Mathematics and Physics
* Pedagogy and Psychology

Secondary Education Professorate

* Literature and Spanish Language
* Business Sciences
* Philosophy
* Religious Sciences

University Technician

* Information Systems
* Advertising
* Business Management
* Financial Management
* International Trade
* Production Control
* Graphic Design
* Communication Science
* Psychometry and School Guidance
* Special Education
* Speech Therapy
* Social Work
* Tourism
* Phytotechniques
* Cooperative Business Administration

Table 9.3 (cont'd)

PROGRAMS OFFERED BY RAFAEL LANDIVAR UNIVERSITY

Licenciaturas

* Business Administration
* Economics
* Public Accounting and Auditing
* Marketing Techniques
* Information Systems
* Civil and Administrative Engineering
* Chemical-Industrial Engineering
* Mechanical-Industrial Engineering
* Industrial Engineering
* Architecture
* Political and Social Sciences
* Literature and Philosophy
* Psychology
* Pedagogy, focused towards education evaluation and administration
* Tourism
* Social Work
* Agricultural Science
* Juridicial and Social Sciences

Master's Programs

* Industrial Management
* Education

Doctorate

* Procedural Law

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3) Humanities Faculty

a) Philosophy and Letters
b) Education
c) Psychology
d) Tourism

4) Engineering Faculty

a) Industrial Mechanics
b) Industrial Chemical Engineering
c) Civil Engineering and Administration
d) Quality Control

5) Architecture Faculty

In addition to the above, the Academic Division also administers off-campus centers in Quetzaltenango, Escuela, Antigua, Zacapa, and Jutiapa.

9.1.2.3 Mariano Galvez University (UMG). Founded on January 29, 1966, UMG was originally conceived as an evangelical university by a group of graduates who later decided to establish it as a private, non-sectarian, and co-educational institution. The university was named for a progressive Guatemalan Chief of State who introduced a number of major educational and social reforms in the early 1800s.

The university has a total enrollment of 3,500 at the present time, with most students from lower middle-class backgrounds. It is strongly committed to serving the fully employed student and has organized itself accordingly. Classes begin at 5 p.m. on weekdays and are offered on Saturdays as well. Unlike most other universities in Guatemala, the undergraduate programs at Universidad Mariano Galvez are of six years' duration. The institution has a very modest scholarship program. The main UMG campus is located in the north end of Guatemala City, and regional centers are operated in Salama, Baja Verapaz; Flores, Petén; Puerto Barrios, Izabal; Tiquisate, Escuintla; Concha, Alta Verapaz; San Pedro Sacatepéquez, San Marcos; El Progreso, El Progreso; and El Estor, Izabal.

UMG is governed by a five-member Board of Directors which selects the Rector and sets the policies of the university. The Rector is responsible for the operation of the campus.

This university has an open admissions policy. There is no admission test required, and all students who have a valid secondary-school diploma are eligible to attend. Its program offerings reflect the areas of study on which students place high demand. The attrition rate is relatively low.

UMG has received some modest outside assistance, including a small grant to equip a science laboratory. The university takes pride in having financed campus programs through local bank loans and credit arrangements. Operational costs are met solely from monies derived from student fees.

The faculty of the UMG is all part time and, as would be expected under this condition, is not involved in research activities of any kind.

9.1.2.4 Francisco Marroquin University (UFM). The UFM is a private university founded in August 1971 by a group of highly influential leaders of business and industry. It is a selective, high-cost institution committed to providing a rigorous program which will produce leaders.

This university serves those from upper and upper-middle-income backgrounds, and expects its students to attend on a full-time basis. Although the tuition costs are high, some scholarship assistance is offered to support highly qualified students who cannot meet tuition and fee costs, which are summarized in Table 9.4.

The UFM campus is now located in south-central Guatemala City, but has broken ground for what promises to be an attractive new site. Some of the buildings are completed and classes are now being offered there, as well as at some off-campus sites. The administrative head of the UFM is the Rector. A Board of Trustees serves as the policy-making body for the institution, and selects the Council which works with the Rector to carry out the policies set by the Board.

At present, the UFM offers Licenciatura programs in:

1) Law
2) Architecture
3) Economics and Business Administration
4) Information and Computer Science
5) Medicine
6) Theology
7) Psychology

UFM also offers master's level programs in economics and business administration, social sciences, clinical and medical psychology, and medicine, as well as a doctoral degree in clinical and medical psychology.

The university also offers intermediate career programs intended to meet certain pressing national needs. These programs are in the areas of secondary teaching, systems analysis, and computer programming.

The UFM has a total enrollment of 3,055 in the academic year 1984-85, compared with 1,635 in 1978. Although the institution is growing at the annual rate of 17 per cent, the administration is concerned more with the qualitative aspects of the institution rather than with increasing the number of students served. Consistent with that philosophy, all students are required to take a formal admissions test and undergo a personal interview to qualify for admission.

The UFM has no centers outside the city, but it does offer several extension courses and special programs. University involvement in outreach activities has grown during the last two years. As is the case with all of the universities in Guatemala, the UFM has few full-time faculty. Most professors are working professionals in their fields, and teach only part time.

9.1.3.5 Del Valle University. The Del Valle was founded in January 1966; it is privately supported and non-sectarian. It has been very successful in attracting research and training support from the U>S> and other foriegn sources. From its inception, the institution has been committed to offering strong undergraduate and graduate programs in the sciences, humanities, education, and the social sciences. It is located on a fifty-two acre campus which is also the site of the American High School, of which the Del Valle is an affiliated institution.

Table 9.4

STUDENT COSTS
UNIVERSIDAD FRANCISCO MARROQUIN

Enrollment: Economics, Law, Architecture	Q200.00
For assignment of courses ten days after the established date	20.00
For assignment of courses ten work days after the established date	75.00
Make-up Exams: Architecture, Law, Economics	10.00
Late Make-up Exams	75.00
Proficiency Exam	75.00
Revision of exams which are not partials, if grade is confirmed	20.00
For each UMA acknowledged[1]	1.00
Directed Study course: Architecture, Law, Economics (for each supervised course)	Q150.00
General Private Examination - Economics	100.00
or per area	25.00
General Private Examination - Law	175.00
General Private Examination - Architecture	200.00
Make-up Exam - Economics, per area	75.00
Graduation Project (Thesis), Architecture (12 UMA's)	600.00
Thesis - Faculty of Law (6 UMA's)	240.00
Thesis - Faculty of Economics (6 UMA's)	280.00
Graduation Fee - Architecture/Economics	50.00
Graduation Fee - Licenciatura in Psychology	50.00
Graduation Fee - Law	10.00
Graduation Fee - Doctorate in Psychology	100.00
Graduation Fee - FICCSC - or for those who do not use a cap and gown	40.00

[1] UMA = credit-hours.

Table 9.5

STUDENT COSTS
UNIVERSIDAD FRANCISCO MARROQUIN
MASTER'S DEGREE PROGRAM

Enrollment fee	Q40.00
Equivalences or Exonerations	10.00
Special Examination	20.00
Surcharge after the first week (for each week after enrollment or assignation of courses)	15.00
Graduation Fee	50.00
SOCIAL SCIENCES	
Enrollment fee	25.00
Course Exoneration	20.00
Advice on Thesis (Overall Advice)	50.00
Graduation Fee	50.00
Thesis Revision (Overall Revision)	40.00
PROFESSORATE	
Enrollment	15.00
Make-Up Exam	8.00
Equivalencies	25.00
Directed Study Course	50.00
Graduation Fees (includes everything)	160.00

The students of the Del Valle come primarily from middle and upper class families, but due to an extensive scholarship program, students of lower and lower-middle class backgrounds also attend. More than 50 per cent receive some type of financial support. More than 90 per cent of the students are enrolled on a full-time basis. The institution has an excellent record of students continuing into graduate studies.

The Del Valle enrolled a total of 1,190 students in 1984-85. In addition, over 500 students were enrolled in its Secondary Teaching Certificate Program. Students who are admitted to the Del Valle undergraduate programs must have completed a secondary-education program and must pass an admission test, which measures verbal and numerical skills. Applicants to the master's degree programs must have a Licenciatura degree and are also required to pass an examination.

The Del Valle is headed by a Rector who is selected by a Board of Trustees, which receives its authority from the Foundation of the Univer-

sidad del Valle, the body ultimately responsible for setting policies for the university. The Board of Trustees selects an Executive Council which is comprised of the Rector, Vice-Rector, Secretary General, Director of Studies,and the executive secretary of the Foundation. The academic aspects of the university are coordinated by the Academic Council, which includes the Executive Council and the principal administrators of the university.

In the academic areas the university is organized into three facultades or faculties: the Faculty of Sciences and Humanities, the Faculty of Social Sciences, and the Faculty of Education. The programs offered by each are as follows:

Faculty of Sciences and Humanities

Biology
Marine Biology
Biochemistry
Sciences
Agricultural Sciences
Physics
Physical Chemistry
History
Humanities
Engineering and Nutritional Science
Engineering and Environmental Science
Civil Engineering
Electrical Engineering
Chemical Engineering
Letters
Nutrition
Educational Psychology
Chemistry
Pharmaceutical Sciences

At the graduate level, they offer a master's degree in structural engineering.

Faculty of Social Sciences

Cultural Anthropology
Archaeology
Economics of Community Development
Linguistics
Social Psychology
Sociology

At the graduate level, this faculty offers master's programs in anthropology, linguistics, and sociology.

Faculty of Education

Master Teacher Credential for Primary Education, Secondary Certificates in Normal Sciences, History and Social Sciences, English, Literature, and Mathematics.

B.A. in Education

Master's in Educational Administration

Master's in Educational Tests and Measurement

The Del Valle is the only university in Guatemala with a general studies, core curriculum which all first-year students take, regardless of major. This program is organized under the University College, which is headed by a dean. This approach represents a focused effort to address special problems and differences among students which are encountered during the first year of study.

9.1.3 The Characteristics of Higher Education

9.1.3.1 Enrollments. Enrollments at the USAC have grown about 5 per cent per year since 1978, while those at UFM have increased at a rate of about 17 per cent. Only the USAC and UFM had significant increases in enrollment last year; the others showed little change. Until 1966, there were no private universities; in just nineteen years, the private institutions have gained a respectable share of the total higher education enrollments. Table 9.6 shows the enrollment trends of the private and public universities from 1970 to 1985. Despite the growth of the private universities in Guatemala, however, the USAC remains by far the most potent force in higher education in the country.

9.1.3.2 Staffing. Few professors work on a full time basis. Table 9.7 shows the differences among the universities in terms of the number and percentages of faculty who are employed full time. The UFM, considered the elite institution in Guatemala, has no full time professors. The lack of full time faculty is of major concern to the other universities, however, who believe that there are qualitative advantages to be gained from the employment of full-time faculty. No research has been done, however, to support this belief.

Another problem identified by most of the rectors is the low number of faculty with advanced degrees. The situation is similar to that found in many developing countries.

A third concern common to all the institutions is the need to improve or in some cases initiate the research activities of university faculty. The Del Valle University has a well-organized research program, as they were able to secure out-of-country funding and collaborative support from the U.S. The USAC also has some ongoing research activities, as does the Rafael Landivar. UMG has no faculty research program but is committed to the initiation of a research institute in the near future.

Table 9.6

ENROLLMENTS IN GUATEMALAN UNIVERSITIES

	YEARS							
	1970	1971	1972	1973	1974	1975	1976	1977
Total	15,177	17,171	19,306	21,708	24,417	27,690	31,189	36,084
All Private	2,804	3,214	3,649	3,721	4,380	4,829	5,264	6,850
Rafael Landivar	1,949	2,230	2,248	2,244	2,568	2,599	2,788	4,012
Del Valle	293	161	252	304	359	504	413	609
Mariano Galvez	562	823	1,022	1,020	1,267	1,386	1,692	1,726
Francisco Marroquin			127	153	186	340	371	503
San Carlos	12,373	13,957	15,657	17,987	20,037	22,861	25,925	29,234

Table 9.6 (cont'd)

ENROLLMENTS IN GUATEMALAN UNIVERSITIES

	YEARS								Annual Growth Rate 1970-1985
	1978	1979	1980	1981	1982	1983	1984	1985	
Total	42,931	47,540	50,890	47,699		57,245	60,865	62,865	1.056
All Private	8,630	10,019	11,469	11,710		14,121	14,157	14,582	5.6%
Rafael Landivar	4,741	5,782	5,540	6,896	7,307	7,279	6,628	6,783	5.2
Del Valle	604	765	893	997	1,107	1,128	1,159	1,190	8.0
Mariano Galvez	2,230	2,410	3,431	1,518		3,346	3,366	3,554	6.9
Francisco Marroquin	965	1,062	1,605	2,299		2,368	3,003	3,055	17.9
San Carlos	34,301	37,521	39,421	35,989	36,890	43,124	45,552	48,283	5.0

Table 9.7

COMPARISON OF GUATEMALAN UNIVERSITIES IN TERMS OF PROFESSORS EMPLOYED FULL-TIME IN 1984-85

	Total number of Professors	% Full-time
San Carlos University	3,249	13.0
Rafael Landivar University	396	4.0
Mariano Galvez University	132	20.0
Francisco Marroquin University	160	0.0
Del Valle	227	13.7

9.1.3.3 Facilities and Equipment. The needs of the universities vary a great deal, in terms of facilities. The USAC has simply run out of space. It is operating with 48,283 students, more than the campus was intended to accommodate. However, given the massive budget problems which the government faces, there is little chance that additional buildings will be approved in the near future. The UMG also has major space problems, and is exploring ways to expand through local loans and bank financing. The other universities have excellent new campuses, well designed and landscaped.

All of the institutions have significant equipment shortages, although the Del Valle has probably the best-equipped science laboratories in the country. The principal problems at the other universities revolve around physics, chemistry, biology, computer science, and engineering laboratories. Agricultural science equipment is also desperately needed at the USAC. The UMG and the regional centers of all the institutions need audio-visual equipment, although this is not expressed by the universities as a high priority.

9.1.3.4 Curricular Programs. Student demand is the sole determinant for new programs, particularly in the private universities as they depend on student tuition and fees. Table 9.8 presents the distribution of students by areas of discipline, for four of the universities.

The USAC offers nothing in the exact sciences and mathematics, and relatively little in agriculture. This is a reflection of what students want to study, rather than a consideration of what the country needs.

