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THE UNIVERSIDAD DEL VALLE DE GUATEMALA AS A
CONTRIBUTOR TO NATIONAL DEVELOPMENT

presented by

Keith David Miller

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Administration &
Higher Education

A handwritten signature in dark ink, appearing to read "D. Miller", written over a horizontal line.

Major professor

Date 2/20/80

THE UNIVERSIDAD DEL VALLE DE GUATEMALA AS A
CONTRIBUTOR TO NATIONAL DEVELOPMENT

By

Keith David Miller

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

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ABSTRACT

THE UNIVERSIDAD DEL VALLE DE GUATEMALA AS A
CONTRIBUTOR TO NATIONAL DEVELOPMENT

By

Keith David Miller

In this study the writer describes the Universidad del Valle de Guatemala and then draws some conclusions concerning the appropriateness of its organization and programs for contributing to the development of Guatemala. To guide the study, the following research questions were posed:

1. What characteristics have been identified by development experts as appropriate for development-oriented universities?
2. What are the physical, economic, social, and educational conditions of the country in which the Universidad del Valle de Guatemala operates?
3. What are the perceptions of Guatemala's educational leaders with regard to the Nation's development needs and the role local universities can play in responding to those needs?
4. How did the Universidad del Valle de Guatemala originate and develop, how is it organized, and what are its functions?

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5. What are the perceptions of the students, professors, administrators and trustees of the Universidad del Valle with regard to its purposes, organization, facilities, programs, and contribution to national development?
6. To what extent are the characteristics of the Universidad del Valle de Guatemala appropriate for contributing to the development of Guatemala?

The study provides a model for the evaluation of a university vis-a-vis its role as a contributor to national development. In light of the similarity of problems and common concerns of the developing countries, the writer has drawn on the thinking and experiences of authorities in the development process from around the world to furnish a general evaluative framework. Allowances are made in the evaluative model for the peculiarities of the country in which a university operates. Thus, the writer includes in the study, in addition to a review of the world literature on development, a description of Guatemala and the thinking of Guatemalan educational leaders concerning Guatemala's needs and what local universities can do to meet them. By matching descriptions of the Universidad del Valle de Guatemala and the setting in which it operates with the thinking of authorities (world-wide and local) on the appropriate characteristics of development-oriented universities, the writer is able to draw conclusions concerning the appropriateness of the University's organization and programs for contributing to the development of Guatemala.

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When one compares the organization and programs of the Universidad del Valle de Guatemala with the criteria established from the review of the literature and the thinking of authorities in Guatemalan education, it is evident that many of the characteristics of the University are appropriate for contributing to the development of Guatemala. The University is a centralized institution with capable leadership devoted to the training of leaders in natural science, social science, education, and research. It engages in research and service activities aimed at improving the quality of life in Guatemala. It has a general studies program aimed at providing a liberal, broad-based education; it carefully selects its students on the basis of merit and provides financial assistance to many qualified students who cannot afford to pay for their university studies. It remains autonomous and nonpolitical, but does cooperate with the Guatemalan Government on a variety of development-related projects. It has become increasingly successful in attracting large sums of money from major donors to support its research, service, and development activities. It cooperates with many other institutions. Its programs, instruction, and facilities are rated high by students and professors.

The University is weak in communication between staff and administration, and between the institution and the community. The curriculum does not provide for much instruction in interdisciplinary approaches to problem solving, nor does it treat national development. Its planning and evaluation functions have not received the attention they merit. There has been little effort to improve the teaching capabilities of the staff. In the teacher certification program,

Keith David Miller

there is little emphasis on general studies and insufficient attention to preparing teachers to work in the difficult conditions faced in the nation's schools. The amount of educational research is insufficient. Research conducted at the University is not adequately disseminated. Students are not involved in service activities. Teaching, service, and research activities are not integrated.

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Personnel at The American School of Guatemala were immensely cooperative. Many helped directly in such ways as reviewing drafts, administering questionnaires, proofreading, referencing, and typing. Others helped indirectly by taking on some of my work to permit me more time to write.

The task of writing this study was made easier thanks to the patience and encouragement of my wife, Carmela, and our children, Alexander and Krutzchencka.

This dissertation is dedicated to my parents, Ralph and Jean Miller, who not only gave their children a loving and stable home, but also provided a model of propriety in personal conduct and excellence in physical and intellectual pursuits.

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Chapter 1

INTRODUCTION

STATEMENT OF THE PROBLEM

Since the end of World War II, considerable attention has been focused on poor nations around the world as they attempt to advance toward prosperity. The success of the Marshall Plan gave hope that national development could be achieved quickly with a moderate amount of financial and technological aid from the wealthy countries. However, this early optimism diminished in the ensuing years as development efforts in Asia, Africa, and Latin America met with frequent failure.

The frustrating experiences of the developing nations in the last three decades have led authorities to realize that there are no simple formulas or easy solutions for development. Development is now seen as an intricate process similar to that of weaving a fabric: many strands must be interwoven simultaneously.

Although there is no consensus among authorities as to the exact materials and pattern of the fabric, there is nearly universal agreement that education is one of the critical elements of development. Rusk believes that the European nations responded well to the Marshall Plan because they had a highly educated population capable

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of making effective use of the aid. The third world countries, in which development efforts have been less successful, do not have this educational base. Thus, Rusk argues, "Education is not a luxury which can be afforded after development has occurred; it is an integral part, an inescapable and essential part, of the development process itself."¹

In their study on manpower and development, Harbison and Myers make the following comment on the importance of developing human resources:

In the final analysis, the wealth of a country is based upon its power to develop and to effectively utilize the innate capacity of its people. . . . It takes skilled human agents to discover and exploit natural resources, to mobilize capital, to develop technology, to produce goods, and to carry on trade. Indeed, if a country is unable to develop its human resources, it cannot build anything else.²

Burns states:

Investment in education is the real limitation to further economic growth. . . . If there is any truism in developmental operations, it is the fact that the formal institution of education--the school--can and must be employed as a deliberate instrument of national development.³

Development authorities believe that universities can and should participate in the development process. The contribution of the landgrant colleges to development in the United States of America is frequently cited as proof of this point.⁴ McConnell calls on universities everywhere to ". . . take an active and imaginative interest in the whole program of modernization. . . ."⁵ In a recent report of the Latin American Scholarship Program of American Universities (LASPAU) it is stated that "the university is one of the few institutions in Latin America offering the skills and resources

essential for basic development."⁶ Others such as Butts,⁷ Vaizey,⁸ Thompson,⁹ Todaro,¹⁰ Lewis,¹¹ and the United Nations' Economic Commission for Latin America¹² argue for university involvement in development activities ranging from teacher education to research, to the training of leaders in science and technology, to community service.

Traditionally, universities in poor countries have had little involvement in their country's development. This is especially true of Latin American universities, most of which were built on the Napoleonic model with emphasis on the humanities, fine arts, medicine, and law. Accordingly, Latin American universities have received considerable criticism for their weak role in supporting development goals in their respective nations.¹³

Recently some changes have occurred in the university traditions of Latin America. Several institutions of higher education have become involved in identifying and contributing to the solution of problems confronting their nations.¹⁴ This new trend in Latin America merits the close attention of those interested in the relationship between higher education and national development. However, because of the relatively small number of universities with programs devoted to national development, and the short time they have been functioning, little research has been conducted which pertains to these universities. Accordingly, detailed studies of purposes, programs, and roles of these universities are needed.

One such university, the Universidad del Valle de Guatemala, was established in 1966 to "produce persons who are able and willing

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to assume responsibility in promoting the economic, political, educational, and cultural development of Central America."¹⁵ Its objectives are to

1. promote understanding of regional problems,
2. develop education in Guatemala and the Central American region,
3. conduct long-range research and train research workers,
4. further the aims of general education, and
5. educate teachers and educational specialists.¹⁶

The writer chose to study the Universidad del Valle de Guatemala for three reasons: first, it is a university in a poor country conceived and established to play a role in development; second, there had been no systematic study of this institution to date; and third, the writer lives in Guatemala and has access to the Universidad del Valle de Guatemala as well as to educational leaders in the country.

STATEMENT OF PURPOSE

The purpose of this study is to describe the Universidad del Valle de Guatemala and then draw some conclusions concerning the appropriateness of its organization and functions for meeting Guatemala's development needs. It is hoped that the study will not only contribute to the scant body of knowledge concerning the role of higher education as a modernizing agent, but also be useful to scholars, educational leaders, and others who are interested in bringing the resources of higher education to bear on the complex process of national development.

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PROCEDURE

This study is descriptive, employing library research and survey techniques. To guide the study the following research questions were posed:

1. What characteristics have been identified by development experts as appropriate for development-oriented universities?
2. What are the physical, economic, social, and educational conditions of the country in which the Universidad del Valle de Guatemala operates?
3. What are the perceptions of Guatemala's educational leaders with regard to the nation's development needs and the role local universities can play in responding to those needs?
4. How did the Universidad del Valle de Guatemala originate and develop, how is it organized, and what are its functions?
5. What are the perceptions of the students, professors, administrators, and trustees of the Universidad del Valle de Guatemala with regard to its purposes, organization, facilities, programs, and contribution to national development?
6. To what extent are the characteristics of the Universidad del Valle de Guatemala appropriate for meeting Guatemala's development needs?

The review of the literature produced information on characteristics of universities appropriate for contributing to national

development and a description of the physical, economic, social, and educational conditions in Guatemala.

The survey research produced information on national development needs for Guatemala, the role of universities in Guatemala as modernizers, and a description of the Universidad del Valle de Guatemala. Survey instruments were administered to four key groups: (1) selected Guatemalan educational leaders, (2) trustees and administrators of the Universidad del Valle de Guatemala, (3) professors of the Universidad del Valle de Guatemala, and (4) students of the Universidad del Valle de Guatemala.

It is hoped that this study will provide a model for the evaluation of a university vis-a-vis its role as a contributor to national development. In light of the similarity of problems and common concerns of the developing countries, the thinking and experiences of authorities in the development process from around the world furnish an evaluative framework. It is recognized, however, that allowances must be made in the evaluative model for peculiarities of the country in which the university operates. As Benjamin suggests, the kind of higher education suitable to a given country "is closely related to the course and level of the country's development."¹⁷ Thus, the writer has included in this study, in addition to a review of the world literature on development, a description of Guatemala and the thinking of Guatemalan educational leaders concerning Guatemala's needs and what local universities can do to meet them. By matching the descriptions of the Universidad del Valle de Guatemala and the setting in which it operates with the thinking of

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experts (world-wide and local) on the appropriate characteristics of development-oriented universities; it will be possible to draw conclusions concerning the appropriateness of the University's organization and functions for contributing to the development of Guatemala.

DEFINITION OF TERMS

Below are definitions of certain terms used in the study:

Bachillerato.--A five-year secondary level, college preparatory course comprising the equivalent of high school grades eight through twelve but requiring more courses per year.

Development.--

The process by which a nation maximizes its physical power and productive capacity, making the most of available natural resources and thereby increasing the level of living . . . (and) freeing the potential in people . . . to share in the determination of the goals of their society and to participate creatively and effectively in the realization of these goals.¹⁸

Empirico.--A teacher with little formal education and no teacher training whose only qualification to teach is experience.

Illiterate.--A person who cannot with understanding read or write a short, simple paragraph on his everyday life.

Illiteracy rate.--The incidence or percentage of persons who are illiterate.

Indian.--A native Guatemalan who lives within the native non-Spanish speaking Indian culture.

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Ladino.--Any Guatemalan who lives within the Spanish culture, even though he may be an Indian by ancestry.

Licenciatura.--A professional degree requiring a thesis and five to six years of undergraduate studies, conferred in such fields as law, education and engineering. As a degree bestowed for undergraduate work it is often equated with the Bachelor's degree, but because of the required thesis and up to six years of study, it is sometimes equated with the Master's degree.

Normal School.--A secondary school institution for the preparation of elementary teachers. Graduation from the normal school requires one year more than the bachillerato program.

Underdevelopment.--A condition of relative poverty determined by comparison with other nations. The following is a list of the usual indicators of underdevelopment:

- (a) high birth and death rates,
- (b) poor sanitation and health practices (great lack of health services),
- (c) poor housing,
- (d) high percentage of population in agriculture,
- (e) low per capita income (and high percentage amount of this income for food),
- (f) low food intake,
- (g) High illiteracy and very low enrollment in schools (particularly secondary and higher schools),
- (h) weak and uneven feelings of national cohesion,
- (i) tradition-directed behavior and an ascribed system of stratification,
- (j) low status for women,
- (k) poor technology (communication and transport systems limited),
- (l) high prevalence of child labor,
- (m) export of raw materials in any foreign trade arrangements,
- (n) low savings and low net investment,
- (o) poor yield on the land and much soil depletion,
- (p) military or feudal domination of state machinery,

- (q) wealth in hands of landlords (a very tiny class as a proportion of the population) and the absence of a middle class,
- (r) poor credit facilities and high interest rates,
- (s) prevalence of commonetized production,
- (t) much of the productive land in small holdings (often tenant-held),
- (u) wealth concentrated in one or two large cities (or exported to "safe" developed countries),
- (v) social loyalties and concern mainly family-centered or local in focus.¹⁹

Wastage.--Attrition or dropout of students in formal schooling.

LIMITATIONS

The following limitations apply to the design of the study:

1. Statistics on education in Guatemala are not plentiful, making the acquisition of some pertinent information difficult or impossible.
2. There is a paucity of research on education in Guatemala.
3. The Universidad del Valle de Guatemala's short life and small size limit the amount of work accomplished to date and make its impact on development difficult to assess.

DELIMITATIONS

Even though the interests which prompted the writer to conduct the research cover a broad range of university development tasks in underdeveloped countries in general, the writer delimited this study to one university in one less-developed country. The focus of this

study was purposely narrowed in order to permit an in-depth examination of one institution so that conclusions can be drawn about its role in development.

OVERVIEW OF SUBSEQUENT CHAPTERS

In Chapter 1, the writer describes the problem, purpose, procedure, and limitations of the study; defines terms; and presents an overview of subsequent chapters.

In Chapter 2, the writer reviews the literature concerning the role of higher education in the development of nations in an effort to formulate general principles concerning university characteristics appropriate for development.

In Chapter 3, the writer describes physical, social, economic, and educational conditions in Guatemala in order to show the setting in which the Universidad del Valle de Guatemala operates.

In Chapter 4, the writer describes the origin, organization, development, and programs of the Universidad del Valle de Guatemala. The University in some ways is an outgrowth of the American School of Guatemala, therefore, some attention is given to the American School's history and laboratory program.

In Chapter 5, the writer describes the survey methodology used and presents the results of the interviews and questionnaires.

In Chapter 6, the writer presents conclusions concerning the appropriateness of the University's organization and programs for meeting its aims as a contributor to national development, offers recommendations, and lists implications for further study.

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CHAPTER 1--NOTES

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Chapter 2

UNIVERSITIES AS CONTRIBUTORS TO NATIONAL DEVELOPMENT

INTRODUCTION

This chapter contains a review of the literature on the role of higher education in the development of nations. The authorities cited represent two groups of participants in higher education from various parts of the world: (1) university administrators and leaders in third world countries who are directly involved with development planning and implementation, and (2) observers and consultants from Western countries who are recognized experts on development. These authorities consistently agree on the importance of the universities as contributors to national development.

The word "contribute" is an important concept with regard to the role of universities in national development. Velásquez, a leading force in university reform in Colombia, says,

"To contribute" indicates that universities cannot be expected to assume direct responsibility for all programs needed to promote community development. Rather, universities should participate as "agents or instruments for change" in furthering development.¹

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ORGANIZATION

For a university to be effective, says Stinchcombe, it must deliberately create "an organizational structure, a hierarchical network of roles, ordered in such a way as to systematize human behavior toward achieving a goal."² On the following pages, the writer reviews the literature related to appropriate organizational structure for universities that would contribute to national development.

Aims

. . . any university, like any social institution, is governed by an idea, in the same sense given to the word by Hauriou. The idea is never fully realized, but if it is not there as a guide, all that is left is routine or improvisation. The most serious problem facing the Latin American universities has been the inability of their leaders, and in general all intellectuals, to create an idea of the university which is in accordance with the needs of the time.³

Habte calls for a "profound, pervasive, new philosophy that will characterize the underlying values and purposes of the university as a vehicle for national progress."⁴ Nyerere, President of Tanzania and Chancellor of the University of East Africa, articulates the idea of a university saying, ". . . The role of a university in a developing nation is to contribute; to give ideas, manpower, and service for the furtherance of human equality, human dignity, and human development."⁵

Recently some Latin American universities have adopted a philosophy of contribution to development. King found that several of the provincial universities of Mexico have aims which go beyond "the transmission of culture and the training of professionals . . .

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to special efforts in regular and extension training and research directed at regional development."⁶ Velásquez states, "The fundamental long-range, or 'terminal,' goal of universities should be to contribute toward the well-being of the people-community development."⁷

It is evident, then, that some university leaders in the developing nations perceive the role of their institutions as one of contribution to improvement in the quality of life for all.

Leadership

The quality of leadership is critical in determining the success of a university in carrying out effective programs consistent with its aims. Research indicates that talented, dedicated individuals are the major source of educational innovation:

A program is generally started by one individual who promotes it and dedicates all his time and abilities to it. The program's success depends fundamentally on the competence, motivation, and dedication of this person. It is he who creates an atmosphere of enthusiasm and builds a group of able people from whom his successors can emerge. All the cases studied have been initiated by a devoted leader.⁸

The most common source of opposition to change in universities is the "vested interest of establishment faculties that, for reasons of influence and privilege, fight to preserve the status quo."⁹ This traditional resistance to change, combined with the complexity of the development process, demands strong leadership committed to using the university's resources to promote development, adept at managing people, flexible on matters of detail, and practical in the implementation of programs.¹⁰

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King discusses university leadership suggesting that there is a need for full-time professional administrators

. . . who can effect fundamental change in the institution's internal and external systems of communication . . . administrators who are not mere improvisors, but understand fully their area of action and its vital importance to the total life of the institution. . . . Administration is more than a technique: It is understanding.¹¹

A successful leader will have to lead, in part, by example. Habte calls for a "philosophy of work and sacrifice" which is "reflected in the life-style of higher officers of the university and by the faculty, so that all practice what must be pervasively preached."¹²

Finding university leaders is not an easy task, in part, because developing nations tend to be lacking in trained and experienced administrators. The recruitment of good leaders becomes, then, a major responsibility of a university if it hopes to make a contribution to development.

An attempt should be made to improve the leadership skills of the present university leaders. Authorities suggest that certain techniques and conditions can be helpful in this task. It is recommended that a university atmosphere "which encourages ideas to spread and take hold" is important to developing leadership in people who have the potential.¹³ Also recommended is the promotion of dialogue with other leaders who have been successful in development-oriented programs. Benjamin proposes "conferences of administrators within particular countries or regions, where common problems can be studied by men who are well-acquainted with one another's difficulties" as being useful in leadership development.¹⁴

As a final point, in addition to the need for capable leaders with strength and vision, there is a need for internal stability and continuity of leadership within the university organization. Development is a long-range process requiring enduring, long-term leadership.¹⁵

Institutional Structure

Most older universities in Latin America are structured on the model of the universities of Bologna and Salamanca: loosely federated, highly independent professional schools.¹⁶ As new professions were added to the original schools of theology, law, medicine, and humanities, the faculties tended to become increasingly autonomous, "jealously guarding their traditions and independence, each building up student loyalty."¹⁷ This feudal pattern of organization has carried into the twentieth century and been reinforced by the proliferation of professional schools and the dispersion of buildings throughout various parts of the city.¹⁸ An extreme, but not uncommon, result of this kind of structure can be seen at the University of Brazil, in which, with an enrollment of less than 10,000, there are 533 separate chairs. Elementary chemistry, for example, is given independently in nine different faculties with each faculty having its own laboratories and equipment.¹⁹

Most authorities argue that the traditional structure is inadequate for meeting modern national needs, and the universities in Latin America will need to be restructured so that their "graduates are better able to cope with the larger problems of

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the community and of society as a whole."²⁰ Soedjatmoko, writing about Asian universities, states that there must be "a fundamental structural university reform" possibly including a "shift from a discipline-oriented to a problem-oriented structure. . . ."²¹

Centralization. There is no single structure ideal for all universities. Appropriate structure depends on the nation's needs and the university's purposes. It is generally agreed among the authorities, however, that there is a need for a centralized university structure to unite separate faculties into a cohesive unit.