A second major problem affecting the quality of the instructional programs at Guatemalan universities is the lack of a solid core curriculum which all students should take their first year. Only the Del Valle University has such a program. If instituted at the other universities, such programs could correct deficiencies in students and broaden the type of education received. The courses taught in the general studies year would need to be the responsibility of the base disciplines or departments; i.e., math, science, language, etc. Any program of this nature should not function as a separate and autonomous

Table 9.8

UNIVERSITY ENROLLMENTS BY AREAS OF STUDY 1985[1/]

	USAC	URL	UFM	UDV
Accounting, Business Administration, Economics	12,696	1,779	277	0
Engineering, Computing	6,057	690	342	139
Law	5,809	439	124	0
Medicine	3,706	0	255	0
Architecture	1,749	482	51	0
Agronomy, Agricult. Science	1,651	390	0	48
Psychology	1,629	0	66	0
Pharmacy	1,289	0	2	0
Humanities	1,277	929	0	18
Social Work	1,083	0	0	0
Vet. Medicine	827	0	0	0
Dentistry	807	0	54	0
Social Sci., History, Communications, Theology	1,135	61	70	15
Sciences, Math	0	0	0	73
Education	0	0	890	578

[1/] Not all students are classified in the count.

SOURCE: Individual universities.

structural unit, in order to avoid its being viewed as a threat by the base faculties.

The USAC initiated such a program some years ago but was forced to abandon it because of student and faculty resistance. The faculty objections came from professors in specialized areas who felt threatened because they saw too many students flowing to other courses. Students rebelled because of the rigorous coursework; they also argued that they needed to move more directly into courses related to their major.

The universities have overcrowded classrooms and very large classes. The space problem is particularly acute at the USAC, where some classes enroll up to 250 students in rooms designed for half that number.

Another problem faced by the universities is the high cost of textbooks. Because they are so expensive, professors may feel obligated or be pressured to assign a more reasonably priced textbook, rather than the one they would prefer. Other professors do not assign textbooks at all; instead, they have students buy photocopies of their lecture notes.

9.1.3.5 External Efficiency. Only the UFM regularly follows up graduates to determine if they obtain employment in the fields for which they were trained. Their record is good, especially in their business programs and at the master's level. None of the other universities attempts to measure the extent to which the training they provide is relevant to Guatemala, in terms of employment, income, job satisfaction, etc. In fact, this emerges as one of the most significant features of higher education in Guatemala: little or no effort is made to assess its effectiveness.

The university system does appear to serve some important development functions, however. For example, the USAC, URL, and UMG, by establishing a network of regional universities and centers, may be promoting the development of key regions outside the capital city. On another level, the different philosophies and missions of the various institutions give rise to their serving as forums for the discussion and critique of political occurrences and national events. The USAC clearly serves as an important training ground for future politicians and social leaders.

9.1.4.6 Internal Efficiency. The higher education system of Guatemala is not very efficient. It could be argued that taking fourteen years or even longer to complete the Licenciatura program is not necessarily bad for students who are working and going to college part time. The problem in Guatemala, however, is that those students who are identified as "part-time" actually take the same number of courses as full-time students. They are designated as part-time students because they work and do not attend regularly, rather than because they take a lighter course load. This situation needs careful study, to identify changes which will accommodate the special needs of the working student.

Universities in Guatemala all have major bottlenecks beyond which large numbers of students fail to progress. The first of these is the first semester of coursework. Students in far too many cases are

ill-prepared by the secondary schools they attended. The problem is most pronounced in engineering, business, and other areas requiring solid math and science skills. Universities and the Ministry of Education need to join forces in addressing this problem. Perhaps some basic courses could be identified and required of all university-bound students. Or all that may be needed is an effort to upgrade the caliber of the instruction they receive at the secondary level.

9.1.3.7 Access and Equity. Indigenous enrollments in the universities amount to less than 5 per cent of the total. There are no data on composition of enrollment by sex. Given the relationship of family income and parent education to success in primary and secondary school, it is not surprising that the universities enroll students from the upper half of the income distribution.

9.1.3.8 Administration and Supervision. All of the universities are organized in similar fashion, with each headed by a rector who is responsible for the implementation of policies passed by a board of trustees.

Several observations about the administration of the campuses are worth noting. As might be expected, the institutions whose administrators work full time run most smoothly. The supervision of instructional programs, although a problem noted by a few of the administrators, appears to be manageable. All administrators interviewed were very much aware of the problems they faced and how they might be resolved. The supervision of non-professional staff members does not appear to represent a major deficiency at any of the campus operations visited, either. Although no attempt was made to explore this aspect in depth, no serious problems were reported by the administrators or observed during the visits.

9.1.3.9 Cost and Financing. The budgetary situation varies significantly among the five universities. All, with the exception of Universidad Francisco Marroquin, have experienced budget problems during the past year. The reason for the financial situations at the URL, UMG, and UDV, is the slow growth in enrollment, which has added pressure to the universities' budgets. The USAC budget has stayed constant despite enrollment increases.

Although it was not possible to do full cost comparisons across universities due to the lack of adequate budget information, the following tentative but important conclusions can be drawn from spot comparisons.

1) With the exception of the USAC, operational budgets are derived primarily from student fees. In the case of UMG, the budget is based entirely on fees.

2) The costs of operating different academic programs vary in Guatemala, as they do in similar fashion in other countries: classes in the sciences, especially chemistry, biology, physics, engineering, and computer science, cost more than those in history, humanities, and language. Laboratory courses are the most expensive.

3) The cost per student is greater in the regional centers than it is on the main campuses.

4) Budgets have not increased as fast as might have been expected, given the rise in student enrollments which has occurred in Guatemala.

There are some important differences in the financing of the universities which are worth noting. The USAC, although a state-supported institution, does enjoy some fiscal flexibility. In the academic year 1984-85, it received 81 per cent of its total budget from the state, with additional revenues derived primarily from student fees and private donations. The UFM, which has a very positive relationship with major business interests in the country, also has a degree of fiscal flexibility not enjoyed by the other institutions with their dependence on student fees.

The two universities with the most positive fiscal projections for the next few years are the UFM and the USAC. This is not surprising, given the close ties between the UFM and business, and the fact that San Carlos is state-supported. Del Valle is fiscally sound, and they also have some fiscal flexibility, through special grant projects. However, Del Valle works hard to meet costs strictly through student fees. The URL appears to be having some problems in meeting their commitments on the IDB loan they received to construct their new campus, which they began to repay last year. The UMG is the poorest of the institutions. It is obvious that they are struggling to make ends meet and that their prospects for fiscal solvency depend entirely upon the revenue they derive from student fees.

9.1.3.10 Donor Support. The universities receiving donor support are the USAC, the UFM, and Del Valle. Of these, the one that received the most is the UFM. Table 9.9 presents the amount of donor support which these several universities received in 1983-84.

This is an area that merits more attention by the universities in the years ahead. In fact, a good investment on the part of those with poor revenues would be to pool resources and bring in an expert, preferably from another Latin American university, to advise them on how to initiate and increase their share of funds from these types of sources.

9.2 Analysis

9.2.1 Needs, Plans, and Constraints

The principal challenge facing the universities in Guatemala is the widespread and growing demand for higher education.

From a planning perspective, the efforts of the private institutions to consciously carve out a special place for themselves in higher education have been positive. The Del Valle sees itself as the institution principally concerned with the sciences and education. The UFM has taken on the role of attending to the needs of the exceptionally

Table 9.9

COMPARISON OF DONOR SUPPORT MONIES RECEIVED BY GUATEMALAN UNIVERSITIES IN 1983-1984

	Amount Received	As % of Total Budget
Universidad de San Carlos	Q774,182	0.2
Universidad Rafael Landivar	0	--
Universidad Mariano Galvez	0	--
Universidad Francisco Marroquin[1/]	Q326,330	14.2
Universidad Del Valle	Q145,000	12.6

1/ In 1984-85, UFM received $1.5 million, according to a personal interview with Dr. M. Ayau, Rector, UFM.

talented who are interested in business, medicine, and law. The UMG, on the other hand, is the university of the fully employed person and sees its role as tied to the needs of the working class. The URL is committed to the goal of becoming a full-fledged, comprehensive institution of high standards with a commitment to turning out competent professionals of high moral character. And finally, the USAC is committed to an open admissions policy; at the same time, it wants to maintain its national reputation as the great university of the country in all respects and across all disciplines.

9.2.2 Issues

9.2.2.1 External Efficiency. There are several unresolved issues in terms of external efficiency of higher education in Guatemala. The first and the most important involves what might be done to increase the number of students graduating from the universities, from those fields that are important not just for the present but also for the future.

The second involves the possibility that the USAC, URL, and UMG may be forced by economic circumstances to choose between attending to major needs on their main campuses or continuing to operate their regional centers outside the capital city. Does it makes sense to keep pumping funds into educational centers, where the cost per student is greater than on the main campus, in places where the student flow from secondary schools is low? Or, viewed from another perspective, does it make sense not to do so, given the pressing need to overcome the overconcentration of everything in the capital, and the importance of making university education accessible to the rural people?

9.2.2.2 Internal Efficiency. In the internal efficiency category, the major unresolved planning issue involves the dilemma of whether the country or donor agencies should support only those institutions with the best record for getting students through. At the moment there are few data to determine which universities are most efficient. Furthermore, it is not clear whether inefficiency, measured in terms of non-graduation, is positive or negative for students and the economy.

9.2.2.3 Access and Equity. The major unresolved issue in this area is the problem of finding ways to increase the participation of indigenous students in Guatemalan higher education. A second related issue is that of how best to ensure access to a university education for people outside the capital city. Is the building of university regional centers the best way? And, is it working?

9.3 Conclusions and Recommendations

Although the universities of Guatemala face some serious problems that require immediate attention, it is important to recognize that progress has been made during the last ten years. The most important positive changes in higher education have been the development of the private universities and the impressive efforts by three of the institutions to reach beyond the capital to establish a network of regional university centers.

Two over-arching conclusions can be drawn about the higher education situation in Guatemala. The first is that this country must begin to take conscious and positive steps to increase the number of indigenous students entering and graduating from its universities. And the second involves the need to effect necessary and essential improvements in the existing universities.

9.3.1 The Need to Respond to Indigenous Populations

Increasing the number of students of indigenous background enrolled at the university level is not going to be easy, but the task needs to be faced and must be undertaken immediately. No country can hope to develop and prosper if half its population is shackled by conditions of poverty and excluded from playing a meaningful role in the nation's social and economic affairs.

Because the problem is so broad and complex, it should be approached in a systematic and comprehensive manner. Nothing less will make a meaningful difference in the situation of the indigenous people of Guatemala. The following initiatives, consistent with this approach, are proposed as important first steps.

1) Establishment of a university outside the capital with an indigenous studies focus.

2) Development of a national scholarship program for indigenous university students.

3) Construction and organization of a university residence center in Guatemala City for indigenous students.

4) Development of a national association of indigenous professionals.

9.3.1.1 The University with an Indigenous Studies Focus. The development of a university that would have as a central mission the study and assessment of indigenous concerns would have a dramatic impact on Guatemala. The reaction from the indigenous people would be overwhelmingly positive. Among other things, it would communicate the importance of education, particularly to currently under-served indigenous groups.

The possibility of collaborative funding should be explored, including the government of Guatemala, AID, and other sources such as the Ford and Rockefeller Foundations. Prospective partner universities need to be approached and encouraged to participate. All of the conditions required to secure outside funding are present in this initiative.

In developing the university, it will be important to maintain a sense of mission which reflects a strong commitment to the study and improvement of the conditions of the indigenous people of Guatemala. Students and faculty with a deep interest in such concerns and a strong desire to be part of such an institution should be encouraged to participate.

The fields of study should be oriented toward the types of human resource needs projected for Guatemala in the next decade and beyond, for which research has yet to be done. The intent of the coursework and degree programs should be to prepare genuinely enlightened and sensitive professionals in key development fields, who possess special skills and knowledge about Guatemalan indigenous populations. This should be in addition to the acquisition of a sound education in their professional field of study.

The use of indigenous languages on campus should be encouraged. Where possible, bilingual approaches should be used in classes; but Spanish will need to be the academic language of study. The textbooks are in Spanish and ensuring the production of competent professionals must be the major goal at this as in all good universities.

9.3.1.2 A National Scholarship Program for Indigenous Students. The development of a national scholarship program is proposed as a "talent search" aimed at identifying indigenous students who are capable of moving directly into existing universities. The scholarship awards should be sufficient to enable the students to attend the university of their choice. While most of the awards should be for study in a Guatemalan university, the program should also include scholarships for study abroad.

Adequate scholarship money should be provided to support 200 students during the first year of the program, and 200 additional recipients each year for the next five years.

9.3.1.3 The University Resident Center for Indigenous Students. The establishment of a University Resident Center in Guatemala City is recommended because of the need to provide an additional support system for indigenous students. The intent is to organize the Center so that the student is better able to adapt to the university and to the environment of the city. Tutoring and counseling assistance should be provided by peers and by those in charge of the Center.

The Center should not be located on any of the university campuses, although the students would live at the Center while attending universities in the city. An effort should be made to have indigenous students from all universities in residence.

The Center should be headed by an indigenous professional with appropriate interests and sensitivities. The students in residence would be encouraged to develop a spirit of cooperation and mutual support. The Center should be a place where the students are encouraged in their studies, as well as a place where they can feel comfortable and "at home" culturally.

9.3.1.4 The National Educational Association or Foundation of Indigenous Professionals. Providing support and encouragement to indigenous professionals in their aspirations to organize a viable national educational organization is especially important at this time. The purpose of such an organization should be to support initiatives aimed at improving the educational conditions of indigenous people in Guatemala. A nucleus of about twenty interested and committed indigenous professionals already exists. They need to be encouraged and provided with initial support in the development of their association or foundation. Part of that support should involve technical assistance in seeking out and communicating with indigenous professionals in Guatemala and elsewhere. What is significant about this effort is that it presents an opportunity to foster a "within group" support system committed to investing time and resources in helping others with a similar heritage. That type of commitment can have impact far beyond the actual activities that are engaged in by the association.

9.3.2 Improvements Needed In Guatemalan Universities

The recent enrollment growth has placed an enormous strain on existing resources and facilities. In a very real sense, this is the cause of many of the problems faced by universities in Guatemala. Though some are better off than others, all need assistance and support in coping with the pressures brought on by recent enrollment growth.

The type of help they need falls into two categories: technical assistance and support to effect needed reforms and improvements; and financial assistance and support in key functional areas. The first involves the provision of outside support to assist three of the

institutions with admission, retention, and graduation bottleneck problems. The second entails providing financial assistance to address some basic institutional needs. Both types of assistance are very important at this time.