. . . Strong autonomous faculties tend to erect barriers against ideas or methods from other faculties or administrators and even against the needs of the community. There must be some central planning and authority to encourage interdisciplinary programs and to spread new ways of doing things, including circulating information on innovative projects. The existence of an initiating nucleus within the institution . . . is of great importance since it "can radiate the spirit of community service throughout the entire institution. . . ."²²

Centralization of a university already established is no easy task, especially if it has a tradition of semi-autonomous faculties. The very interest groups which inhibit appropriate development activities are usually powerful and firmly entrenched. Strong leadership is required to effectively confront and overcome the formidable resistance to the centralization process.

Some centralization of the university structure has occurred in several institutions in the last few years. At the University of Bahia, in Brazil, "many isolated chairs were grouped under departmental structures and the departments were organized under a better-defined university structure of schools and institutes."²³ Many of

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the private universities established in the last quarter century are centralized in structure, including the four private universities in Guatemala.²⁴

Students. Access to the university is an often discussed and controversial topic. To date, most university students in developing nations have been from the middle and upper classes. This has led to criticism that the universities perpetuate a rigid social class structure and as such will not be very effective in bringing about the changes which will result in true development. The situation is complex, for the educational and social systems in most countries are such that the majority of the students who manage to acquire the education prerequisite to enrollment in universities are from the middle and upper classes. Few of those students from the lower classes who finish secondary school are well prepared for successful university participation because of the inferior secondary education they receive. In addition, poverty requires them to be employed while at the university, increasing their chances for academic failure and prolonging the time required for obtaining a degree. Thus, even an open admission policy would not equalize access to higher education or insure equal opportunity in the university.²⁵

Should admission be open, or should universities select their students? Those in favor of open admission point out that selection invariably discriminates against the poor and thus perpetuates an elitist system. Those who argue for selection say that a poor nation cannot provide a good university education for all secondary school graduates who wish to go to college, thus must

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take the most qualified candidates in order to be most effective in contributing to the development of human resources.²⁶

The answer to the dilemma lies, in part, in a combination of financial aid and an extensive search program for talented students from all levels of the social strata. If qualified students from lower socio-economic levels can be located and their education subsidized, then a university for development will have a reasonably adequate solution to the problem of access.²⁷

Wastage is a serious problem at all levels of education in the developing countries.²⁸ As will be seen in Chapter 3, the dropout rate in Guatemala is particularly high, especially at the university level. If a university is to be effective in training people needed in development, it must find ways to retain its students and encourage their rapid progress toward graduation. Low retention at universities is caused, in part, by high failure rates at universities. At the Universidad de San Carlos, on the average, students fail more than half their courses each term.²⁹ The high failure rate is caused by a variety of phenomena: interference from student activities, inadequate previous academic preparation, need of students to work while studying, inadequate personnel and academic guidance, and a tendency of Latin American professors to equate low grades with high teaching standards. The president of a private university in Guatemala suggested that a combination of careful selection, appropriate placement, continuing guidance, supervision of professors to guard against unreasonable failure rates, scholarships for capable students from low income families,

and better curriculum and teaching are needed to improve retention and graduation rates.³⁰ Vaizey recommends two practices which he believes may increase retention. First, he suggests improved selection of students, "to discourage pupils from beginning an education that they will never be able to complete." Second, he suggests the development of intermediate degrees "so that there is always something to show for whatever knowledge or training has been acquired and which can be put to economic use."³¹ Lewis suggests that countries give "other post-secondary schools a higher status and deflect more students there."³²

According to Benjamin, today's institutions of higher education have evolved from the universities of Paris and Bologna. At both institutions, the term universitas referred to the groups of people who operated the university. In Paris, the universitas was the corporation of masters (teachers). In Bologna, it was the corporation of students. The Paris concept of "university teachers directing students" became the model for universities in northern Europe and the United States. The Bologna concept of a "university of students served by teachers" became the model for Italy and Iberia and thus found its way to Latin America via the Spaniards who founded the first universities there.³³

Today direct student participation in the governing of universities (co-government) is common in Latin America. Co-government grew out of the Bologna model and was greatly strengthened by the Córdoba movement of 1918 in which the right of the university to determine its course without interference from government was

established. Co-government usually "takes the form of student representation in a fixed ratio on all the governing boards and councils of the institution as well as a fixed percentage of votes in the elections for rector and dean."³⁴ In many Latin American universities, the alumni also are represented on boards of governance and in elections for university officials. Thus, since decisions concerning policy, budget, and hiring and firing administrators are made by the boards of governors; the students, both current and graduates, have an important voice in determining university affairs.³⁵

Student participation in governing the university has few defenders among the authorities who write on universities concerned with national development. Undue student influence in university governance has resulted in lowering the academic quality of courses, undermining the atmosphere of discipline, discouraging the practice of full-time study, and as a result, reducing the number of graduates in relation to the enrollment.³⁶ The graduates, representing their professional associations, may also play a negative role. The professional associations have an interest in university decision making since future graduates become the business and professional competition for those already graduated. It is believed that this self-interest, combined with governing power, is "largely responsible for extending the program of studies and, in general, for the measures designed to limit possible competition from future graduates."³⁷ The negative role of graduates is one of the factors which causes the universities "to be so lethargic about helping the process of change in their respective countries."³⁸

It is recognized by many authorities that student participation in university decision making is not conducive to sound university management and, thus, inappropriate for development-oriented universities. At some universities, action has been taken to limit student power and provide more responsible administrative leadership.³⁹

The United Nations Economic Commission for Latin America summarizes much of the writing on co-government as follows:

It is understandable that students should be consulted regarding the services directly affecting them (dining-rooms, scholarships, etc.), but it is difficult to justify their participation in the drawing up of curricula and programs, or their having a say in teaching appointments, etc. The establishment of a university policy in all these matters presupposes that those who formulate it are competent to do so. By definition, students would appear to lack this competence.⁴⁰

Benjamin points out that there is a negative correlation in Latin America between the general level of development of a country and the degree of student control of universities; i.e., countries at the lower levels of development tend to have universities with more student participation than countries at the upper levels. There is a tendency, he says, in the more advanced countries, such as Chile and Costa Rica, to move away from student co-government and towards lay boards of control.⁴¹

Student participation in community service projects and research related to national development is generally recommended by development authorities. It is recognized that students should be given counseling and supervision in their field work, and encouraged to "use their training to solve local and national

problems after graduation."⁴² Thompson and Fogel lay great stress on involving students in work-study programs in both the rural and urban areas. They recommend financing the theses of students who will work in national development projects, including the students in planning community development programs, and assigning theses in community and national development matters.⁴³

Involvement of both students and professors in political and union activities on campus is another tradition at Latin American universities. Many students belong to organizations which take active roles in the political, social, and economic concerns of the nation. To influence national and international affairs, students employ their organizations in a variety of ways, some illegal, such as strikes and acts of group violence. On occasion, student movements have been influential in bringing down government, as was the case in Guatemala when General Ubico was overthrown in 1945.⁴⁴

There are some compelling arguments in favor of politics on campus. Many students are deeply concerned about the myriad social problems which exist and want to use their privileged position in society to effect social change.⁴⁵ This involvement would appear to be in keeping with a university philosophy aimed at development. However, there are several problems related to political activism on campus. Much political activity is manipulated by strong national political organizations for the purpose of acquiring power. In addition, political activism tends to make the disinterested pursuit of knowledge difficult. Points of view and the tone and substance of instruction and research are likely to be determined on the basis

of political strength. Indoctrination replaces free thinking.⁴⁶ Paddock, in his strong criticism of student activism at universities, decries the tendency of students who, "depending on their whims of the moment, shout down and terrorize anyone voicing an opinion different from theirs, whether fellow student, faculty member, dean, or visiting lecturer."⁴⁷

Political activism not only takes study time away from the direct participants, but it also frequently results in strikes which close the university for all. At the Universidad de San Carlos, as an example, it is estimated that student activism may result in the loss of up to 20 percent of class time per year.⁴⁸

It is the thinking of the authorities, in general, that in spite of some of the good intentions of student political involvement, the general result of student activism is to retard a university's contribution to national development. Paddock believes that universities under the control of student organizations "are incapable of giving the hungry nation the trained men and leaders it so desperately needs."⁴⁹

Autonomy. University autonomy is a complicated issue related to university governance in Latin America. The concept of autonomy as it applies to most universities is a product of the university reform movement of 1918 at the University of Córdoba in Argentina which attempted to free the University from government interference. The movement spread slowly to other universities and today exists in theory at least at almost all Latin American universities. Autonomy generally means a constitutional guarantee that the government will

not interfere in the internal affairs of the university. It usually includes an annual income as a fixed percentage of the national budget with no government control over how the money is spent.⁵⁰

Autonomy of higher education is extremely important in Latin America, especially when recognized that prior to its inception, universities were under the control of the incumbent governments which used them for political purposes. A university free from outside interference is much better able to pursue its important functions of teaching, research, and learning. Thus, the advent of autonomy was a positive step in the evolution of the Latin American universities.⁵¹ However, autonomy brings with it some negative effects especially with regard to the development functions of the university. In many Latin American countries, universities are divorced from their governments and the communities in which they operate. Butts discusses the deleterious effect of autonomy on teacher education in Latin America, pointing out the wide gulf between the ministries of education and the universities concerning the preparation of teachers. This inability of the two institutions to communicate and cooperate, caused in great part by autonomy, results in the "duplication of effort and proliferation of small, weak teacher training institutions. . . ."⁵²

Adams and Bjork, while recognizing the need to protect the university against "crude attempts at governmental coercion," argue that the isolation of the universities limits their ability to contribute to national development. They note that there are great

mutual benefits in contacts between universities and their governments.⁵³ Beltran states that autonomy "does not and should not mean a divorce from the state, since this would imply a cloistering and sterilization, a divorce from the community."⁵⁴ Hannah has been paraphrased as saying that "the single most urgent factor affecting the contribution higher education makes to development in the developing countries is its relation to government. . . ."⁵⁵ It has been pointed out by others that a university is more likely to be successful in carrying out development projects if government people are involved.⁵⁶

Medina Echavarria proposes a useful formula for a middle ground between the extremes. He believes that there should be neither the "cloistered university," nor the "militant university," but a "participating university." This formula favors a nonpolitical institution which is free to choose its own personnel, determine its own programs, and establish its own budget, but which maintains contacts with the community and government in identifying problems and carrying out projects to solve them.⁵⁷

There are several models of university cooperation with government in which university autonomy is maintained. Velázquez describes the Norte del Cauca Program of the Universidad del Valle in Colombia in which the Schools of Health, Engineering, Education, and Economics of the Universidad cooperate closely with three governmental agencies to "test and experiment with practical models to improve well-being (agricultural productivity, nutrition, education, health, electrification, housing, and income) for farmers owning small plots."⁵⁸ Other successful development programs

involving universities cooperating with government have been carried out at the University of Antioquia in Colombia, the University of Bahía in Brazil, and the Monterrey Institute in México.⁵⁹

Interdisciplinary activity. Solutions to many social problems require the use of skills and knowledge from a variety of disciplines. Consequently, people prepared as leaders in development must have training not only in several disciplines but also in the practice of employing various areas of knowledge simultaneously in solving problems.⁶⁰ Velásquez complains that at most universities,

. . . the rigid departmental structure . . . does not train an engineer or a doctor to understand the interdependence of all segments of society or how to solve problems except in the limited area of their specialized knowledge.⁶¹

Authorities call for the restructuring of universities and the retraining of staff and administration to achieve an interdisciplinary approach to training students.⁶² They mention several ways to achieve interdisciplinary programs at universities. One way is to initiate a project in one faculty and then invite staff from other faculties as participants. This approach has proved successful in a community health program at the Universidad del Valle in Colombia and in the urban development program at the Federal University of Bahía in Brazil.⁶³

Interdisciplinary instruction may be carried out through curriculum reorganization. In 1971, for example, the Faculty of Arts and Sciences at the University of Dar es Salaam was reorganized to make problem-solving the central theme of the curriculum.⁶⁴

Interdisciplinary activity may also be accomplished by involving several institutions in projects which require various kinds of competence which no one institution can provide by itself. An example of this approach is the Maeklong Project in Thailand, in which Thammasat University, with expertise in social sciences; Kasetsart University, with expertise in agriculture; and Mahidol University, with expertise in medical sciences, joined forces to carry out a rural development project.⁶⁵

Interinstitutional cooperation. To enhance development efforts of universities, various forms of cooperation among institutions are recommended.⁶⁶ Cooperation can be an effective way to pool resources and expertise, especially for small institutions in poor countries in which there is a scarcity of academic talent and in which different institutions engage in different specialities. Accordingly, in many areas, the interdisciplinary approach to attacking societal problems requires interinstitutional efforts. As was mentioned previously, three universities ". . . are pooling their institutional specialities in agriculture, medical science, and social sciences in the Maeklong Project in rural development."⁶⁷

In Nigeria about eighty teachers' colleges have become affiliate members of the Institute of Education at Ahmadu Bello. Their plan is very similar to Butts' suggestion for setting up institutes to bring people together, ". . . people who man the several principal agencies necessary for the improvement of education of teachers."⁶⁸ The Institute of Education "organizes boards for curriculum study, provides subject area specialists, moderates

examinations, and sends mobile teacher training teams from one college to another to advise, assist, and train as required."⁶⁹

An African educator recommends "advanced-level joint degree programs with other universities" located both locally and in foreign countries which would provide "more relevance and more efficiency in the process of granting a Ph.D. or similar qualification."⁷⁰

An example of interinstitutional cooperation in Central America has the added dimension of internationality. The Central American Council of Higher Education (CSUCA) was established in 1948,⁷¹ and revitalized in 1958, to promote "cooperation among the five national universities of Central America and functional integration for specific regional programs at both the graduate and undergraduate level."⁷² CSUCA, considered one of the most successful interinstitutional and international endeavors in higher education, has sponsored a variety of projects related to research and curriculum. Not all the projects have been successful, but Mitchell believes that, on balance, CSUCA has established itself "as the principal source of new ideas and innovation in higher education in Central America."⁷³

International involvement. Closely related to the concepts of interdisciplinary and interinstitutional cooperation is the concept of international involvement. Fogel states, "Innovation is stimulated by a larger world of ideas and action. Higher education must have continuing contact with life and thought outside institutional walls and outside national borders."⁷⁴ This contact

helps to broaden the vision and perspective of faculty and students, expands contacts with institutions that have useful knowledge and experience in meeting development needs, and permits concerted efforts in national development projects.

Some authorities point out that international involvement can be a double-edged sword; that is, its effects can be negative as well as positive. The "brain drain" is an unfortunate phenomenon related to international involvement. This phenomenon usually occurs when students from poor countries study in the wealthy ones and then remain abroad because the employment opportunities there are better than at home. Even when the students return home, they may encounter problems, for much overseas education is not designed for preparing students from poor nations to meet the problems they face in their own countries. In addition, foreign university models cannot be imported to developing countries without modification.⁷⁵ Effective international involvement, then, requires an awareness of potential pitfalls. The following are some general patterns of international involvement which can be useful.

1. Administration and staff members study abroad. This is an important way to enhance the competence of a university's leaders, and in many countries may be the only means for them to obtain graduate degrees. The University of Dar es Salaam tries to take advantage of foreign Ph.D. programs without losing touch with the requirements for meeting Tanzania's development needs by having its professors do some work at home and some abroad. "The University

also pays a staff salary to promising graduates during the period of their overseas work as an incentive to return."⁷⁶

Habte believes that universities in underdeveloped countries must work with "foreign graduate schools to devise programs that will enable more advanced study and particularly required research. . . . Projects could then be more relevant both to the creation of individual expertise and to (local) research needs generally."⁷⁷

Study abroad does not have to be formal. Teachers and students may benefit greatly from visits to special innovative projects and from participation in workshops and seminars.⁷⁸

2. Aid (financial and consultative) from developed countries. Foreign aid must be relevant to the recipient country's development needs. Thus, one of the most important concepts of foreign aid for national development is that of the participation of the recipient institution in identifying needs, suggesting and planning appropriate programs, providing its own personnel in carrying out the projects, and seeing that the results are disseminated appropriately.⁷⁹ Along this line of thought, Habte argues for the "shift in general policy formulation from the international 'experts' to the 'local experts.'"⁸⁰

3. Multinational consortia of experts. Habte recommends the establishment of several small consortia of experts drawn from many developed and developing nations to foment "new strategies of international cooperation for continuing, systematic study of the problems of ongoing development. . . ."⁸¹ He suggests that there be a consortium for each of such areas as agriculture, administration, education, etc., which would meet periodically "to discuss relevant

theoretical advances in the field, concrete research or experimental projects, new strategies for developing university staff, and other related problems of institutional and professional development."⁸² It has also been stated that "Underdeveloped countries need to draw upon an international fund of knowledge to hasten them along the path of social and economic growth."⁸³

4. Regional integration of universities. The regional integration of universities is a means of promoting international cooperation which can have several benefits. First, it can be used as a way of unifying degree requirements and courses of study so that students may transfer easily from one university to another in the region. Second, individual universities can be designated as regional centers for certain kinds of professional training in which students from several countries may enroll. In addition, research institutes can be set up and jointly operated so that resources and money can be used most efficiently.⁸⁴

Several efforts have been made at this kind of regional cooperation, most notably the Central American Higher University Council (CSUCA). CSUCA is an organization representing national universities in each of the five Central American states and Panamá. It has made efforts at cooperation in three areas: general studies, regional courses, and regional institutes. At present, several universities in the organization have a general studies program; there are regional programs in such areas as sanitary engineering, chemistry, veterinary medicine, and clinical medicine; finally, there are several research institutes functioning at the regional level.⁸⁵

Another effort at regional cooperation in Central America is the Federation of Private Universities in Central America (FUPAC). FUPAC was established in 1968 as a means of coordinating the activities of private universities in Central America somewhat on the model of CSUCA. Presently, there are eight member institutions, including the Universidad Mariano Galvez in Guatemala. The major efforts of FUPAC to date have been (1) the publishing of several books and pamphlets on the role of the private universities in Central America and (2) the convening of a series of meetings to discuss the important issues before the Central American private universities.⁸⁶

Over the years, the thinking of FUPAC's leaders has gradually moved toward the position that universities must attempt to effect social change. Roman Mayorga Quiros, a former president of FUPAC, in his book, The University for Social Change, strongly advocates an activist role for private universities in identifying national problems and contributing to their solution, even taking strong stands on major social and political issues in the area.⁸⁷

Formation of institutes. Occasionally in the literature on higher education, reference is made to the formation of institutes within the university as a mechanism to carry out specific tasks for which there is no adequate existing structure. These institutes, usually given some autonomy within the institution and flexibility to develop unorthodox programs, "act as clearinghouses for the institution's expertise."⁸⁸ Institutes are usually related to research or service, with teaching being corollary. They are frequently problem-oriented and multidisciplinary in structure.

Support facilities. To permit a university to contribute to national development it must have appropriate support facilities. Generally speaking, university facilities in Latin America are inadequate. Unfortunately, although building construction may be accomplished economically, the provision of sufficient and adequate science laboratories and equipment is expensive.⁸⁹ This problem is aggravated by the fact that at many universities similar courses are offered independently in various autonomous faculties, each with its own libraries, laboratories, and equipment.⁹⁰ The common use of these facilities by various departments would allow more laboratory use and reduce expenditures for facilities.