9.3.2.1 The Technical Assistance Project Initiative. All Guatemalan universities are currently struggling with some difficult organizational problems. One of the most serious involves the inadequate preparation of entering students. Corrective action is needed; what is not obvious is what steps should be taken and where is the best place to start. Should the focus be on reform and improvement at the secondary level? Or should it be on developing university-based remedial instruction and other support activities? Perhaps the only way to address the problem is to attempt efforts at both levels.

A second major problem involves the amount of time it takes a student to progress through a Guatemalan university before completing a degree program. As noted previously, the USAC appears to have the worst record in this regard. Students who are commonly identified as part time are required to take the same number of courses as those studying full time. Because these are working students, they should be able to take a lighter course load. However, just what model makes the most sense is not clear; this area needs to be carefully studied and discussed with campus administrators, faculty, and students.

Outside assistance might provide leverage as well as an objective perspective on the problems to be overcome. That assistance can be provided in a number of ways: from a U.S. university team, a private consulting firm, or a third-country university team. Whichever choice of technical support group is made, the emphasis needs to be on providing help and expertise on-site for at least twelve and preferably eighteen months. There should also be an opportunity for key Guatemalan university administrators and faculty to visit some U.S. universities for the purpose of observing how these kinds of problems are handled in that setting.

9.3.2.2 The Financial Support Project. In order for the universities in Guatemala to make meaningful improvements in their operations, they need financial support for purchasing textbooks; establishing pre-university preparatory programs; upgrading professors; and improving equipment, libraries, and research capacity.

9.3.2.2.1 The Purchase of Textbooks. Because textbooks are so expensive, students must pool their resources in order to buy and share them. Often, professors are forced to choose the least expensive texts; to use no assigned texts; or to sell photocopies of their lecture notes as a substitute for textbooks. The negative effect on the quality of instruction is obvious.

What is needed is the establishment of a revolving-fund program to provide good-quality textbooks to students at reasonable prices. Each university involved would receive an initial grant under the strict condition that they use the proceeds from book sales each year to

purchase new books for the following year. A pilot project is proposed, to serve students at two campuses. The universities chosen as sites should be willing to contribute matching funds, up to an amount agreed upon after careful study. This project will require at least $250,000, serving 10,000 at a cost of $25 per student. The universities most in need of assistance are the USAC and UMG. But if the USAC receives its promised budget increase, it may require only a small amount of seed money.

9.3.2.2.2 The University Prep Project. A comprehensive effort is needed to improve the quality of students emerging from secondary schools. The problem needs to be studied carefully to determine which solution might be the most effective. At this point, it is not clear which of several alternatives offers the best prospect for improving the current situation. Four possible options are:

1) Initiate a pre-university "prep" cycle of remedial course work.

2) Mandate a required pattern of secondary-school coursework.

3) Impose an entrance examination in all the institutions.

4) Require all students to go through a common general studies program their first year, with emphasis on math and language.

The pre-university "prep" cycle option would involve the organization by one or more universities of a short-term, pre-university session to enable students to overcome math and Spanish language deficiencies. As part of this effort, the university would work with the Ministry to strengthen instruction at the secondary level. This option can be implemented immediately. It addresses the problem directly and offers a high probability of success if carried out properly. A pilot project, involving one university, could be established with the intention of replication at other campuses in subsequent years.

The second option would require a decree by the Ministry of Education mandating college-preparatory courses for all secondary-school students who intend to go to college. Technical assistance would be required to carry out this initiative, as such a decree would necessitate significant changes at the secondary level.

The third option is directed primarily at USAC and UMG, the only institutions who do not now require an admissions test. The imposition of such an examination, especially at the USAC, would be extremely difficult. Previous attempts to require an admissions test have met with strong resistance from students and from members of the faculty, so much so that the Rector was forced to withdraw the proposal. There is no reason to believe that the same type of resistance would not be generated today.

The last option, to establish a first-year program of general studies on the four campuses not now offering one, is certainly worth considering. As with the previous option, strong opposition from students can be expected, at the USAC as well as the other institutions.

Thus, although the initiation of such an effort has tremendous potential, the campus political situation may prevent implementation in the short run.

9.3.2.2.3 Upgrading of Professors Project. At the present time, all universities need to upgrade their professors. Opportunities for preparation at both the master's and doctoral levels should be made available to Guatemalan faculty members. The establishment of a national program of competitive fellowship awards is recommended, to enable faculty to obtain advanced degrees in their areas of specialization. The program should include opportunities for study in-country as well as abroad. A modest program of sixty fellowships per year for the next ten years is recommended. The fellowships should be open to professors who teach at any of the five universities. The grant awards should be large enough to enable them to leave their positions for up to two years. The Latin American Scholarship Program of American Universities (LASPAU) has considerable experience and an excellent record for this kind of staff development program.

9.3.2.2.4 Equipment Support Project. With the exception of Del Valle, all the universities in Guatemala suffer equipment shortages. The demand for equipment in chemistry, physics, agronomy, and engineering laboratories is especially critical. A special project funded through an international agency is recommended, to provide support to key institutions in this area.

Although it will take more to meet the total need, an initial grant of $850,000 is recommended for each of the next two years. Selection of the universities to receive the grants for equipment should be based on the priority lists and rationale submitted by each institution. Primary consideration should be given to upgrading the science, agriculture, engineering, and business computing programs.

9.3.2.2.5 Library Support Program. Assisting universities to upgrade their libraries seldom arouses much enthusiasm among government and foreign assistance agencies. However, there are few efforts offering the possibility of more immediate impact than improving the library in a Guatemalan university. This is because the library is so critical for Latin American students and faculty, as compared with U.S. students and professors, who have other options to obtain books.

A general library support program is recommended, one which is directed to those universities with the highest potential for reaching low-income students. This would require a three-year grant in the amount of $800,000; and all institutions requesting aid should required to develop book acquisition lists with a rationale for their ordering of priorities.

9.3.2.2.6 Research Support Program. Trying to stimulate enthusiasm among foreign assistance agencies for the support of university faculty research is always difficult. Nonetheless, it is an area of critical need and represents an important opportunity. Despite the many obstacles they face, Guatemalan faculty and their top-level administrators share a genuine enthusiasm and commitment to research

involvements by university faculty. Universities need to be at the forefront of the production of new knowledge in any society. In a country such as Guatemala, this function is a most crucial one. Research involvements and related activities by university faculty help institutions live up to that important responsibility. It is for that reason that the universities of Guatemala need to be encouraged to support the development and implementation of research projects and activities.

What is needed is a faculty research assistance program aimed at encouraging the initiation of modest research projects on selected campuses. An approach involving national competition is recommended, requiring at least $200,000 for each of the next three years to achieve the desired impact.

CHAPTER 10

ADULT, NON-FORMAL, AND DISTANCE EDUCATION

Adult, non-formal, and distance education are discussed together in this chapter, since they have a common primary audience, the disadvantaged poor, and since the boundaries between these three areas are blurred.

10.1 The Need for Adult and Non-Formal Education in Guatemala

In 1984-85, a research study collected information on the rural sector in Guatemala, in conjunction with a project mounted by the Non-Formal Education Board with a loan from USAID. Among the areas studied was the educational level of the target population. About 22 per cent of those surveyed could not sign their names. Almost one-half could not read a very simple sentence, and only about one-third could read simple sentences easily enough to establish themselves as functional literates.

These results were confirmed by the level of schooling that the target population had been able to attain. About 40 per cent had no schooling, and only slightly more than 20 per cent had completed the fourth or higher grade.

The study revealed a startling difference between those who spoke an Indian language and those who did not. Almost one-half (47.8 per cent) of the Indians had no schooling, while only slightly more than one-fourth (26.3 per cent) of the non-Indian population had not attended school.

The Indian speakers made up a large portion of the population surveyed. In the Western region, 68.6 per cent of those surveyed spoke an Indian language; and in the Eastern region, 43.1 per cent.

The percentage of those who spoke one of the Indian languages in the Western Region was found to be:

Quiché	33.1%
Cakchiquel	31.1%
Mam	26.6%
Tzutujil	8.4%
Other	0.6%

In the Eastern region, the percentages were:

Pocomchi	41.3%
Kekchi	27.1%
Achi/Rabinal	16.8%
Cakchiquel	12.3%
Other	3.0%

In summary, these results showed that the illiteracy rate in Guatemala is very high; and that it is particularly a problem among the Indian population. Although many in the rural areas have had no schooling, the dearth of schools for Indians has been much more severe than the lack of schooling for non-Indians.

The illiteracy problem was reflected in other conditions in the population surveyed: the need for better health knowledge and practices, and the need for more effective and efficient agricultural technologies. The survey revealed a very serious need for adult education in the rural sector of Guatemala, with the need being most acute among the indigenous groups.

While the needs are not so great in the urban sector since more opportunities for education exist there, available evidence suggests that the cities also have a sizeable proportion of the population which is educationally and culturally deprived. The rapid growth in the urban population has meant that many of the newcomers are from the rural sector and have had limited educational opportunities.

10.2 Goals and Strategies

While the Ministry of Education has primary responsibility for adult education in formal settings, it shares responsibility with other ministries for providing non-formal educational opportunities in a wide range of subject areas. Also, many private organizations are involved in non-formal and distance-education programs. A recent survey identified over 100 governmental or private non-formal education programs.

The government recognized the need for coordination in this area and established a National Board for Non-Formal Education. It is made up of representatives from the National Directorate of Non-Formal Education of the Ministry of Education; the National Training and Productivity Institute (INTECAP); the Department of Training and Education of the Ministry of Agriculture; the National Center for Training of the Ministry of Finance; and the National Institute for Public Administration (INAP). The objectives of this Board are:

1) To orient non-formal education programs so they will meet the needs of the target population.

2) To strengthen the coordination among various institutions, in order to provide educational opportunities in such areas as cultural heritage, health, nutrition, environmental sanitation, literacy and post-literacy, agriculture, housing, family planning, mining, energy, industry, commerce, tourism, communications, and transportation.

3) To expand the coverage of non-formal education by both the public and private sector, so as to respond more adequately to the country's basic needs.

The Board secured a loan and grant in 1982 from USAID, in order to expand and improve non-formal activities directed to the rural poor and increase the geographic coverage of these educational services.

Specifically, the project is to increase the coverage of non-formal education programs from 6 to 15 departments, and to increase the proportion of the people affected in the area by at least 20 per cent. Another long-range objective is to reduce the unit costs of non-formal education services and improve their effectiveness.

The project willl strengthen the outreach activities of the non-formal education system in Guatemala, by expanding the coverage of the Regional Office in Quetzaltenango and creating two new Regional Offices in Baja Verapaz and Quiché. These Regional Offices will develop instructional materials appropriate to the needs of the region, provide in-service training for its own promoters and for the field workers of other ministries, and evaluate the materials and training activities.

The project will also strengthen the Non-Formal Education Secretariat in Guatemala City, so that it can give greater and more consistent support to the Regional Offices. It will restructure and expand the use of radio, to give broader coverage in the project area.

The funding for the project is a combination of a loan of $3 million and a grant of $860,000 from USAID, and about the same amount in counterpart funds from the Guatemalan government.

An evaluation of the project to date conducted in June 1985, revealed that it got off to a late start and is proceeding at a slower rate than planned. The Secretariat had not achieved the organizational strength to meet the administrative demands of the project, and changes needed to be made in the budgetary and administrative systems with a clarification of the project goals. This evaluation may result in significant changes in future activities under the project.

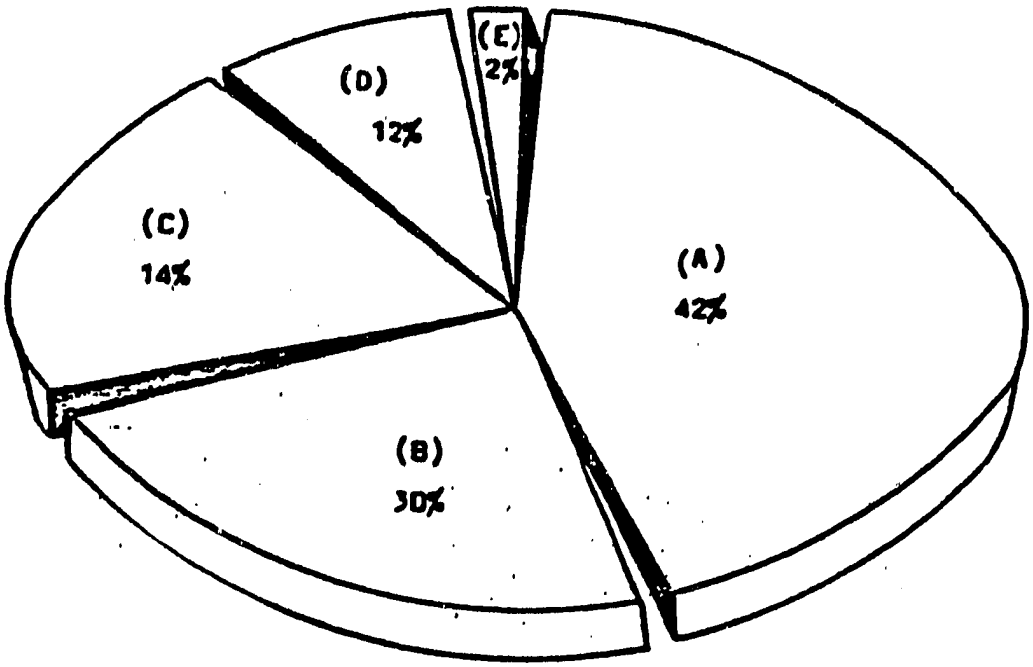
10.3 Non-Formal Educational Programs in Guatemala

A recent study has analyzed statistics and data reported by 20 public and 30 private non-formal education institutions in Guatemala, and provided information as to the nature of these entities.[1/] Of the 50 programs considered to be the most significant in the country, 44 stated that their emphasis was on the rural sector. Only six were strictly oriented to the urban areas.

Chart 10.1 shows the distribution of their activities in relation to the population served, which also points to the emphasis given by these programs to the rural sector.

1/ Carcamo, Alva Ernesto, Diagnostico del Estado Actual de las Estadisticas en el Subsector Extraescolar, Guatemala: Junta Nacional de Educacion Extraescolar, Secretaria de Coordinacion, Julio, 1985.

Chart 10.1
DISTRIBUTION OF NON-FORMAL EDUCATION BY GEOGRAPHIC SECTOR
URBAN, RURAL[1/]



A) Urban-Rural Population
B) Rural Population
C) Urban-Rural Population and Institutional Technicians
D) Urban Population
E) Institutional Technicians

1/ Technical Institutes are considered urban.

SOURCE: Carcamo, Alva Ernesto, Diagnostico del Estado Actual de las Estadisticas en el Subsector Extraescolar, Guatemala: Junta Nacional de Educacion Extraescolar, Secretaria de Coordinacion Julio, 1985.