Perhaps the most critical resource that supports teaching and research is the library. Libraries in Latin America are notorious for the inadequacy of their books and service. King found that of the nine provincial universities in Mexico, only three had any central library service at all.⁹¹ White, in a study of 220 university librarians in México, found that only four had library degrees, and only nine held university degrees of any kind; the vast majority had not even graduated from secondary school.⁹²

It has been noted that year-round use of educational facilities is practical in any country. The advantage is obvious: it permits the speeding up of the presentation of courses and reduces the time required for completion of programs. Paddock describes the Panamerican Agricultural School in Honduras which adopted a three-year curriculum by eliminating most vacations. This, he says, not only increases efficiency but also instills in the student a sense of urgency about

the needs of development.⁹³ Several African institutions are trying out the concept of a year-round university which stays open for both service and instruction. In addition, extension and summer programs are being planned during evenings and vacation periods offering standard university courses.⁹⁴

Nyerere proposes that in underdeveloped countries, educational institutions at all levels have farms and workshops as integral parts of the community. These should not be merely adjuncts to the institutions, but working entities in which students can participate in actual experiences and research directly related to curriculum, methods, and practicum.⁹⁵

Planning

As opposed to the development of the modern Western nations, which occurred at a leisurely pace without design, the developing nations of today are attempting to promote rapid change with limited resources. For them, planning is a crucial element in their progress. Authorities argue that planning is a necessity in the efficient use of scarce resources, but they also point out that it is not in itself a panacea for development. Politics, human resistance to change, financial and resource limitations, and lack of trained manpower are obstacles to the effectiveness of planning.⁹⁶ However, as Hanson and Brembeck state, "Although planning cannot solve the unrealistic ambitions, it can bring what is possible into being."⁹⁷

Planning is most often carried out at the national level in developing countries. In general, universities have not demonstrated much interest or involvement in planning. King, in a report that is

generally complimentary of the national development role of the Mexican provincial universities, says that these "universities are growing and changing more in response to social demand for education than as a result of coordinated planning."⁹⁸ The United Nations Economic Commission indicates that Latin American universities have not, as a group, been very effective in planning.⁹⁹

Given the importance of planning in a developing country and the tendency in recent years for universities to expand in number of students and activities, it has become crucial for planning to take an important role in higher education. Following is a discussion of planning steps which are pertinent for a university in a developing country.

Assessment of national needs. The planning process begins with an appraisal of the needs of the present conditions. A university which would participate in development must, therefore, have a procedure for assessing the nation's needs. There are several ways to accomplish this. One is through research and study: "Research can identify critical situations and the directions and occasionally the quantitative impacts of alternative strategies."¹⁰⁰ The universities involved in the Maeklong Project in Thailand identify community problems by using field research. Project leaders list the problems and "rank them in order of difficulty, possibility of solution, and probable impact." A committee then "selects the problems that seem to have the greatest chance of successful solutions."¹⁰¹

Another method of assessing national needs is to work in collaboration with business and government. Several universities,

such as the Monterrey Institute of Technology and Advanced Studies in México and the Development Academy in the Phillipines, work on a consulting basis with other institutions and charge fees. Others, such as the Universidad del Valle in Colombia and the National Agrarian University in Colombia, cooperate with their governments ad honorum.¹⁰² As was observed earlier, cooperation with the government on identifying national problems has the benefit of obtaining valuable government support for those institutions involved.

One of the advantages developing nations have is the opportunity to learn from the mistakes made by the developed countries. Accordingly, part of the planning process requires identifying problems which result from modernization in order to avoid committing the same types of errors.¹⁰³

Goal setting. The thoughtful setting of institutional goals, based on identified needs, is one of the crucial steps of the planning process. Well-formulated statements of goals provide the criteria by which to judge whether or not the goal is eventually met.¹⁰⁴

Curle identifies two kinds of goals: (1) "investment" goals, which result in some material advantage for the individual, and (2) "consumer" goals, which enrich the individual ultimately. Relatively complex goals may be analyzed and atomized into simple ones which may be accomplished quickly and successfully but cumulatively more directly toward long-range goals.¹⁰⁵ Husén argues that to serve the society adequately, "Analyses based on empirical survey data . . . are badly needed to arrive at a proper set of concrete goals. . . ."¹⁰⁶

Assessment of a university's ability to meet its goals. Identification of needs is not in itself sufficient for setting goals. A university must also assess its own personnel and physical resources to determine which goals it can realistically meet.

Before any project is attempted, there needs to be a careful diagnosis of all needed elements to determine if the institution has or can obtain the necessary resources to accomplish its aims. Certain programs may require a high level of research staff, considerable personnel, cooperative effort with other institutions or agencies, or funding. Once it has been determined that the university has the capability to undertake such projects and the goals are set, there is a need for continual assessment of the required means to carry out individual projects.¹⁰⁷ Bowles says that little should be expected of universities in the formative periods, that it will take twenty or thirty years for these universities ". . . to take their proper place on the national scene."¹⁰⁸ The point here is that manifesting high aspirations and a desire to confront urgent national needs is not sufficient to permit the university to have an effect on development problems.

Universities must not become so involved in national development that they ignore self-sufficiency as one of their goals. "Self-sufficiency and the ability to help oneself remain important indexes of educational capacity for both individuals and institutions."¹⁰⁹

Planning for change. ". . . The very nature of planning implies change . . . change means reform, and . . . reform is precisely what Latin American countries . . . need most."¹¹⁰ Planning should play

a central role in any institution, but it is particularly important to an institution dedicated to innovation and change. A university which serves a changing world must constantly engage in the process of identifying regional needs, setting goals, assessing its ability to meet those goals, and evaluating its efforts.

Planning for change requires emphasizing qualitative factors more than quantitative ones. Pure expansion of programs, numbers of students and faculty, and amount of the budget, while appearing impressive, may actually debilitate the development process. What is needed is a planning procedure geared toward adapting educational structure and programs to the changing development needs of the region so that the university does not fall into the "crisis of painful maladjustment between unchanging educational institutions and their rapidly changing environment."¹¹¹ A suitable planning policy, then, will combine selective growth with qualitative changes which will keep the practices of the university in tune with changing circumstances of the region.¹¹²

Traditionally, universities have been perpetuators of culture. Lewis advances the interesting thesis that much traditional culture in poor countries is "no more than the universal culture of poverty."¹¹³ With the impingement of modern technological societies upon less developed peoples, their ancient and time-honored social relationships will break down. Indeed this must occur if modernization is to furnish a better quality of life for the masses. Therefore, a new role of the university is to "erode traditional society," to be a bearer of change and improvement.¹¹⁴

In undertaking the role of change agent, universities confront many barriers: feudal heritage and traditional conservatism, not only of universities, but society in general;¹¹⁵ traditional social and political values; primary concern for family and "tribe" rather than the broader community; and suppression of rights by those in authority.¹¹⁶

Planning for national change, if it is to be effective, must involve the participation of many individuals and institutions. Perhaps most importantly, those who will be implementing the projects should be involved in the planning to assure their satisfactory completion.¹¹⁷ It is important for all the participants in a project to "understand the plan, believe in it, and feel that they have a stake in it,"¹¹⁸ according to Coombs and Hallack. Many planned reforms have met with resistance and been rendered ineffective because the groups responsible for implementing them were simply handed the final plans without having an opportunity to contribute to the development of the reforms.¹¹⁹

Some major obstacles to consider in planning for change are the feelings and attitudes of persons who will be affected by that change. Trying to change the basic precepts and values which people have held much of their lives is a slow and difficult process. If people desire change, they want to participate in the decisions of the processes themselves. They must be convinced that something different may be of greater benefit to them than what they presently possess. Plans for change at any level should provide for helping the recipients recognize and describe their problems, and seek their own solutions.¹²⁰

Social scientists, particularly anthropologists, need to be involved in planning for social change. Their sensitivity to people's attitudes may prevent a superior and ethnocentric posture frequently adopted by industrialized societies vis-a-vis the people of underdeveloped nations.¹²¹

Innovative programs. Planning should include innovative programs if it is to serve the university in contributing to development. Thompson and Fogel indicate that "the major source of educational innovation is an individual or group of individuals who take the lead."¹²² Accordingly, the innovative process must begin with the seeking out of people with creative minds and the willingness to participate in the planning and realization of new ideas.¹²³

Once the innovators are identified, a university should encourage them by providing a hospitable environment for experimentation. Some latitude should be allowed the innovator. Unwieldy bureaucracies "produce fewer innovators than do societies that welcome open discussion and that reward innovators with attention and respect."¹²⁴

Innovation is a contagious phenomenon which tends to be extended by example. Fogel believes that "innovators create their own atmosphere of excitement, attract their own support, and may change an apparently hostile environment by their very presence."¹²⁵ Hence, their involvement in planning new programs will be useful not only for the direct application of their intellect to problems, but also because of the influence they may have on others. Velásquez refers to this phenomenon and says that "the best way to introduce

innovative change is by showing successful examples."¹²⁶ A good illustration of this in higher education is the Universidad del Valle in Colombia. In the early 1960s, it became involved in a series of innovative programs after a medical group there launched a successful new program of health delivery service.¹²⁷ To enhance innovation in an institution, it is suggested that visiting professors and others recognized as innovators have contact with the staff.¹²⁸

A major source of innovation is research. Research can be used to determine the ways in which different kinds of structure and other types of environments affect successful experimentation. Research can also be used to determine what innovation is needed and how already implemented innovation is functioning.¹²⁹

Innovation often requires the wisdom and abilities of people from various fields of study. Velásquez notes, however, that it does take expert leadership to induce strong-willed individuals from various disciplines to cooperate, modify their points of view, and participate positively in the give-and-take planning and executing of innovative projects.¹³⁰

The difficulty of assuring that educational innovation will be adopted and generalized is a topic on which Cerych has written at some length. It is his belief, supported in part by research, that innovation is more likely both to take place and be generalized in a participatory environment than in an authoritarian environment.¹³¹

Innovation is neither a panacea for problem solving nor does it necessarily result in improved practices or conditions. It should

be recognized that some traditional programs and methods are quite adequate for development. For that reason, the planners of innovation, while being inventive and willing to experiment with bold new ways, must at the same time exercise good judgment as to what kind of innovation is needed and what practices are already working well. There must be a "reasonable balance . . . between innovation in education and the tried and tested present-day educational models. . . ." ¹³²

Evaluation

Evaluation is essential to the decision-making process in any system. It is especially important in a university which is trying to break new ground. Whereas the value of traditional programs may be fairly well established, innovative programs require extensive and careful assessment. Unfortunately, systematic evaluation in higher education is not widespread. Dressel notes that most important decisions in higher education are made on the basis of "tradition, prejudice, and rationalization," rather than through sound evaluative procedures. ¹³³ Cerych, writing about universities internationally, echoes Dressel's observation, saying that "for a long time self-evaluation was resisted by educational establishments in general and by universities in particular. . . ." ¹³⁴

It should be noted that failure to employ evaluation techniques in education is related not only to normal resistance to the process, but also to the fact that evaluation is an imprecise and tentative endeavor. Cartter argues that "no single index . . . nor

any combination of measures is sufficient to estimate adequately the true worth of an educational institution."¹³⁵

Given the importance of evaluation, it becomes incumbent upon university leaders to attempt the most sophisticated assessment possible of the institution even though pitfalls are inherent in the process and no evaluation system has yet been evolved which precisely measures outcomes in educational endeavors.