As to the program emphasis of the 50 entities, the most frequent area was health, with 18 having activities aimed at preventing diseases. Sixteen organizations had agricultural programs, and the same number had social welfare activities. Nine, or less than one-fifth, featured literacy programs. Table 10.2 gives the distribution of the programs by area of emphasis.

10.4 Adult Education, Ministry of Education

Adult primary education programs are administered by the Ministry's Directorate of Literacy Training and Adult Education. They fall into three categories: literacy training, adult formal primary education, and a correspondence program.

10.4.1 Literacy Training

The Literacy Department under the Directorate of Adult Education provides some literacy training directly, and coordinates other activities carried out by public and private entities. The literacy program is divided into two phases: beginning and functional literacy. In 1985, the department reported that 86,966 adult students, defined as 15 years or older, were enrolled in beginning literacy programs. Of these, about one-half (43,000) were women. In the second phase, the enrollment dropped considerably, with only 9,283 adults attending; less than one third (3,000) were women. The department estimates that the programs reach about 3 per cent of the illiterate population. The programs are housed in schools (80 per cent), churches (5 per cent), homes (10 per cent), and factories (5 per cent). Participants receive primers (Nuevo Amanecer), arithmetic books, and workbooks.

The annual budget of the department is some Q309,000. The cost per pupil for the courses administered directly by the department is Q17, which includes expenditures for facilities, materials, and administration. The individuals who actually help the students learn are all volunteers. It is mandatory that students in the fifth year of teacher training, teach at least three people to read and write before receiving their credentials.

The Literacy Department divides the country into two zones. The mountainous region in the north is called the intensive zone, because this is where illiteracy is most widespread. The department concentrates the greatest share of its efforts there. The rest of the country is referred to as the extensive zone. The department attempts to provide literacy training in Spanish and in the four main Indian languages: Quiche, Kekchi, Mam, and Cakchiquel.

10.4.2 Proposed UNDP Literacy Project

The Literacy Department is in the final stages of negotiations with UNDP for a project to help develop the literacy program. The project will require an expenditure of $806,250, with the UNDP contributing $300,000 of that amount. It will be a three-year effort, including a study of literacy needs, development of curriculum

Table 10.2

DISTRIBUTION OF NON-FORMAL EDUCATION ACTIVITIES BY PROGRAM EMPHASIS

	Number of Programs 0 2 4 6 8 10 12 14 16 18 20
Prevention of Diseases	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Agricultural Techniques	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Social Welfare	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Community Organization	XXXXXXXXXXXXXXXXXXXXXXXXXXX
Technical Training	XXXXXXXXXXXXXXXXXXXXXX
Literacy	XXXXXXXXXXXXXXXXXXX
Labor Training	XXXXXXXXXXXX
Women's Promotion	XXXXXXXXXX
Handicrafts	XXXXXXXX
Home Economics	XXXXXX
Appropriate Technology	XXX

SOURCE: Carcamo, Alva Ernesto, Diagnostico del Estado Actual de las Estadisticas en el Subsector Extraescolar, 1985.

and methodology, evaluation of present materials, materials development and production, and development of a system of supervision. An experimental project will test the curriculum, methodology, and materials, and radio iessons and programs will be developed. An important component of the project will be the coordination of the Ministry's program with those of other entities.

10.4.3 Adult Formal Primary Education

The Department of Adult Primary Education, under the Directorate of Adult Education, administers the adult night schools, in which the six years of primary education are taught in four years. The department also coordinates the adult primary education courses given by other entities, such as that of the Instituto Guatemalteco de Educacion Radiofonica (IGER). In 1984, the department's total budget was Q1,195,058. No books or materials are available for distribution to students.

For 1984, the department reported that 26,609 adults were enrolled in the various programs within and outside the department. Some 20,000 finished the class and of these, 16,000 passed. Fifty-eight per cent of the students were men.

Of the public schools, 52 were in Guatemala City and 48 in the other departments; but the department schools enrolled 12,719 students, while the Guatemala City schools had some 11,000. The schools in the capital had more teachers, so the pupil-teacher ratio there was 38.6, as opposed to 63.3 students per teacher in the other departments.

The private schools had a total of only 1,950 students, 1,007 in Guatemala City and 943 in the other departments. The number of private schools has decreased in recent years, as the department has required them to observe higher standards if they wish to continue in operation.

The teachers in the adult schools hold primary-teaching credentials; most have experience with children but have no special training for teaching adults. A number of the teachers hold a professional degree in law or accounting as well as a teaching credential, and teach in the adult school to supplement their income. Public primary-school teachers are prohibited by law from drawing more than one public salary, so they cannot teach in the adult schools. The average monthly salary of public night-school teachers is estimated to be Q321.

10.4.4 The Primary Education Program by Correspondence (PEAC)

The Directorate of Adult Education also offers the Program for Educating Adults by Correspondence (PEAC). Its annual operating budget is small, only Q30,000. From 1974 to 1984, the program enrolled 21,168 students. These were in the second, third, and fourth levels of the adult primary education program. The first level cannot be offered by correspondence, of course, since students must have some minimal reading and writing skills. The promotion of students as of December 1984 was as follows:

Second level	1,720
Third level	636
Fourth level	416

In the first semester of 1985, the program had a total of 895 students. Most are adults, 15 years or older, but some children are allowed to take the program, because they do not have access to a primary school. Most students are males, some 77 per cent.

10.5 Other Adult and Non-Formal Education Programs

In addition to the programs already described, four other programs or entities merit special attention. These are the Instituto Guatemalteco de Educacion Radiofonica (IGER), the Federacion Guatemalteca de Ensenanza Radiofonica (FGER), the Instituto Centroamericano de Educacion y Cultura (ICECU), and the Instituto Nacional de Administracion Publica (INAP).

10.5.1 The Instituto Guatemalteco de Educacion Radiofonica (IGER)

Founded in 1978, IGER's program is based on the educational system which was proven successful by the Instituto Constarricense de Ensenanza Radiofonica (ICER). This system combines the use of printed instructional material with lessons broadcast by radio. Each week the students meet with a monitor (Maestro Orientador) who corrects their homework and helps them with their learning. The monitors are members of the students' community. They have completed the grade that the students are studying. Besides being capable of giving needed assistance, the monitors are dedicated to helping others progress.

This instructional system was first tested in Guatemala with 600 students, using only the printed materials and the monitors. The experiment was so successful that the Ministry of Education gave its approval, certifying that IGER is now officially authorized. IGER's instructional system is based on the following educational principles:

* The learner is the center of attention. The teacher-learner situation must be structured to the mentality, conditions, and needs of the students, who come from the ranks of the disadvantaged rural poor.

* The language is simple; only words known to the students are used, so any new words must be defined. Sentences are short.

* The emphasis is on the concrete. Important abstractions and definitions are given only at the end of classes.

* Each class begins with elements which are within the students' experience, and the lessons lead the students from these into new concepts and understandings.

* Although IGER gives certificates and diplomas, the emphasis is on the improvement that learning can make in the student's quality of life.

* The literacy system uses the complete thought or phrase system, reinforced by the phonetic system.

* The programs provided by IGER in the Indian languages are given only by bilingual teachers who are from that Indian group and who have been carefully selected as being identified with that group.

* The development of this system, to be used with adults who are illiterate and culturally marginal, requires that the teachers be carefully selected and have not only special professional and intellectual capabilities, but also be dedicated to their fellow men.

The objectives of IGER include the following:

1) To promote and provide for the educational development of the people of Guatemala, especially those from the rural and Indian sectors with limited economic means and no access to schooling.

2) To develop the individual and to promote the integration of the family in other ethical, intellectual, and cultural values.

3) To secure the understanding and collaboration of the varied social and ethnic groups without distinction for creed or cult, and to orient the educational activities to their environment.

The need in Guatemala for the IGER program is very great. Although in the last 20 years the percentage of illiterates has been reduced from 60 to 48 per cent, Guatemala still has one of the highest rates of illiteracy in this hemisphere. When the concept of functional literacy is applied, in some parts of the population the percentage of people who are not functionally literate may reach over 90 per cent. This is especially evident in the Indian communities, which comprise a large part of the Guatemalan population.

Adult education is a critical need in Guatemala, but it must not divert resources from other levels of the education system. The IGER program was devised to provide effective adult education in an efficient manner at a very low cost per pupil: Q32.

The educational program of IGER is called "El Maestro en Casa" and contains a literacy program along with primary and basic education. The program is equivalent to that of the public adult night schools, except that the third and fourth steps of these schools are completed in two years instead of two semesters in the IGER program. The following chart compares the programs of IGER with those of the public night schools:

IGER		Public Night Schools
	Primary	
Two Semesters	First-Step Certificate	One Year
Two Semesters	Second-Step Certificate	One Year
One Semester	Third-Step Certificate	One Year
One Semester	Fourth-Step Certificate and Diploma	One Year
	Basic General Culture	
One Year	First-Phase Certificate	One Year
One Year	Second-Phase Certificate	One Year
One Year	Third-Phase Certificate and Diploma	One Year

The subject matter offered by the IGER program is the same as that in the night schools, but the order of presentation is different. Also, because of the nature of the IGER system, it is exempted from providing typing; and instead of English, IGER offers Quiché and Kekchi in those areas where this is appropriate.

The level at which the student enters the IGER program is determined by an entrance examination so that the student may begin the program either below or above the level of schooling that he/she has completed.

The IGER system is provided under three projects: Spanish, Kekchi, and Quiché. Under the Spanish Project, there are currently some 5,000 students, with over 2,000 of these in Guatemala City. The statistics show that about 85 to 86 per cent of those enrolled pass the course. Up to 12.5 per cent have to repeat one or more of the subjects. Less than 5 per cent drop out before finishing the course.

The Kekchi Project began in 1981 in the Diocese of Alta Verapaz, with an enrollment of 7,586 in the literacy program. The guerrilla situation in the area limited the program, but it was able to continue developing instructional material for all the primary grades, using small experimental groups of students to try out the materials. The project is renewing the program now and has enrolled 2,765 students. The broadcast will be over Radio Tezulutlan.

The Quiché Project is now ready to start an experimental instructional program in the Quiché language. The literacy material is ready to be tested, and some 17 monitors have been recruited along with at least 150 students. This program is based in Quetzaltenango; and with the support of the Bishop, the lessons are to be broadcast over Radio Fraternidad, the radio station of the Diocese.

Although the IGER system is most effective when the three elements--the printed lessons, the broadcast lessons, and the monitors--are all used, it has been found that the printed lessons can be used without the broadcasts when it is not possible for the students to receive them. The printed materials are also being used in formal

classroom situations. An experimental program is now also being developed in which the broadcast lessons are presented on cassettes, using simple tape players and rechargeable batteries.

Following is a tabulation of the students in the various programs at the present time:

1. Spanish:	Using printed material, radio broadcasts, and weekly learning sessions	3,226
2. Spanish:	Using printed material only but in a classroom situation	819
3. Spanish:	Using printed material and weekly or monthly learning sessions	455
4. Spanish:	Using printed materials and the broadcast lessons presented on cassette tape recorders	140
5. Kekchi:	Using printed material and trained community leaders	2,765
6. Quiche:	Using printed material with 17 experimental groups led by trained leaders	159
	TOTAL	7,555

IGER's main broadcast facility is Radio Internacional in Guatemala City, owned by ASEC, IGER's umbrella organization. It broadcasts the entire IGER program each evening. The station's radio signal can be heard clearly to the north and west for approximately 75 km, and to the south and east for about 25 km. The number of students listening to the radio lessons is 2,996.

Arrangements have been made by IGER to have its programs broadcast by Radio Chortiz, which is heard primarily in the department of Chiquimula and part of Zacapa. It is difficult to estimate exactly how many students follow the program on this station because the signal also reaches the departments of Petén, Alta and Baja Verapaz, and even Huehuetenango.

The IGER program is also broadcast over La Voz de Atitlan in the department of Solola, which can be heard for a radius of some 30 km around the station at Santiago Atitlan. Some 90 students follow the lessons. This shortwave station may, of course, be heard by others more distant from the station, because of the nature of shortwave signals.

The program in the Kekchi language is now being presented in municipalities in Alta Verapaz, and in Izabal, reaching some 2,765 students. The Quiché language program is starting up on an experimental basis in Quetzaltenango, Totonicapan, Solola, and El Quiché, with 150 students. In addition to the above, the program is also being provided in isolated groups in Petén, Jutiapa, Izabal, and Huehuetenango.

In addition to the radio stations which now broadcast the program, other stations have made arrangements with IGER to carry them in the future.

10.5.2 Federacion Guatemalteca de Escuelas Radiofonicas (FGER)

In 1965, the leaders of Catholic radio stations in Guatemala formed an association, FGER, in order that they might assist each other in obtaining licenses and agreements with the government, reducing operational costs, and finding funding in order to upgrade their equipment and operation. The five affiliates of FGER are Radio Mam, La Voz de Nauala, La Voz de Atitlan, Radio Chortiz, and La Voz de Colomba. FGER is administered by a Secretary-General, who is responsible to the Administrative Council, chosen by the General Assembly of the organization.

As a new organization with no example to follow, FGER progressed slowly until 1973, when it was able to clarify its objectives and to determine its future course. In that year it stated as its philosophy:

> As Latin Americans we share the history of our people. The past made us Latin American human beings, the present finds us in a group to make decisions, and the future requires us to take creative measures to assist the development process.

According to FGER, the purpose of education is to make it possible to change the student's situation, in order to improve quality of life.

In 1976 the earthquake destroyed FGER's offices. Its affiliate stations were active in giving support to the areas of the country which were affected by the earthquake.

From the beginning of 1980 until the end of 1981, the violence which took place in various parts of the country made the operation very difficult. A result was that FGER sought to become more effective by establishing commissions or working groups: Administration, Women in Development, Formal Adult Education, Communications, Indigenous Cultures, and Radio Engineering. Through these commissions, FGER has been able to give more support to its members.

FGER's sources of funding are various religious foundations and philanthropic organizations. It has an annual budget of approximately $250,000. Of this, $100,000 is used to support the operation of the member radio stations. Some $40,000 provides training for the personnel of the stations, and $8,000 supports the training courses offered by the stations for the people in their communities. The remaining $30,000 is for the administration of FGER. Each of the affiliate radio stations has a budget of its own, which averages about $20,000. Following are the details of the five member stations.