When evaluating innovative programs, the most important task is to determine whether the new way is an improvement upon the old. To get at this question, it is important that ways to assess performance be built into the planning process. First, the goals of the program must be clearly defined. Second, there must be ways to measure the results of the program. Third, there must be a review of the goals themselves to determine their validity.¹³⁶

The scientific approach is stressed by those who advocate improved evaluation procedures.¹³⁷ Velásquez argues that "casual observation of the effects of change" does not compare with "the ability to predict and evaluate these effects with some precision."¹³⁸

In addition to scientific evaluation, which has its limitations, there are other, less formal, ways to evaluate. Periodic meetings with people involved in the various university tasks to discuss projects can be a useful way of keeping informed of progress. Observation, testing, and surveying are other evaluative procedures recommended.¹³⁹

Qualitative evaluation is the most difficult to achieve, but in education it is the most important. Husén recommends surveys to

assess the qualitative outcomes of an educational system, saying that output cannot be measured by counting individuals, "but rather by the amount of competence that has been imparted to these individuals."¹⁴⁰ Todaro agrees that counting the Ph.D.'s is an insufficient way to evaluate the university's impact and insists that difficulty in measuring outcomes is no excuse for not attempting the qualitative evaluation.¹⁴¹

Another aspect of the evaluation process should be mentioned here, the involvement of as many members of the staff as possible. Jones suggests that "Self-evaluation solidifies and strengthens the institution chiefly by what it does for the individuals who comprise it. . . . Efficiency is not important; staff education is what we are after."¹⁴² Involvement of the staff helps to make them aware of institutional goals and their role in the total organization, not just in their bailiwick.

Participation of the staff is important also because it increases the probability that meaningful exchange will occur. It is fairly well established that those people involved in decision making are more likely to implement the decisions.¹⁴³

The view of evaluation as a total involvement of staff in assessing the entire institution is particularly pertinent to a university which is attempting to unify departments and faculties in a multidisciplinary effort to contribute to meeting national needs. Thus, the process may be as important as the results.

Evaluation should be an on-going assessment of component parts as well as overall program and structure. Dressel states

that "a proper evaluation requires that the experiment or project is structured from the start with the design requirements of the evaluation in mind."¹⁴⁴ By making the evaluation process continuous, it becomes manageable and at the same time encourages constant attention to institutional processes.

The model of program development designed by Dressel serves to demonstrate the concept of built-in, continual evaluation, which may be useful as a model for a university that would contribute to national development.¹⁴⁵ (See model, Figure 1, on page 48.)

Some authorities recommend that a cost-benefit analysis be included in plans for an overall evaluation in an effort to link program results with money spent.¹⁴⁶

In the final analysis, evaluation must be directed at asking the question that Todaro presents with regard to financial aid to a university in a developing country: " . . . how and in what way is this support assisting the university in its efforts to contribute to the solution of the basic problems of undernourishment, poverty, inequality, and values?"¹⁴⁷

Financing

Financing a development-oriented university is no mean task, for development activities do not lend themselves well to self-sufficiency. First, universities for development are not likely to offer degrees in the lucrative professions, the most profitable programs at traditional universities. Second, there must be places for talented students with limited income.¹⁴⁸ Third, the costs of the scientific and technical education are higher than the

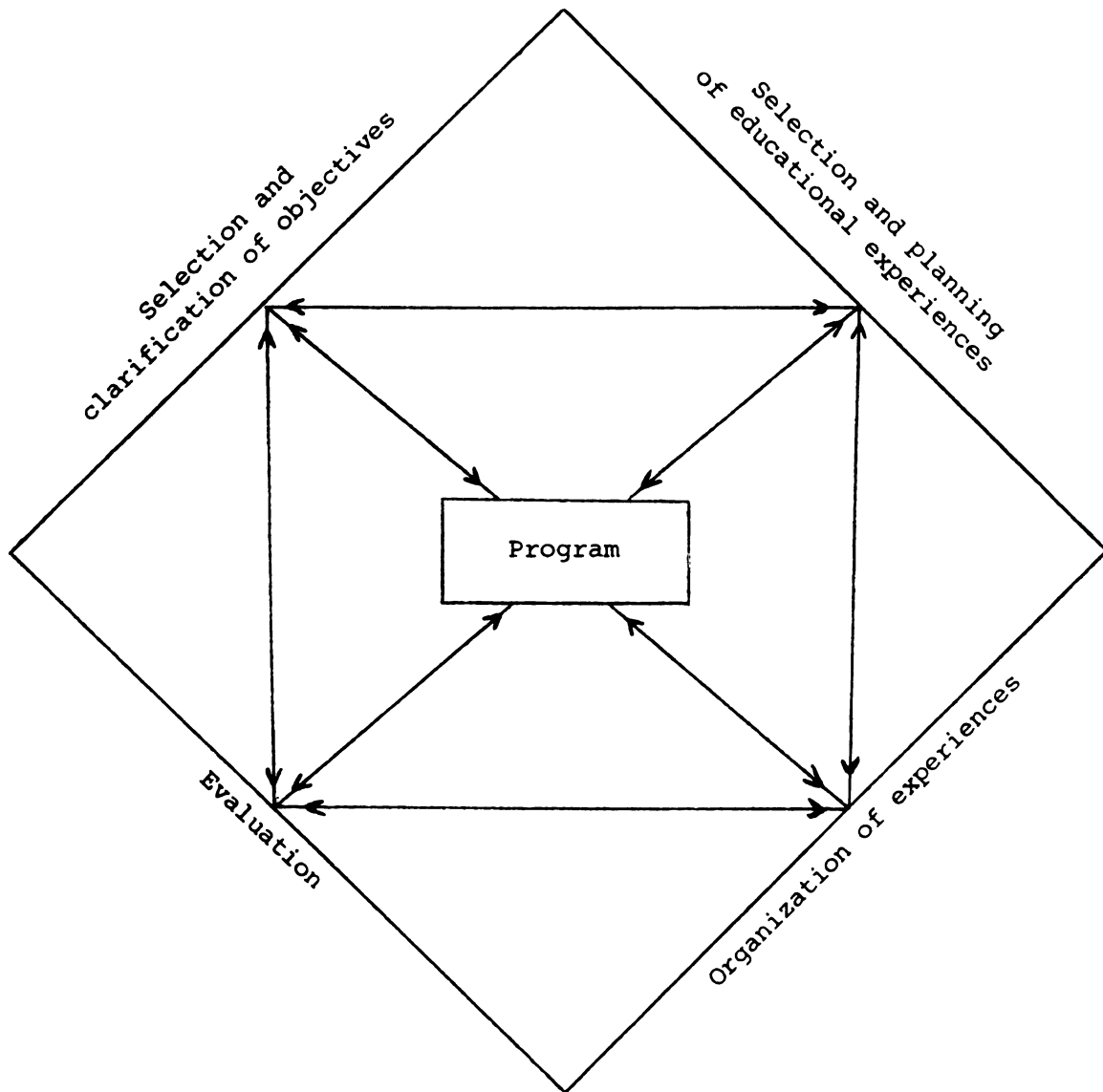


Figure 1

Model of Program Development

SOURCE: Paul L. Dressel and associates, Evaluation in Higher Education (Boston: Houghton Mifflin, 1961), p. 9.

traditional areas of law and the arts.¹⁴⁹ Fourth, research and service projects do not generate income from fees. Thus, universities that would contribute to development must depend on funds from outside sources for their survival.

Although development-oriented universities are not likely to achieve self-sufficiency solely from fees, they may be able to obtain financial support from large international foundations, development banks, and governments both at home and abroad. Millions of dollars are available to institutions of higher education in poor countries from these sources. The World Bank, alone, has projected expenditures on higher education in a five-year period of \$300 million.¹⁵⁰

Financial and consultative aid from other countries is vital for the undertaking of much needed projects in many developing nations. Without the millions of dollars from private foundations such as Ford and Rockefeller and others, from USAID, and from United Nations agencies, few of the well-known and successful development projects could have been implemented. In a recent study of the role of higher education in development, the International Council for Educational Development reports that in most of the higher education programs studied worldwide, foreign financial assistance "has been a crucial addition to local resources."¹⁵¹

One technique for giving outside assistance to universities is to have the assistance agencies combine forces on development projects. This not only makes possible the large sums needed for many projects, but also permits agencies to dedicate their effort

more effectively to that which they are best able to do. For example, the World Bank can make its contribution through capital loans, while UNESCO is best able to provide technical assistance.¹⁵² Experience has shown that when donor agencies combine forces, "they have been able to contribute the different building blocks a project needs, and by planning together, along with local project directors, they have provided an overall view."¹⁵³

One of the difficulties inherent in seeking financial aid is the universal tendency for the donor to want to control the project. However, this tendency is diminishing among the international agencies as they have come to recognize that success of programs depends in large part on the recipient planning and directing the work. The international donor agencies tend now to look on development projects to which they supply aid as partnerships.¹⁵⁴

One of the most successful activities of aid programs has been the training of people. It is recommended that initial aid projects concentrate on personnel training and general institution building so that later aid can be focused on development programs and ways to support innovation.¹⁵⁵ It is very important for universities to build up their "critical mass of scholars" who can participate in the task of development and take full advantage of further aid.¹⁵⁶

Another point related to financing is continuity. Development is both a complex and lengthy process; one or two-year programs are not likely to have great impact. Therefore, long-range programs supported by long-term financing must be part of the aid process.