10.5.2.1 La Voz de Nahuala. This station was founded in 1962 by a nonprofit community organization, which did not receive official recognition until 1972. The shortwave station broadcasts to a large portion of the country, but its programs are directed to the departments of Solola, Totonicapan, Suchitepéquez, Chimaltenango, and Quiché. The total population is over 100,000. It was the first radio station to broadcast in Quiché and one of the first to broadcast in a Guatemalan Indian language. The station is on the border of two language groups, Quiché and Cakchiquel, so its broadcasts are now in both languages. When the station first began in 1959, there were only 14 radio receivers in the area; one of the first activities was to sell inexpensive, one-frequency transistor radios.

The station supports a community center which has a program of activities corresponding to the interests of the people. The operation of the Nahuala center is illustrative of how all serve their communities. It has some six major programs, in agriculture, women in development, literacy training, health, cultural development, and spiritual development. The center started with just three programs and added the others as the people in the community came to express additional needs. The program for each of the subject areas is planned at the start of each year by those involved in the specific program area. In agriculture in 1985, the main emphasis is on the production of corn and vegetables and includes such elements as the use of organic fertilizers and ways to increase production and decrease post-harvest losses. A secondary emphasis is on poultry production, in which successful farmers are sharing their knowledge and methods.

In the women in development program, three Indian women from the community have nine learning groups, six in Nahuala and three in the surrounding areas. They are working on such topics as family planning and the problems of alcoholism. The learning groups in literacy training have varied in number from 60 to 150, and have at times included as many as 2,500 students. Through the program, 420 people became literate in 1984.

10.5.2.2 La Voz de Colomba. This station, founded in 1958 as an entity of the Diocese, is located in Colomba, Quetzaltenango. Its primary operational area is the southern part of the department of Quetzaltenqango, but its radio signal also reaches parts of San Marcos and Retalhuleu, an audience of perhaps 60,000 to 100,000. It derives funds through radio advertisements and does not broadcast formal education lessons. Until recently, its programs were all in Spanish, but it is now starting to transmit some programs in Mam. It has some 40 volunteers leading programs for about 70 groups, in community development and non-formal education activities.

10.5.2.3 Radio Chortiz. This station, located in Jocotan, Chiquimula, was founded in 1966 and belongs to the Diocese of Zacapa. It serves the eastern part of the country, the departments of Chiquimula, Zacapa, and Izabal. The population of the area is over 580,000, so that the audience is estimated to be 400,000. It is virtually the only station in the area. The bulk of its programs are in Spanish, but some educational programs are in Chorti.

In its center for special community and educational activities, Radio Chortiz serves over 4,000 people, using as many as 150 volunteer leaders. It also offers the IGER formal education program to more than 160 students, through five centers in the department of Chiquimula.

10.5.2.4 Radio Mam. This station is owned by a nonprofit community organization and is located in Cabrican, Quetzaltenango. The station broadcasts through shortwave to an audience of 30,000 people in the municipalities of Cabrican and Hitan. About half of its programs are in Spanish, and half in Mam.

Its center offers a variety of community and non-formal education activities with some 40 volunteer leaders. These activities currently emphasize health needs but also include women in development, agriculture, and literacy programs. Currently, eight literacy groups are in operation.

10.5.2.5 La Voz de Atitlan. This small station, owned by a nonprofit community organization, is located in Santiago Atitlan, Solola, and was founded by a Catholic mission from a Diocese in Oklahoma in 1968. It operates on shortwave, from a location surrounded by three tall volcanic peaks; and its short antenna reduces the reach of its signal so that the audience is limited to the small population close to the station. Currently it operates two hours per day, and the signal is of low quality. This station has suffered greatly from the violence in Guatemala in the early part of this decade.

10.5.2.6 Radio Tezulutlan. Although this station is not formally a member of FGER, it is closely related to the member organizations and to FGER itself. It was founded in 1975 in Coban, Alta Verapaz. Its director is the Bishop of the Diocese of Verapaz. The station has FM transmission facilities and has reserved an FM frequency, but as yet has not received governmental authority to operate. The antennas are located on a hill above Coban, so the FM would be received very well both in Coban and the nearby city of San Pedro Carcha. The area served by the station has a population of over 300,000.

The station operates via shortwave in the early morning and afternoon, presenting programs in both Spanish and Kekchi. It is assisting in IGER's Kekchi project, which is now offered on an experimental basis to over 2,000 students.

10.5.3 Instituto Centroamericano de Extension de la Cultura (ICECU)

This institute was started in Costa Rica to provide non-formal education to the poor or marginal people of Central America. In June 1966, it opened a center in Guatemala.

The main activity of ICECU is the production and distribution of a 30-minute radio program entitled, "Escuela para Todos." This consists of answers to questions sent in by the listeners, so it covers a wide range of topics of interest and importance to the poor people of the area. The programs are broadcast six days a week by local radio stations, which are

paid to provide this service. A study estimates that some 700,000 Guatemalans listen to the programs at least once or twice per week.

The program is produced in Costa Rica, and the broadcast tapes are sent to Guatemala. The material is selected for its general appeal to all the poor people of the region.

In 1984, expenditures of the Guatemalan center of ICECU amounted to Q18,948. Until May 1984, the program was broadcast in Quiché and Kakchiquel by La Voz de Occidente, but the lack of funds forced the cancellation of these broadcasts.

In addition to the radio program, ICECU tries to answer all the letters which it receives and each year publishes an almanac. In Guatemala some 100,000 copies are sold annually; the current price is Q1.25. One study indicated that at least seven to eight people read each copy, so that this publication reaches an estimated audience of over 700,000 in Guatemala.

10.5.4 National Institute for Public Administration (INAP)

Founded by executive decree in 1980, INAP is Guatemala's principal technical organization for training and upgrading public employees. According to the by-laws of the organization, INAP has seven major functions:

1) Carry out basic research on problems that affect the organization and functioning of public agencies.

2) Define political reforms and administrative changes for the short and medium term, and carry out administrative development on a global, sectoral, and institutional level within the public sector.

3) Lend technical assistance to public and private institutions in support of their administrative development actions.

4) Define policies and develop human resources in the public sector.

5) Disseminate information on scientific and technological advances in public administration.

6) Integrate and coordinate specialized activities and training for public officials.

7) Elaborate technical studies and give an opinion on the creation or reform of public agencies with regard to organization and functioning.

INAP carries out these tasks by striving to achieve the following four objectives:

1) Satisfy the needs of public administration through development of human resources.

2) Develop training courses that address formal educational deficiencies and facilitate administrative action to carry out programs of national interest.

3) Coordinate the demands of public agencies, especially in those sectors that have been named as priorities in the National Development Plan.

4) Offer training in the interior of the country to priority sectors with inter-institutional participation.

To carry out these functions, INAP has four departments: Technical-Administrative; Training and Development; Research and Programs; and Materials Production, Documentation, and Information. Its major focus, however, is on training. This department is responsible for permanent training programs; specific training courses given upon demand; seminars; workshops; and orientation sessions.

INAP gears its programs to several levels of public employee groups:

* Operational employees, responsible for routine or simple manual work requiring minimum experience or training.

* Office workers, who are clerks, secretaries, and office assistants.

* Technical employees, Classes I and II, who have technical or administrative responsibilities in the areas of planning and programming, control, personnel administration, and evaluation.

Upon successful completion of a course, participants receive a Certificate of Achievement.

In 1984, INAP carried out some 67 training programs: 8 at the operational level, 25 at the office-worker level and 25 at the technical levels. These programs reached some 3,510 persons. By mid-1985, INAP had surpassed the total number of persons trained in 1984, and was estimating that their programs would reach 6,000 participants before the end of the year.

INAP operates directly out of the Office of the President, as a decentralized, semi-autonomous service unit. It receives funding from the national budget. In 1984, INAP's budget was Q100,000 for training, amounting to Q28 per employee trained that year.

10.6 Recommendations

There is a great need for adult and non-formal education programs in Guatemala, if a large part of the population is to be freed from ignorance. But already limited resources cannot be diverted from other education levels, particularly primary education for children. Ways must be found to provide adult education as inexpensively as possible to the maximum number of adults who are most educationally and culturally deprived.

Those most in need of education services are adults in the rural sector and, particularly, the Indian population. At this time, IGER is the institution which has the greatest capacity for reaching these people inexpensively. IGER has programs in Spanish, Kekchi, and Quiché, and should be assisted and encouraged to develop programs in Mam and Cakchiquel.

The role of the Adult Education Directorate should be to provide support to entities such as IGER that have demonstrated their ability to help adults through the use of volunteer labor and effective techniques. The night schools should not be expanded. They should be upgraded, however, to serve as demonstration schools. Student results at these schools should be comopared with those at IGER and other institutions, to make sure than the out-of-school programs are maintaining high standards.

In non-formal education, the Ministry should give priority to its role as a coordinating and service entity. If it spends its resources on actually presenting non-formal programs, the Directorate of Non-Formal Education will only dilute the important assistance it can give to other ministries and private organizations.

Instead of doing extensive programming, the Directorate should develop prototype materials and help the other programs to present their educational activities more effectively. The few programs that the Directorate-General does offer should be seen as demonstration products and should be very well done so that they can serve as models to other organizations.

Private, non-formal education programs which operate close to the people need to be given emphasis and support. For example, IGER and its five member radio stations and centers should be encouraged, since they have a direct impact on increasing the quality of life of the rural adult population that they serve.

APPENDIX I

AED TEAM MEMBERS AND COUNTERPART USIPE TEAM

APPENDIX I

AED TEAM MEMBERS AND COUNTERPART USIPE TEAM

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APPENDIX III

POLICIES OF THE MINISTRY OF EDUCATION

APPENDIX III

POLICIES OF THE MINISTRY OF EDUCATION[1]

3.1. Legal and Historical Background

Guatemala's Constitutions in effect from 1944 give priority to two aspects of education: (a) literacy of youth and adults, considered to be of major national importance; and (b) the obligation of the State to provide universal primary education to the population in the 7 to 14-year old age group. This trend will be noted in the summary which follows about the evolution of education in Guatemala since 1944.

3.1.1 1944 to 1954

This decade is representative of a deep change in the overall educational system in terms of qualitative as well as quantitative issues. During this period, priority was given to rural education through the organization and establishment of the Campesino School Centers; the eradication of illiteracy through Alfabetizacion Campaigns; and the organization of Initial Culture Ambulatory Missions.

Attention was also given to the economic status of teachers, greatly increasing their technical-legal situation. The Teacher's Salary Roster was established, creating incentives for entering and remaining in the profession. The professionalization of empirical practicing teachers was also institutionalized.

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[1] This review of the goals and policies of the Ministry of Education of Guatemala was prepared by Prof. Rolando Méndez Mora, Minister of Education from January to August, 1983.

3.1.2 1955 to 1965

In accordance with the emphasis given to rural primary education, the Direccion de Socio Educativo Rural (SER), or Rural Educational Bureau, was created during this period. Its range of programs included the educational centers and Castellanizacion programs employing bilingual educational promoters to provide indigenous children with their first knowledge of Spanish, so that they might continue with their studies at the primary level.

The professionalization of teachers continued to be highly successful; and at the secondary level, teaching was diversified, thus creating new career openings.

3.1.3 1966 to 1974

The adult literacy campaign was systematized as a program during this period, with the participation of teachers, student teachers and voluntary personnel. The Primary and Secondary Education Projects (PEMEM and PEMEP) were put into operation, in order to improve the school system. Through these programs, the establishment and equipping of regional schools became a reality. It was also possible to design materials, textbooks, and curriculum outlines and to train personnel.

The Direccion de Desarrollo Socio Educativo Rural increased its programs to extend coverage to the rural area: Escuela Unitaria, Rural Family Education, Family Centers for Development, construction and repair of school buildings through a three-part plan involving the State, municipalities, and communities.

There was a concentration on adult educational services, which permitted the establishment of complete schools in the capital city, departmental capitals, and some municipalities. Also, these services were designed to be accomplished in four stages, completion of which would be equivalent to six years of primary education. Coverage was also extended to the school-age population, by systematizing the increase of vacancies to be occupied by teachers every year.

3.1.4 1975 to 1979

From the legal standpoint, general policies of the Ministry of Education are based on the National Education Law (Legislative decree 73-76) of December 1, 1976, enacted for purposes stated in Chapter II thereunder, as follows:

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THE PURPOSE OF EDUCATION

Article 14. The purposes of education are as follows:

a) To provide complete education to the student on the basis of scientific, technical, and cultural principles, and prepare him to carry out profitable work to allow him access to higher levels of social and national life;

b) To encourage the scientific and humanistic formation of students, emphasizing ethical, esthetic and civic issues;

c) To promote critical analysis in students and stimulate means for the application thereof;

d) To train students for life in the community and to promote community progress;

e) To strengthen in students, the spirit of human solidarity;

f) To develop in the student an overall sense of organization, responsibility, order, and cooperation;

g) To promote in students, the knowledge of, respect for, and desire to defend human rights;

i) To encourage students on scientific and technological research;

j) To train students to contribute to the strengthening of democracy, freedom, and social justice;

k) To develop and strengthen in students, a favorable attitude towards the restoration of Central American unity;

l) To promote student training to increase nutrition and health levels;

m) To promote in students, responsible attitudes and commitments towards defending and developing the economic and cultural heritage of the Nation.

During the period from 1975 to 1979, the development of national development plans was systematized, giving rise to the

National Education, Science and Culture Plan, with the following objectives:[1]

* To provide an education which will allow for the efficient participation of citizens in actions aimed towards development, providing knowledge, skills, and attitudes which will:

  a) Train Guatemalans to find solutions to basic individual, family, and social problems, including nutrition, health, housing, community participation, etc.

  b) Prepare Guatemalans to carry out labor and professional activities, within a broad occupational framework, to increase production and consumption capabilities.

  c) Guide Guatemalans to better utilize and preserve cultural values and national resources.

  d) Prepare Guatemalans to become a dynamic factor for local, regional, national, and Central American development.

* Increase educational opportunities and provide new chances to facilitate greater social mobility towards less-favored population sectors, within the country's integrated development process.

* Encourage scientific and technological research focused on better knowledge and utilization of the country's human and material resources.

At this time, also, the education Extraescolar subsector was institutionalized through the creation of the National Board of Education Extraescolar, with its two programs: The Secretariat of Education Extraescolar and the Basic Module of Education Extraescolar, covering a portion of the central-western Highlands, and constituting an inter-institutional coordination effort. Teacher positions were also increased at the various educational levels.

3.1.5 1979 to 1983

The National Development Plan's objectives for Education, were stated as follows:[2]

1/ Plan Nacional de Educacion, Ciencia y Cultura, 1975/79, SEGEPLAN, November 1975.

2/ Plan Nacional de Desarrollo 1979/82, Sector Educacion, SEGEPLAN.

* Long-Term Objectives

a) To incorporate the majority of the population into the educational process.

b) To adapt education to the needs and expectations of the population.

c) To create an inter-relationship between the educational system and the country's needs for development.

d) To contribute to the preservation of cultural values, the strengthening of cultural identity, and the reciprocal understanding of the country's cultural groups.

e) To promote perception about cultural and external consumption patterns, as well as information processes which distort behavior.

f) To favor the conservation and utilization of natural resources, as well as environmental preservation and improvement.

g) To contribute to the development of national scientific-technological capability.

* Medium-Term Objectives

a) To focus on the expansion of educational service offerings, with priority given to the rural and urban marginal population sectors.

b) To adapt educational content to the needs and expectations of the population.

c) To develop an ability for communication among cultural groups, through the reciprocal knowledge of their cultures and linguistic means.

d) To expand, substantively, the coverage of primary education, particularly in the rural areea.

e) To increase the efficiency and coverage of extraescolar education programs.

f) To promote alfabetizacion, particularly in the areas with the greatest rates of illiteracy.

g) To focus secondary education towards training for work and knowledge of the country's economic, social, and cultural problems.

h) To increase the education sector's administrative, planning, and research capacities.

i) To improve training of teachers and educational procedures.

j) To encourage, at the higher education level, the training of technical and professional personnel capable of adequately responding to the needs of the country and contributing to the development of national scientific-technological capabilities.

At this time, emphasis was placed on educational access for the indigenous population, giving rise to the possibility of a Bicultural-Bilingual Education Project.

The National Alfabetizacion Plan emphasized adult literacy with the goal to cover a population amounting to 2,209,410 individuals within a four-year period. The plan was in effect until mid-1983.

In 1982, as a result of the constitutional breakdown, the new officials of the Ministry of Education set up emergency objectives, as follows:[1/]

a) To promote educational policies in support of the national objectives of the Military Board of Government.

b) To focus and organize programs and projects aimed at the promotion and strengthening of citizen conscience and nationalistic spirit.

c) To establish a process of review and adaptation of the institutional, normative, and organizational framework of the Ministry of Education, as well as to adjust curricula to individual, family, and collective welfare needs required for the development of the country.

d) To impel and strengthen programs or projects tending to rescue, preserve, and promote Guatemala's cultural values.

1/ Plan General de Trabajo, Ministerio de Educacion, April 15, 1982.

e) To guide and strengthen the development of promotion, advertising, and disclosure programs for artistic and scientific expressions promoted in the country, in congruence with the needs, interests, and expectations of Guatemalans.

f) To impel and strengthen programs to incorporate marginal populations into the school system, notwithstanding the modality of the educational services.

g) To establish an inter-institutional coordination process for actions undertaken at the ministerial level and with the remaining institutions of the public sector, as well as with the entities of the private sector and international technical and financial aid organizations and agencies in the country.

The process of providing basic textbooks for primary education began, incorporating programs of studies in areas such as civic education, environmental education, reforestation and cooperativism. Curricular guides and outlines were distributed for the primary level of education.

There was an increased effort to coordinate the actions of the Ministry of Education, in order to be able to respond most effectively to educational problems, in terms of quantitative and qualitative aspects, as well as the physical environment.

The responsibility for construction of school buildings was shifted from the Ministry of Education and became a function of the Ministry of Communications, Transportation and Public Works.

3.2 Current Policies and Objectives

1984 to 1985

The current National Development Plan for Education, establishes the following objectives:[1/]

1/ Plan Nacional de Desarrollo 1984-1986, Plan Sectorial, Sector Educacion, SEGEPLAN, 1983.

* General Objective

Improve the population's educational level and promote more effective ties between education and the national development process.

* Specific Objectives

a) Promote the participation of groups which have not had access to the educational process, in order that they may take advantage of education as a support tool to attain improved standards of living.

b) Extend and improve the offering of educational services, in order to equalize access and adapt the quality of educational programs to the needs and characteristics of the population.

c) Improve educational administration in order to increase the effectiveness of the national education system and optimize the utilization of available resources.

Based on the National Plan, the Ministry of Education has established its present educational policy and action, plan as follows:[1/]

1. POLICY: Specific attention to illiteracy.

POLICY ACTIONS:

a) To measure objectively the problem of illiteracy in the regions and groups most highly affected.

b) To assess achievements through actions carried out over the past, in order to identify salvageable materials, procedures, and methodologies.

c) To design and put into operation viable programs, in order to attack the problem, beginning with locations in greatest need.

2. POLICY: Support education through the media.

1/ Politicas del Sistema Educativo Nacional, Ministerio de Educacion, USIPE, 1985.

POLICY ACTIONS:

a) To organize a technical commission to select, propose, and design educational programs which will contribute to offsetting negative behavioral patterns and appreciating the popular Mayan culture.

b) To identify institutions and individuals capable of sponsoring educational programs through the media.

3. POLICY: Extend educational attention to dispersed population and migrant groups.

POLICY ACTIONS:

a) To identify migrant groups and times when migration takes place, as well as characteristics of such groups.

b) To design educational programs organizing schedules and contents into units to allow the continuity of the teaching and learning process of children belonging to such groups.

c) To use unconventional means (itinerante teachers, radio broadcasts, correspondence courses, programmed instruction) to assist migrant groups as well as dispersed populations.

4. POLICY: Extension of educational services.

POLICY ACTIONS:

a) To systemize the distribution of assigned resources.

b) To carry out micro-planning studies to place educational services in the most appropriate locations.

c) To design and put into operation systematic infrastructure, furniture, and equipment maintenance programs.

d) To put legal provisions into effect, in order that real estate developments reserve adequate land for educational facilities.

e) To standardize and prepare modular educational building designs and the construction of furniture employing materials and labor from the affected locations.

f) To strengthen and extend non-formal educational programs to make up the non-formal education subsector.

g) To strengthen, modernize, and technically support institutions which prepare materials employed in distance-education methods.

5. POLICY: Support to private education.

POLICY ACTIONS:

a) To establish mechanisms focusing private initiative investments in the state's priority educational, cultural, and sports programs.

b) To technically supervise the activities of privately-owned educational centers, in order that they may effectively contribute to the efforts of the government to instill values, knowledge, and attitudes to strengthen patriotism and commitment to national development.

c) To provide advice to private educational centers in order that they may adapt fees to the quality of services offered and economic means of their customers.

d) To develop standards to control prices established by private educational centers (rent or sale of supplies, equipment, uniforms, etc.), so as to avoid disproportionate damage to family economies.

6. POLICY: Construction and equipping of educational facilities.

POLICY ACTIONS:

a) To develop modular-type designs which will permit their adaptation to different circumstances.

b) To draw up facility construction, furniture and equipment standards to be used by institutions which build and equip educational centers.

c) To guarantee ongoing, effective communications between the units carrying out physical jobs and units establishing content and qualitative educational elements.

d) To prepare rational investment plans in the sector, taking into account the need to utilize the overall installed capacity and to ensure that future installations provide facilities for the greatest number of users.

7. POLICY: Curriculum Development.

POLICY ACTIONS:

a) The specific sector organizations must design study plans and curricular content, taking into consideration national, regional, and local needs and characteristics. For this purpose, 60 per cent minimum basic contents is established for all primary education children of the country and 40 percent to carry out the adaptations referred to above. At the basic level (secondary education), a similar procedure shall be followed. In the Ciclo Diversificado, secondary-level careers will be established in each region, as demanded by the labor market.

b) To adapt school calendars and schedules to labor activities and to additional circumstances of the various regions of the country.

8. POLICY: Preparation and training of human resources for the sector.

POLICY ACTIONS:

a) To redesign study plans and adapt them to the type of service which should be rendered by teachers at the conclusion of their training, whether rural primary education teachers or an urban primary education teachers.

b) To establish updated training programs addressed to personnel in Teacher Training Schools (Normales), in order to effect a substantial positive change in the preparation of future teachers.

c) To adapt the production of primary and secondary teachers to the actual demands of the country. For this purpose, it will be necessary to reduce the number of normal schools by reorienting some of them in order that they may train intermediate-level human resources in technical areas.

d) To intensify vocational orientation programs, in order that only students with the appropriate qualifications will follow the teaching career.

e) To institutionalize a permanent in-service personnel training mechanism at all levels and modalities.

f) To adopt a system of incentives for educational sector personnel.

g) To establish a center for the development, adaptation, and transfer of educational technology so that it is available for teacher-training and in-service programs.

9. POLICY: To support the development of school sports.

POLICY ACTIONS:

a) To establish mechanisms of coordination between the Ministry of Education and Guatemala's Autonomous Sports Confederation in order that children and youth from public and private educational establishments may have access to the sports complexes and additional available facilities throughout the country.

b) To organize local committees with the participation of authorities, parents, and neighbors to oversee the appropriate maintenance and utilization of sports facilities, as well as to obtain the necessary funds to hire coaches and cover additional sports expenses.

10. POLICY: To support higher education.

POLICY ACTION:

a) To establish mechanisms which facilitate the coordination between the government and higher education institutions, in order to support human resources development programs which coincide with national development programs.

11. POLICY: Cultural development.

POLICY ACTION:

a) To establish cultural programs of a national scope, designed to strengthen cultural traditions and values and to promote creativity in all population strata.

12. POLICY: Administrative development.

POLICY ACTIONS:

a) To redefine the functions of the national educational system and redesign the administrative structure in order to fulfill such functions.

b) To establish modern systems for the administration of personnel and physical facilities.

c) To strengthen, modernize, and expedite educational information systems as a basis for the decision-making tasks in the sector.

d) To strengthen the project planning, programming, design, and implementation units.

e) To establish agreements with higher education institutions for in-service training of the sector's technical and administrative personnel.

13. POLICY: Inter-sectorial development.

POLICY ACTIONS:

a) To establish coordination mechanisms to allow for reciprocal support of all institutions carrying out educational and cultural as well as sports development programs.

b) To design and carry out educational, cultural and sports development programs, with the participation of various institutions.

14. POLICY: Optimal use of financial resources.

POLICY ACTIONS:

a) To establish mechanisms which allow for the rationalization and optimization of educational sector resources.

b) To work for a greater participation of the educational sector in the national budget, in order to extend services and introduce the qualitative improvements stated in this Plan.

3.3 Summary

During the past ten years, the policies of the Guatemalan educational system have been projected as follows.

* Extension of coverage of educational services horizontally and vertically, emphasizing the rural area and the marginal urban area.

* Consolidation of efforts towards bilingual education, as a substitution of a simple Castellanizacion.

* Promotion of the Alfabetizacion Program.

* Promotion of programs directed to the development and distribution of materials, equipment, furniture, and textbooks.

* Revision and adaptation of curricular guides for pre-primary and primary education, and, revision of study programs at the secondary level, particularly in technical and occupational areas.

* Reorganization of the Ministry of Education's organizational structure, including:

  a) Creation of the National Book Center for Didactic Textbooks and Materials (CENALTEX) "José de Pineda Ibarra," to replace the publishing company which bears the same name.

  b) Elimination of the National School Construction Committee (CONACE), and creation of the School Building Construction Unit (UCEE) attached to the Ministry of Communications, Transportation and Public Works.

  c) Reorganization of the General Directorate of Personnel.

  d) Creation of the Bilingual Education Program (PRONEBI).

  e) Creation of the Educational System Data Processing Center.

  f) Creation of the Educational Research and Planning Sector Unit (USIPE).

APPENDIX IV

ORGANIZATION, RESPONSIBILITIES, AND CHANNELS OF COMMUNICATION OF THE EDUCATION SECTOR AND SUBSECTORS GUATEMALA

APPENDIX IV

ORGANIZATION, RESPONSIBILITIES, AND CHANNELS OF COMMUNICATION OF THE EDUCATION SECTOR AND SUBSECTORS GUATEMALA[1/]

A. SCHOOL SUBSECTOR

The organization chart of the Ministry of Education of Guatemala is included in this section, on page IV-3.

1. ORGANIZATION

The School Subsector, directed by the Directorate-General of Formal Education, is composed of the following sections:

a) Directorate of Urban Pre-Primary and Primary Education
b) Directorate of Secondary Education
c) Directorate of Student Welfare and Special Education
d) Directorate of Physical Education and Health
e) Directorate of Rural Social Education Development
f) General Supervision of School Education
g) Center for the Production of Audio-Visual Aids

2. RESPONSIBILITIES

The general responsibilities of the Directorate-General of Formal Education are the following.

a) To plan, direct, coordinate, and evaluate the educational activities of the school subsector.

b) To provide education to four- to six-year-old Guatemalan children.

c) To provide primary education to seven- to twelve-year-old Guatemalan children, in the urban and rural areas.

1/ This review of the organization of the Ministry of Education of Guatemala was prepared by Prof. Rolando Mendez Mora, Minister of Education from January to August 1983.

d) To provide secondary education to youths who have graduated from primary school.

e) To coordinate the educational activities of pre-primary and primary school principals and teachers, in the urban and rural areas.

f) To train qualifed secondary-level personnel in technical, commercial, administrative, and other areas.

g) To provide medical, psychological, social, and odontological services, as well as snacks to students.

h) To grant scholarships to highly qualified, low-income students.

i) To supervise the execution of official plans and programs in educational establishments.

3. COMMUNICATIONS

a) Upward communications with the Vice-Minister and Minister.

b) Downward communications with Intermediate Directorates.

c) Horizontal communications with Directorates-General, Departmental Government Offices, and Municipalities.