Thompson stresses this point when he says that it is futile to attempt "to meet 20-year needs with a three-year program, two-year personnel, and one-year appropriations."¹⁵⁷

New Institutions

Overcoming the many traditions which are detrimental to development in Latin America, such as semi-autonomous faculties and student participation in university governance, is not an easy task. The interest groups who favor maintaining the status quo are powerful and not likely to relinquish their positions easily. This has led some authors to suggest the establishment of either new units within a university or new universities altogether in an effort to overcome the serious obstacles to effective contribution to development. Paddock proposes leaving the traditional university to the "student shouters and cowed faculty" and establish a new university "separated geographically, administratively, and financially from the national university," to be run by its leaders with high standards and seriousness of purpose with no student activism permitted.¹⁵⁸ The United Nations Economic Commission makes a similar argument: "It would seem less complicated to introduce changes in fairly new universities than in those where the tradition of dispersion and separation is of very long standing."¹⁵⁹ Velásquez also says that "the only chance for experimentation may be creating a new mechanism outside the university structure."¹⁶⁰ Another educator says that "all experiment, whether in methods or curricula, has taken place through the creation of new institutions, and not through willingness of long-established institutions to make room for novelty."¹⁶¹

Fogel lists several of the "new mechanisms of higher education" which have been created recently for implementing innovative development projects:

- (1) the Research and Education Program for Development at the Federal University of Bahia in Brazil,
- (2) the Transfer of Technology Program at the Agrarian University in Perú,
- (3) the Research Program for Systems of Health Services Delivery at the University of the Valley in Colombia,
- (4) the University Centre for Health Sciences in Cameroon, and
- (5) the Institute of Rural and Regional Studies at Gadjah Mada University in Indonesia.¹⁶²

It is pointed out, however, that each of these new institutes or centers is attached to an institution that has some roots, that access to personnel and established institutional organization are important. Furthermore, it is pointed out that new institutions do not necessarily result in change since there is inevitably a concern for standards which are based on traditional criteria.¹⁶³

FUNCTIONS

The three main functions of a university are instruction, research, and service. The following is a review of literature concerning the means by which these three functions can best be employed in an effort to contribute to development.

Instruction

Instruction is the oldest of the university functions and remains the function without which it would be difficult to recognize a university.

Staff. The quality of the teaching staff is the key to successful instruction. Well-defined goals, excellent facilities, appropriate programs, and motivated students will not guarantee an effective program for national development if the staff is mediocre. King states, "The moving force in the entire university community is the professor."¹⁶⁴ Therefore, attention must be given to the recruitment, selection, training, and retention of staff. Universities must hire personnel on the basis of competence, successful experience, and general ability, not on the basis of "personal relationships," which is a common tendency in Latin America.¹⁶⁵ In so doing, an institution's practices will reflect the values and procedures of development.

In many countries, unfortunately, there is no body of competent university personnel from which to choose. Many universities simply accept indiscriminately those available candidates for faculty positions. In many cases, there are no local personnel qualified in certain academic areas. This situation causes universities to turn to developed nations for supplying some of their staff. One of the most common solutions to the problem of insufficient staff is the visiting faculty program in which professors from the developed countries are hired for short periods of time to teach at universities in the underdeveloped nations in areas in which there are no qualified local personnel. Visiting faculty programs have generally served well the institutions which use them, but they are only short-term solutions. The long-term goal of development-oriented universities should be to obtain a critical

mass of local scholars and, thus, become independent of foreign personnel to carry out their development functions.

Benjamin,¹⁶⁶ Butts,¹⁶⁷ and Habte¹⁶⁸ argue that improving the quality of instruction of the local staff is of utmost importance to universities that would contribute to national development. The staff may be improved through a variety of means. One way is to send selected individuals to study at foreign universities. This has the advantage of providing them a higher quality of graduate education than is available in their own country. In rebuttal to the argument that persons trained abroad may return ill-fitted to address local problems, Paddock argues that the point of graduate study is to teach the student "principles of his subject plus the ability to reason out and cope with the problems he will later face in that field of work."¹⁶⁹ To help guarantee that the persons trained abroad receive an appropriate education, Habte recommends that universities in developing countries establish close ties with universities in the developed countries to which their staff may go for training in order to fashion programs which "provide more relevance and efficiency in the process of granting a Ph.D. or similar qualification."¹⁷⁰

Improving the teaching ability of the staff is an important aspect of staff development. King underlines the immense importance of a university training its own faculty members, arguing that when properly trained a staff "knows how to renew teaching methods, plans, programs of study, academic organization, and the very life of the institution."¹⁷¹

At the University of Buenos Aires, the Institute of Psycho-Pedagogical Research is attempting to improve quality of university teaching by experimenting with small-group methods to enliven lectures. Other departments within the university are similarly experimenting with group methods of learning and teaching.¹⁷²

. . . Deliberate efforts like these to improve university instruction could serve the two-fold purpose of improving the learning of the university students themselves and improving the image of the teacher's role which could have a profound effect upon the career ambitions of university students. . . .¹⁷³

Most professors do not receive specific pedagogical training. Therefore, their teaching methods are patterned after the instructional procedures in classes they received in school. The training of professors must relate to the new structures and approaches of the universities. For example, professors must learn to work with colleagues on interdisciplinary endeavors. Teachers must also be taught how to relate field work and research to the classroom.¹⁷⁴

An often discussed phenomenon at universities in Latin America is the part-time professor. At almost all Latin American universities, the majority of professors are professionals who work full time elsewhere and give a few classes a week at the local university for reasons of prestige or politics. Because these professors must rush from their regular employment to the university and then return, the term "taxi teacher" has been used to describe this system.¹⁷⁵

The authorities believe that part-time teaching is deleterious to effective functioning of a university for several reasons. First, it contributes to the high teacher absenteeism and tardiness which

are common at Latin American universities. Since the professor's office and professional interests are distant from the campus, and since his livelihood does not depend on his university work, there are many distractions which reduce the number of classes he attends. Second, part-time teaching leads to inferior instruction and research. Full-time work elsewhere leaves little time for reading and preparation necessary for good teaching and research. As a result, part-time professors tend to fall back on the practice of lecturing from the same notes year after year.¹⁷⁶ Third, part-time teaching sets a bad example for prospective teachers by giving the impression that teaching is not a "career worthy of one's full energies and powers throughout a life-time."¹⁷⁷ Fourth, part-time teaching makes a university community practically nonexistent. The system of spending the time on campus only for teaching leaves little or no time to counsel students or discuss academic matters with colleagues or to participate in any of the usual academic activities which are important to the instruction of fresh knowledge.¹⁷⁸

Authorities who write on the subject recommend that universities move toward a full-time staff of professional teachers trained in appropriate teaching methodologies with time for and interest in research and service and counselling students. Reaching this goal is not easy since many of the causes of part-time teaching are beyond the capability of the university to solve. The most serious obstacle to full-time teaching is low salaries. Given the already precarious financial situation of most universities in

Latin America, it is no mean task to raise salaries high enough to attract quality people full time.¹⁷⁹

It should be noted also that simply employing full-time teachers does not guarantee that the quality of instruction and research will improve. It is possible to have full-time professors who lecture from the same notes year after year, do not engage in meaningful research, and who are often absent and late to class.¹⁸⁰

There is a certain advantage in having at least some part-time teachers, especially in training for the professions in which practitioners have much to bring to the instruction process. Such a practice also provides contacts with the community which a university for development should have.¹⁸¹

Curriculum. The curriculum is of critical importance in preparing university students to become competent, thoughtful, concerned, and contributing members of their society. To meet these requirements, major shifts in existing curricula are needed. LASPAU calls on universities to revamp their curricula "to make it more relevant to national realities. . . ."¹⁸² King calls for institutional practices to be "in tune with their changing times and local circumstances."¹⁸³ Butts states that institutions that train educators, if they are to be effective as modernizers, must reform their curricula so that "foundation studies focus upon the process by which all nations, young and old, learn to become modern."¹⁸⁴

Velásquez thinks that curricular changes should be made to give attention to "both the theory of community development and practical experience with actual programs having this objective."¹⁸⁵

It is Velásquez's belief that the curriculum should be used to inculcate in both students and faculty an understanding and acceptance of the university's goals related to development. To do this, he advocates the organization of conferences, lectures, and seminars on the subject and "direct involvement of staff and students in research and experimentation. . . ." ¹⁸⁶

A curriculum molded to prepare students to successfully confront national problems should emphasize the scientific approach, providing experience in problem solving and critical thinking. ¹⁸⁷

A good example of this is the recent reorganization of the Faculty of Arts and Social Sciences at the University of Dar es Salaam in which a problem-solving curriculum with a career orientation was established: the "traditional subject divisions of the degree structure have been replaced by multisubject 'streams' and numerous common courses introduced under the rubric 'Developmental Studies' and 'East African Societies and Environment.'" ¹⁸⁸ The rationale for the reorganization is to better prepare Tanzanian students "to understand Tanzania's problems and to contribute toward their solution." ¹⁸⁹ Several other institutions of higher education are referred to in the literature as examples of recent efforts to make their curricula more relevant to development needs. ¹⁹⁰

It should be pointed out that the authorities do not advocate a complete and blind change to a totally "relevant" curriculum. A curriculum too narrowly focused on development tends to prepare technicians able to operate only in a limited area. Coombs says, "There are certain basic intellectual tools to which the student

must be exposed and certain basic information that he must acquire in order to be an educated man in the modern world. . . ."191 Much curriculum will be similar to that in a developed nation. Good science, mathematics, and social science, for example, draw on the literature worldwide and give the student knowledge and techniques universally applicable. Basic principles in a discipline, when combined with training in problem solving, understanding of local problems, a desire to help a nation solve its problems, and experience in research and community service, form a good model for appropriate curriculum at a development-oriented university.