4. SPECIFIC DESCRIPTION

The organization, responsibilities, and communication of the divisions which compose the school subsector are described below:

a) Directorate of Urban Pre-Primary and Primary Education

1. Organization

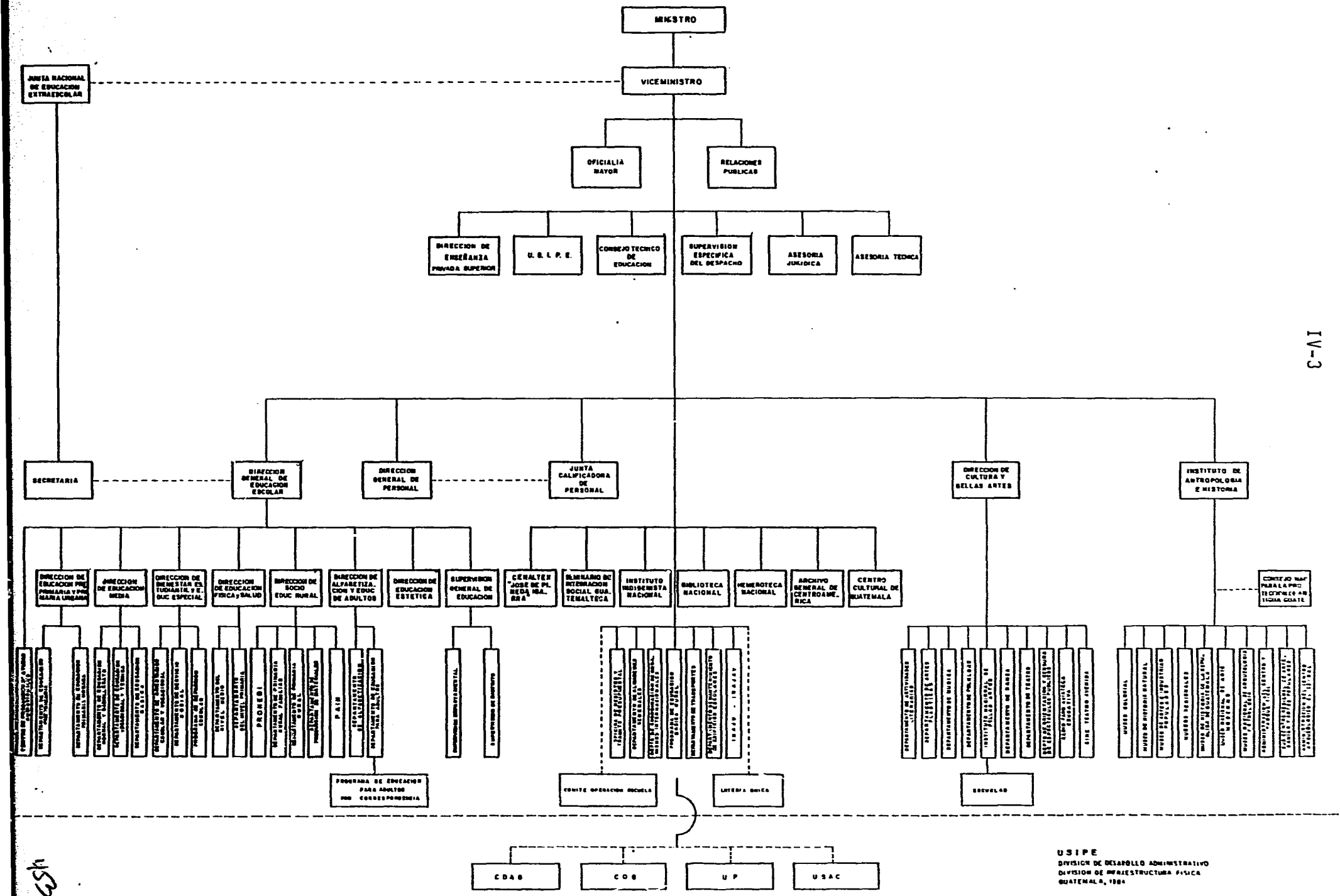
As part of the Directorate General of Formal Education, this Directorate is structured as follows:

* Director's Office
* Department of Pre-Primary Education
* Department of Urban Primary Education

2. Responsibilities

* To provide urban pre-primary and primary education to children four-to-six and seven-to-twelve years of age.

"ORGANIGRAMA DEL MINISTERIO DE EDUCACION"



USIPE
DIVISION DE DESARROLLO ADMINISTRATIVO
DIVISION DE INFRAESTRUCTURA FISICA
GUATEMALA, 1984

* To coordinate the educational activities of the pre-primary and primary urban, public and private-sector school principals and teachers.

* To evaluate the teaching activities in urban pre-primary and primary public and private sector schools.

* To authorize and revalidate the creation of urban private pre-primary and primary educational establishments.

* To authorize the validity of pre-primary and primary studies undergone in other countries.

3. Communications

* Upward communications with the Directorate General of Formal Education, Vice-Minister and Minister.

* Downward communications with principals, teachers, parents, community committees, and students.

* Horizontal communications with General Educational Supervision; Departmental Supervisions, and District Supervisions.

b. Directorate of Secondary Education

1. Organization

Hierarchically, this Directorate descends from the Directorate-General of Formal Education and is integrated as follows.

* Director's Office
* Department of Basic Education
* Department of Normal and High School Education
* Department of Vocational and Technical Education

2. Responsibilities

* To plan, direct, coordinate and evaluate secondary education in the country.

* To provide specialized education in the following careers:

Accounting Technician
Public Administration Technician
Marketing and Advertising Technician
Industrial Bachiller and Specialized Technician

Municipal Administration "Bachiller"
Police Techniques Technician
Teacher (in all of its specialized branches)
Office Clerk
Bilingual Secretary
Optional Courses
Cosmetology Bachiller

* To authorize and revalidate the creation of secondary education establishments in the country.

* To approve equivalencies and adaptation of courses within the secondary education specializations.

3. Communications

* Upward communications with the Directorate-General of Formal Education, the Vice-Minister, and the Minister.

* Downward communications with principals, teachers, parents, and students, and their associations.

* Horizontal communications with the General Supervision of Education; Departmental Supervisions; and District Supervisions.

c. Directorate of Student Welfare and Special Education

1. Organization

In hierarchical order, the Directorate falls under the Directorate-General of Formal Education and is structured as follows.

* Director's Office
* Department of School and Vocational Counseling
* Social Services Department
* Special Education Department
* School Lunch Department

2. Responsibilities

* To provide medical, psychological, social, odontological services and lunches to secondary education students.

* To provide scholarships to highly qualified, low income students.

3. Communications

* Upward communications with the Directorate General of Formal Education, the Vice-Minister, and the Minister.

* Downward communications with students, parents, and individuals in charge.

* Horizontal communications with teachers, principals, Departmental and District Supervisors, and food donation agencies.

d) Directorate of Physical Education and Health

1. Organization

This Directorate is a dependency of the Directorate-General of Formal Education and is structured as follows.

* Director's Office
* Secondary Education Department
* Primary Education Department
* Supervision

2. Responsibilities

* To plan, direct, coordinate, and evaluate physical education activities.

* To plan and direct recreational and sports activities at the national level in educational establishments.

* To supervise official physical education programs in public and private, primary and secondary education programs.

* To plan and organize national-level sports tournaments and competitions.

3. Communications

* Upward communications with the Directorate-General of Formal Education, the Vice-Minister, and the Minister.

* Downward communications with public and private, primary and secondary, education establishments.

* Horizontal communications with the General Supervision of Education, Departmental and District Supervision; national sports federations.

e) Directorate of Rural Social Education and Development

1. Organization

The Directorate is a dependency of the Directorate-General of Formal Education and is composed of the following departments.

* Director's Office
* Rural Primary Education Department (DERFAM)
* National Bilingual Education Program (PRONEBI)
* Integrated Action for Children Program (PAIN)
* Materials Production Department
* Education Development Clusters or Nucleos (NEPADE)[1]
* Family Education Development Clusters or Nucleos (NUFED)[1]

2. Responsibilities

* To provide primary education in the rural areas of the country.

* To provide primary education within the various ethnic groups of the country, in their own languages and in Spanish.

* To provide rural area schools with the materials needed for operations.

3. Communications

* Upward communications with the Directorate-General of Formal Education, the Vice-Minister, and the Minister.

* Downward communications with rural communities in the country, parents, technical-bilingual supervision, and education clusters or Nucleos.

* Horizontal communications with Departmental Supervisions and District Supervisions.

f) Audio-Visual Aids Production Center (CEPAV)

1. Organization

The center is a dependency of the Directorate-General of Formal Education and its composition includes:

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[1] Not shown in the Organization Chart.

* Director's Office
* Administration Section
* Production and Services Section
* Training Section

2. Responsibilities

* To design prototype materials

* To train supervisors and teachers in the development and utilization of materials.

* To lend film and slide projection equipment

3. Communications:

* Upward communications with the Directorate-General of Formal Education, the Vice-Minister, and the Minister.

* Downward communications with teachers and students.

* Horizontal communications with individuals in charge, sub-centers, and supervisors.

B. NON-FORMAL SUBSECTOR

1. ORGANIZATION

The Non-Formal subsector operates under the directorship of two institutions:

a) The Adult Alfabetizacion and Education Directorate
b) The National Non-Formal Education Board

Both institutions operate independently with little coordination between them. The Adult Alfabetizacion and Education Directorate hierarchically falls under the structure of the Directorate-General of Non-Formal Education of the Ministry of Education, which is functionally non-existent. The National Non-Formal Education Board is an inter-ministerial dependency in charge of coordinating the different government institutions which carry out and develop non-formal education activities.

2. RESPONSIBILITIES

The general responsibilities of the Non-Formal Subsector include the following.

a) To plan, organize, direct, and evaluate the alfabetizacion programs in the country.

b) To coordinate alfabetizacion efforts with related official and private institutions.

c) To facilitate the coordination between various public administration levels for the development of relevant non-formal education.

d) To design, produce, and provide methodological forms and materials for the coordination of non-formal education programs.

3. SPECIFIC DESCRIPTION

A specific description of the institutions which make up the non-formal subsector, in terms of organization, responsibilities, and communications, is given below.

a) Directorate of Adult Alfabetizacion and Education[1/]

1. Organization

The Directorate reports directly to the Minister, and is integrated, as follows:

* Director's Office
* Alfabetizacion Department
* Adult Education Department
* Adult Correspondence Course Program

2. Responsibilities

* To plan, organize, direct, coordinate, and evaluate alfabetizacion programs in the country.

* To provide adult education programs for social improvement using on-site teachers and correspondence courses systems.

1/ Shown as a part of the Directorate of Formal Education, but belonging to the non operational Directorate Gof Non-Formal Education.

3. Communications:

* Upward communications with the Vice-Minister and the Minister.

* Downward communications with Alfabetizacion Coordinators, communities, homes, and adult individuals.

* Horizontal communications with Departmental and District Supervisions, and local authorities.

b) National Non-Formal Education Board

1. Organization

The National Non-Formal Education Board is composed of the Vice-Minister of Education, acting as Chairman; the Manager of the Technical Training and Productivity Institute (INTECAP); the Director of Community Development; the Director-General of Agricultural Services (DIGESA); the Director-General of Non-Formal Education of the Ministry of Education (because there is no director of Non-Formal Education, he is replaced by the Director of Adult Alfabetizacion and Education); the Chief of the Army Education Department; the Director-General of Health Services; and a Representative of the General Secretariat of the National Economic Planning Council. In addition, there is an Executive Secretary for operations.

2. Responsibilities

* Record the programs carried out by government institutions to coordinate non-formal education efforts.

* Produce and distribute educational materials in coordination with the represented institutions.

* Provide non-formal education programs to rural communities.

3. Communications

* Upward communications with the National Non-Formal Education Board.

* Downward communications with regional and local coordinators.

* Horizontal communications with members of the various institutions.

C. CULTURAL SUB-SECTOR

1. ORGANIZATION

The Cultural Subsector operates under the directorship of the Directorate-General of Culture and Arts and is composed of the following departments.

a) General Director's Office
b) Department of Literary Activities
c) Department of Art
d) Department of Music
e) Department of Folklore
f) National Institute of Art
g) Department of Dance
h) Department of Theater
i) Department of Public Shows
j) Educational Radio Station (Radiofaro Aviateca)

2. RESPONSIBILITIES

The Directorate-General of Culture and Art has the following responsibilities.

a) Plan, direct, coordinate, and evaluate cultural activities.

b) Promote activities which enhance artistic creativity.

c) Promote the appreciation and admiration of children and youth for music, dance, theater, folklore, art, and literature.

d) Organize, direct, coordinate, and evaluate artistic activities.

e) Broadcast cultural and artistic radio programs.

3. COMMUNICATIONS

a) Upward communications with the Vice-Minister and the Minister.

b) Downward communications with children, youngsters, and artists in the country.

c) Horizontal communications with related national and foreign institutions.

D. ANTHROPOLOGY AND HISTORY DIVISION

1. ORGANIZATION

The Anthropology and History Division of the Education Sector operates under the direction of the National Institute of Anthropology and History, and includes the following institutions.

a) Colonial Museum
b) Natural History Museum
c) Art and Popular Industries Museum
d) Regional Museums
e) Museum of History
f) National Museum of Modern Art
g) National Museum of Archaeology and Ethnology
h) Regional Subcenter of Handicrafts and Popular Art
i) National Park of Tikal
j) National Committee for the Protection of Antigua Guatemala.

2. RESPONSIBILITIES

The Institute of Anthropology and History has the following responsibilities.

a) Investigate and protect the country's archaeological and ethnological heritage.

b) Protect the country's artistic and cultural heritage.

c) Promote and safeguard popular art and industry in the country.

d) Protect Colonial-period estates and promote pre-Columbian cultural heritage.

e) Protect and promote the country's historical heritage.

f) Collect, classify, and exhibit representative specimens of national flora and fauna, minerals and fossils.

g) Investigate and promote popular handicrafts and industries.

3. COMMUNICATIONS

a) Upward communications with the Vice-Minister and the Minister.

b) Downward communications with nationals, foreigners, and students at all educational levels.

c) Horizontal communications with related national and foreign institutions.

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E. TECHNICAL, ADMINISTRATIVE AND SERVICE AREA

1. ORGANIZATION

The Technical, Administrative and Service Area of the Education Sector operates through a complex of organizations which have the following characteristics.

a) Organizations located at different levels of the hierarchy.

b) Organizations which do not belong to one single structural area.

c) Organizations which have various specialized operations.

d) Organizations which report to the Minister's Office.

e) Diverse organizations with little coordination between them.

These organizations or bodies are:

* Chief Clerk's Office
* Public Relations
* Private Secondary Education Council
* Sectoral Unit for Educational Investigation and Planning (USIPE)
* Technical Education Council
* Specific Supervision
* Legal Advice
* Technical Advice
* Personnel Classification Board
* National Textbook and Didactic Materials Center "José de Pineda Ibarra"(CENALTEX)
* Guatemalan Social Integration Seminar
* National Indigenous Institute
* National Library
* National Periodicals and Newspaper Library
* General Central American Archive
* Guatemalan Culture Center
* Budget Registration and Negotiations Office
* General Warehouse Department
* International Organizations Coordination Department
* Rural Basic Education Program (EBR)
* Transportation Department
* School Building Maintenance Department
* National Youth Institute (INAJU and INAJAV)
* School Operations Committee
* Loter§a Chica
* Cooperation Commission with UNESCO
* School Furniture Committee

2. RESPONSIBILITIES

The organizations included under the technical, administrative and services area of the educational sector, have the following responsibilities:

a) Develop, follow up, and evaluate the necessary steps and standards for the fulfillment of efforts of the Ministry of Education in the execution of the General Work Plans, as well as to develop and implement educational policies and strategies at various levels, modalities, and specializations of national education.

b) Organize and supervise administrative procedures and ease the coordination between dependencies of the Ministry of Education and of the Minister's Office.

c) Provide support services for the adequate operation of the various dependencies which make up the National Education System.

F. GENERAL ANALYSIS

In the organization of the Ministry of Education, there are certain discrepancies in budgetary and operational structures.

It can be easily noted that the Ministry's organization is pyramidal, with a rather large concentration of dependencies assigned directly to the Minister's and Vice-Minister's offices, implying an overburdening or congestion at the top.

Although the Educational Sector's division into three subsectors--Formal, Non-Formal, and Cultural--is legal, one can observe inoperative lines of communication.

In terms of organization, the Non-Formal Education Coordination Secretariat, the General-Directorate of Formal Education, the General Directorate of Personnel, the Directorate of Culture and Art, and the Institute of Anthropology and History are all qualified as General-Directorates.

These dependencies carry out the policies and efforts of the Ministry of Education, but it must be reiterated that the channels of communication and coordination are not very good. This type of organization also leads one to conclude that there is a problem in the communication with those at the operational levels--supervisors, principals and teachers.

G. RECOMMENDATIONS

The following recommendations aimed at improving the organizational structure of the Ministry of Education are divided into short and medium-range targets.

o Short-Range

* Carry out a study of the responsibilities of each department, to ascertain the existence or non-existence of duplication of effort. If duplication exists, a unification and/or re-orientation should be made.

* Create a procedure capable of guiding, supervising, and evaluating the different departments reporting directly to the Vice-Minister's and Minister's Offices to decrease the congestion of the workload.

o Medium-Range

* Following the principle of delegation and decentralized decision-making and considering overall reorganization for greater efficiency, it is necessary to make an in-depth analysis of the structure of the Ministry of Education.

APPENDIX V

ADDITIONAL MATERIALS RELATING TO MAINTENANCE OF RURAL PRIMARY SCHOOLS

APPENDIX V

ADDITIONAL MATERIALS RELATING TO MAINTENANCE OF RURAL PRIMARY SCHOOLS

5.1 General Questionnaire on School Maintenance

This questionnaire was developed and administered in selected schools in the western and eastern regions of Guatemala, as part of the preparation of Chapter 4 of the Assessment, MAINTENANCE OF RURAL PRIMARY SCHOOLS. The tabulated results are contained in Section 5.2 below.

A. Identification and Location

1. Name of School:
2. Executing Unit of Program:
3. Village, Town, City
4. Municipality:
5. Department:

B. General Data

1. Type of School:
2. Shift:
3. Morning Shift Registration:
4. Afternoon Shift Registration
5. Grades Covered:
6. Number of Classrooms:
7. Other Buildings:

All purpose room:	____	Warehouse:	____	Kitchen:	_____
Living:	_____	Library:	_____	Shops:	_____
Administration:	_____	Principal:	____	Other:	_____
Sanitary System:	_____	Type:	_____	No. of Units:	_____

C. Building Condition

1. Structures, walls, columns, partitions, roof cover, etc.:

Columns: _____ Beams: _____ Roof Struct.: _____
Cover: _____ Walls: _____ Partictions: _____

2. Finishings and Floors:

Floor Sub-base: _____ Floor: _____
Wall Ext. Finishing: _____ Wall Int. Finishing: _____
Wall Ext. Painting: _____ Wall Int. Painting: _____

3. Doors and Windows:

Door Frame: _____ Hardware: _____ Door Paint: _____
Window Frame: _____ Hardware: _____ Window Paint: _____
Glass: _____ Plastic: _____ Protection: _____

4. Water Servie:

Pipes: _____ Valves: _____ Pressure: _____
Condition: _____ Type of Repair: _____

5. Electricity:

Internal Inst.: _____ External Inst.: _____
Connection to Main: _____ Condition: _____
Type of Repair: _____

6. Sanitary Service:

Flush Tanks: _____ Latrines: _____ Other: _____
Condition: _____ Type of Repair: _____

7. Recreation:

Patios: _____ Sport Areas: _____
Green Areas: _____ Fences: _____
Condition: _____ Type of Repair: _____

D. Maintenance Program:

1. Is there a program of cleaning and/or maintenance? _____

2. Specify how is done: _____

Teachers and children: _____
Janitor: _____
Watchman: _____
Other: _____
Condition: _____
Results: _____

3. Who financed it: _____

Snack shop: _____ MOE: _____ Other: _____

4. Cleanning Materials:

Brooms: _____ Mops: _____ Brushes: _____
Pails: _____ Glass and Hand Wiper: _____
San. Rubber Vaccum: ___ Other: _____

5. Who would you approach in a maintenance emergency?

Municipality: _____ Village Committee: _____
Parents: _____ MOE: _____
Public Works: _____ Military: _____
Activities: _____ DDC: _____
Other: _____

6. Which, so far, has been the support of MOE?

None: _____ Fair: _____ Good: _____

5.2 Mobile Sanitation System

The Ministry of Public Works should be provided with two mobile latrine maintenance units for dry wells, septic wells, or absorption wells, consisting of water cisterns and containers mounted on trucks provided with suction and impulsion pumps (hose, control valves, etc.), for the purpose of evacuating sewer solids. These should be transported to disposal areas to be dried, incinerated, or buried.

Since the structures of the sanitary latrine system have a saturation life which varies depending upon frequency of use, the maintenance cycle will vary from three to five years. If maintenance carried out by a specialized group at each school takes up to four hours and the cleaning year has 130 work days, it can be said that approximately 520 schools could be cleaned per year, or an average of 2,080 latrines in four years.

There are 2,000 schools in Guatemala's rural primary school system. By comparison, the estimated number of units and maintenance-hours seems appropriate. The maintenance cycle could be organized by Departments, according to the time spent in each, and the number of existing schools. Thus, the operation costs for the system would be minimal.

System Operation:

The system consists of injecting water under pressure into the walls and bottom of the well, to be subsequently evacuated by suction into the tank. The sewer sludge is then transported to drying areas in empty municipal lots, where they are disposed of a variety of manners. The most common of these are:

* Used to fertilize shrub plantings.
* Buried.
* Incinerated.
* Used to produce gas.
* Sold.

The well is then sprayed with chemicals.

5.3 Information Gathered in Site Visits

The tables on the following pages present information on rural schools, collected during site visits conducted as part of the preparation of Chapter 4 of the Assessment. Table 5.1 contains information of a general nature about each school, while Table 5.2 presents data of a much more detailed sort. Each school is classified according to its current condition as "Good", "Fair," or "Poor."

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Table V.1

GENERAL INFORMATION COLLECTED IN SITE VISITS
1985

	School	Municipality	Department	Enroll-ment	Executing Agency	Year of Construction	Physical Condition	Geographical Area
1	Urbana	Sto. Domin-go Xenacoj	Sacatepéquez	526 CONACE	AID (Butler), Iglesia Baut., 1981	1977 1979 G	F G	Western Guatemala
2	Rural Aldea Sitio de las Flores	Sumpango	Sacatepéquez	76	CONACE, CRN	1981 1984	G	Western Guatemala
3	Urbana José Joaquin Pardo	Chimalten.	Chimaltenango	575	CONACE	1966	F	Western Guatemala
4	Regional	Sta. Cruz Balanya	Chimaltenango	451	PEMEP, O.P.	1974 1981	G	Western Guatemala
5	Rural Aldea El Caiman	Sta. Cruz Balanya	Chimaltenango		AID (Butler), CONACE	1977 1981	F	Western Guatemala
6	Urbana Mario Méndez Monten.	Sta. Apo-lonia	Chimaltenango	325	SER, Canada	1967 1977	G	Western Guatemala
7	Rural Aldea Agua Escondida	Chichicast.	El Quiché	200	Comunidad, Comunidad	1976 1965	G I	Western Guatemala
8	Rural Canton Los Encuentros	Solola	Solola	161	D.C., O.P., Comun./AID	1982 1984 1984	G G G	Western Guatemala

Table V.1 (cont'd)

GENERAL INFORMATION COLLECTED IN SITE VISITS
1985

	School	Municipality	Department	Enroll-ment	Executing Agency	Year of Construction	Physical Condition	Geographical Area
9	Rural Canton Xajaxac	Solola	Solola	94	AID (Butler), CEEP	1977 1982	F G	Western Guatemala
10	Rural Aldea Xecul	San Cris-tobal Tot.	Totonicapan	324	O.P., Vision Mundial	1951 1977	F F	Western Guatemala
11	Rural Canton Juchaney	Totonica-pan	Totonicapan	455	Comunidad, CONACE	1917 1981	I G	Western Guatemala
12	Regional Can-ton Chotacaj	Totonica-pan	Totonicapan	951	O.P., PEMEP	1951 1977	I G	Western Guatemala
13	Tipo Federa-cion Atanasio Tzul	Totonica-pan	Totonicapan	362	O.P.	1951	G	Western Guatemala
14	Regional Aldea Tacajalbe	San Fran-cisco El Alto	Totonicapan	393	CONACE, CEEP	1967 1981	G G	Western Guatemala
15	Regional	San Juan Ostuncalco	Quetzalte-nango	406	PEMEP, O.P.	1975 1985	G G	Western Guatemala
16	Rural Aldea Los Duraznales	Concepcion Chiquiri-chapa	Quetzalten-nango	169	O.P.	1984	G	Western Guatemala
17	Urbana Elisa	San Matero	Quetzalte-	374	CONACE,	1973	F	Western

Table V.1 (cont'd)

GENERAL INFORMATION COLLECTED IN SITE VISITS
1985

	School	Municipality	Department	Enroll-ment	Executing Agency	Year of Construction	Physical Condition	Geographical Area
18	Regional	Cantel	Quetzalten.	607	CEEP	1980	G	Western Guatemala
19	Urbana tian	San Sebas-	Retalhuleu	794 O.P.	CONACE, 1977	1973 G	F	Western Guatemala
20	Urbana Colonia La Flor del Café	Mazatenan-go	Suchitepéquez	535	CONACE, O.P.	1971 1984	G G	Western Guatemala
21	Urbana Justo Rufino Barrios	Mazatenan-go	Suchitepéquez	422	CONACE	1975	G	Western Guatemala
22	Rural Aldea Concepcion Ixtacaya	San Anto-nio Suchi-tepéquez	Suchitepéquez	135	CONACE	1968	G	Western Guatemala
23	Rural Aldea Pavo Gordo	San Anto-nio Suchi-tepéquez	Suchitepéquez	89	O.P.	1984	G	Western Guatemala
24	Rural Aldea San Antonio Las Flores	Rio Bravo	Suchitepéquez	144	D.C.	1981	G	Western Guatemala
25	Rural Aldea Florida Acei-tuno	Escuintla	Escuintla	181	Comunidad		F	Western Guatemala

Table V.1 (cont'd)

GENERAL INFORMATION COLLECTED IN SITE VISITS
1985

	School	Municipality	Department	Enroll-ment	Executing Agency	Year of Construction	Physical Condition	Geographical Area
26	Tipo Federacion	Escuintla	Escuintla	1214	O.P.	1951	F	Western Guatemala
27	Urbana 5 Nov. 1811	Fraijanes	Guatemala	509	O.P., Comunidad	1961 1962	F	Western Guatemala
28	Rural No. 2 Aldea Fray Bartolomé de las Casas	Barberena	Santa Rosa	396	CEEP	1977	G	Eastern Guatemala
29	Esc. Of. Urana Republica de Centroamérica	Barberena	Santa Rosa	600		1951 Aprox.	G	Eastern Guatemala
30	Esc. Nac. Rural Mixta Aldea Montecillos	Cuilapa	Santa Rosa	150	CONACE, CARE	1968	F	Eastern Guatemala
31	Of. Rural Mixta Lic. Guillermo Fernandez Llarena	Los Esclavos	Santa Rosa	310	CONACE, Desarrollo Comunidad, Municipal., CEEP	1978	F	Eastern Guatemala
32	Urbana Mixta Alberto Masferrer	San José Acatempa	Jutiapa	450	CONACE	1968	G	Eastern Guatemala

Table V.1 (cont'd)

GENERAL INFORMATION COLLECTED IN SITE VISITS
1985

	School	Municipality	Department	Enroll-ment	Executing Agency	Year of Construction	Physical Condition	Geographical Area
33	Nac. Regional Dolores Bedoya	Quesada	Jutiapa	485	CONACE, O.P., Municipal., Comunidad	1966	G	Eastern Guatemala
34	Rural Mixta San Diego, Rio de Paz	Quesada	Jutiapa	165	PEMEP	1973	G	Eastern Guatemala
35	Rural Mixta Aldea Santa Cruz	Asuncion Mita	Jutiapa	110	O.P.	1984	G	Eastern Guatemala
36	Rural Mixta Hermenegildo Recinos Aldea El Puente	Santa Catarina Mita	Jutiapa	54	Club de Leones	1977	I	Eastern Guatemala
37	Nac. Urbana	Agua Blanca	Jutiapa	548	CONACE, O.P., Municipal., Comunidad	1964	F	Eastern Guatemala
38	Nac. Regional El Amatillo	Ipala	Chiquimula	160	CEEP	1977	G	Eastern Guatemala
39	Urb. Mixta Maria Moscoso Espino	San Jose La Arada	Chiquimula	265	CONACE	1972	G	Eastern Guatemala

Table V.1 (cont'd)

GENERAL INFORMATION COLLECTED IN SITE VISITS
1985

	School	Municipality	Department	Enroll-ment	Executing Agency	Year of Construction	Physical Condition	Geographical Area
40	Of. Regional Raul Mejia Gonzalez	Aldea Sabana Grande Chiquimula	Chiquimula	275	PEMEP	1978	G	Eastern Guatemala
41	Nac. Rural Mixta Aldea La Fragua	Zacapa	Zacapa	230	AID	1976	F	Eastern Guatemala
42	Of. Urbana	Teculutan	Zacapa	350	CONACE	1961	G	Eastern Guatemala
43	Nac. Rural Aldea La Palmilla	Uzumatlan	Zacapa	150		1977	G	Eastern Guatemala
44	Urb. Mixta Pablo Jiménez	San Agustin Acasaguastlan	El Progreso	875	CONACE, O.P., C.N.R.	1968	G	Eastern Guatemala
45	Rural Mixta Aldea Casas Viejas	Guastatoya	El Progreso		CONACE, Foster Parents	1982	G	Eastern Guatemala
46	Nac. Urbana para Ninas	Sanarate	El Progreso	680	CONACE, O.P.	1970	G	Eastern Guatemala
47	Rural Mixta Isidoro Zarco	Palencia	Guatemala	175	Club de Leones	1979	F	Eastern

APPENDIX VI

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