Beeby points out, however, that appropriate curriculum is not a panacea:

Major changes in curriculum entail inevitable commitment to changes in the training of professors and university structure. It is a false hope that "reforms in education can be brought about merely by altering curricula."192

1. Interdisciplinary curriculum.

No single discipline can claim special insight into the variegated process of development. To successfully seek casual relationships between the educational, social, economic, political and psychological factors requisite to growth, demands effort from the scholars representing many academic interests.193

The training of people to play a role in development requires that their education reflect the multidisciplinary nature of the development process. Butts indicates this when he says that teachers in poor countries must be trained to deal with "the problems of social organization, personal attitude, moral behavior, and religious belief when the traditional sector is confronted by the revolutionary social changes of modernity."194 A narrowly focused

education will not help teachers in preparing to meet this difficult task. It is vitally important, then, for "society's leaders and planners to have broad social and historical perspective that is difficult to achieve in separate academic disciplines."¹⁹⁵

There are several ways to combine various disciplines in a curriculum. One is to develop service projects which require expertise from more than one discipline. Programs at the Universidad del Valle in Colombia, the University of Bahia in Brazil, and three universities in Thailand provide good examples of this kind of interdisciplinary approach.¹⁹⁶

Another vehicle for promoting interdisciplinary cooperation is curriculum reorganization in which staff members and administrators plan new divisions or "multidisciplinary streams" in the degree structure. An example of this took place at the University of Dar Es Salaam in 1971. In the University Centre for Health Sciences in Cameroon, themes rather than subjects bring together both staff and students from the various disciplines.¹⁹⁷

2. General studies. A curricular concept closely related to the interdisciplinary approach and frequently recommended by development authorities is general studies. As usually recommended, general studies is "a compulsory common curriculum required of all entering students for their first one or two years, after which they would enter the professional faculties to complete their education."¹⁹⁸

The reasons for such a program are several. First, as has been mentioned previously, training in several disciplines is useful

to the person who must deal with complex development problems. Second, secondary education in developing countries is often of low quality. General studies helps to compensate for the academic deficiencies of incoming students. Third, a year or two of general studies allows incoming students to explore various fields and determine which they wish to enter. Fourth, general studies helps break down the power of the professional faculties by making some of the courses independent of their jurisdiction. It is a centralizing influence on the institution. Fifth, in order not to extend the time required for graduation, "the professional faculties must revise their curriculum, eliminating the basic material that would now be taught in general studies."¹⁹⁹

Butts strongly advocates general studies as an integral part of teacher education: "General education along with competence in their academic specialties is the stock and trade of teachers."²⁰⁰ His argument is that if teachers are to be the vanguard of development, they must be well versed in various disciplines.

Offering a general studies program requires a basic departure from the university traditions in Latin America of fragmented faculties with high emphasis on specialization. Indeed, there is outright rejection of the general studies idea in many places in which it has been tried. As will be seen in Chapter 3, general studies was initiated and later rejected at the Universidad de San Carlos in Guatemala during the 1960s.

There are, however, models of successful general studies programs in Latin America. The Faculty of Philosophy and Education

at the University of Chile has managed to reduce itself to just three departments and has a strong interdisciplinary general studies program. The Universities of Sao Paulo and Brasilia, as well as several universities in Colombia, have made reforms involving general studies.²⁰¹ Several universities in Central America opened general studies in the 1960s as part of a regional plan.

A tendency to prepare general studies courses in haste with superficial planning may be responsible for their failure in some cases. Considerable time and thought are necessary if general studies is to be the basis upon which all of the professions build their curricula. General education requires "careful selection of topics to be considered, coupled with thoroughness, depth, scholarship, rigor, and intellectual discipline in the study of these topics."²⁰²

Some objection to general studies is based on what might be called legitimate differing points of view about the most suitable curriculum for professional training. Other objections to general studies are based on more selfish motivations. For example, many professors resent the centralizing tendency of general studies which reduces their control of the students which they enjoy under the traditional system of separate professional schools.²⁰³

Training of educators. To paraphrase Rousseau, "Man believes that education has the power to set him free, but everywhere he is in chains for want of good teachers."²⁰⁴ The training of educators is one of the key tasks on the agenda for national development. Butts views teacher training "as belonging at the very heart of any human

resource development plan that hopes to contribute to the modernization and building of a free nation."²⁰⁵ Vaizey argues that "the expansion of teacher training is perhaps the most urgent educational need for the underdeveloped countries."²⁰⁶ "More can be done," says Curle, "to raise the standards of education and at less cost through teacher training than any other activity."²⁰⁷

There is growing support for the idea that universities should take an active part in the preparation of educators. The Economic Commission for Latin America strongly advocates that Latin American universities assume teacher education as one of their major responsibilities.²⁰⁸ Butts and Gamboa concur that universities should bear part of the burden of teacher education in underdeveloped countries.²⁰⁹ The Conference on Education and Economic and Social Development in Latin America makes the following recommendation:

. . . that the training and improvement of personnel engaged in educational services--teachers, supervisors, counsellors, administrators, and other specialists--be . . . coordinated with the higher education institutions, according to the usages in each country.²¹⁰

On the following pages, the writer will review the literature pertinent to the preparation of educators at universities in developing countries. The term "educators" has been chosen because, in addition to teachers, other kinds of professionals involved in the educational process must be trained at the university level.

1. The educator as an agent of change. Since development in today's world is a process of rapid change, educators in a developing nation must be prepared to pass on values and techniques of change.

. . . the teacher of today or tomorrow should be an agent of change, an agent of modernization, on the alert for new ideas: that is, he ought to be not only a catalyst, but also a person who can accept constant transformation of the society itself. . . .²¹¹

Education in developing countries is often characterized by the requiring of rote memory of facts, usually through the techniques of lecture and recitation.²¹² In addition, it is frequently little attuned to the life of the students, especially those from the rural areas. The combination of dull classroom routine and irrelevance of subject matter is partly responsible for low interest and dropout.

If teachers are to be agents of change, substantial effort in the training institutions will be required. Coombs states:

Clearly, educational systems will not be modernized until the whole system of teacher training is drastically overhauled, stimulated by educational research, made intellectually richer and more challenging and extended far beyond pre-service training into a system for continuous professional renewal and career development for all teachers.²¹³

Science instruction is often mentioned in the literature as of major importance in teacher training. Curle recommends that all teachers receive science instruction "of a sort to lay the foundations of an objective and experimental approach to nature, rather than technological training."²¹⁴ Gamboa urges "immediate and long-range plans for training of teachers in specialized areas, especially science, mathematics. . . ."²¹⁵ Gale believes that a major goal in education in the developing countries is the "expansion and improvement of science education at all levels."²¹⁶

To be agents of change, teachers must be taught the techniques of problem solving and the methods necessary to teach their

students how to relate what they have learned to the solution of problems.²¹⁷ Miller suggests the following regarding the teaching of problem solving:

Creative problem solving involves identifying a problem, viewing it from various perspectives, finding alternate ways of accomplishing the solution, weighing the relative merits of each alternative, and being willing to try a totally new, unique approach, no matter how wild or inappropriate it may seem at first.²¹⁸

Teachers must also be taught techniques appropriate to handling teaching situations in which they must work: large groups of various-aged students, few materials, and sub-standard facilities. According to Phillips, teachers must be taught to involve their students in "practical tasks and actively observe their environment rather than merely sit at their desks."²¹⁹

The use of media and programmed instruction should be presented to incipient teachers. Coombs believes that teachers taught in the use of such technology as programmed instruction and use of film, radio, and television will be better able to affect larger numbers of students.²²⁰

Butts urges the combination of general education with in-depth training in the specialized field of the teacher:

Such preparation should include sound academic background in a scholarly field of study, thorough grounding in pedagogical methods, and--what is so scarce throughout the world today--a basic understanding of the political, economic, social, psychological, and culture role of education in the modernization process as it manifests itself in one's own country and in other parts of the world.²²¹

Butts says that teachers should be "generalists in the modernization process," saying that this "calls for a general education of the highest order; and it calls especially for the

application of the social sciences and humanities to the study and practice of education."²²²

2. Quality of teachers. In most developing countries, the supply of trained teachers is insufficient now, and the population growth will put even greater pressures on the educational system in the next decade. Arévalo has estimated that literally millions of new teachers will be needed in a relatively short period of time in Latin America alone to keep up with population expansion.²²³

Unfortunately, untrained teachers are not very effective. Williams, in a study made in Guatemala, showed that children taught by untrained teachers are much less likely to stay in school than those taught by trained teachers. Indeed, he believes that "when the proportion of 'qualified' teachers falls below 33 percent . . . the resources devoted to education have been almost completely wasted."²²⁴

Even when teachers have been trained, they do not necessarily contribute to the development of their nation. Harbison, who has pointed out that education can be either a constructive or destructive force depending on the kind and quality of education, laments that in developing nations, education "is too often characterized by 'more of the same' rather than imaginative innovation."²²⁵ Whether the education of a nation is more of the same or not depends to a large extent on the preparation of the nation's educators and requires attention to quality and appropriateness.²²⁶

The attention a nation can give to the quality of training of its teachers depends to a large extent on the country's stage of

development. Nations at the early stages of the development of an educational system must use untrained people with limited formal education as teachers. As the country develops and more students enroll in secondary and tertiary levels, more attention can be placed on providing teachers who are both well educated and properly trained.

The training of elementary teachers is a common practice in most countries. The training of teachers for secondary schools is much more recent in developing countries.

3. Training of secondary school teachers. The training of teachers for the secondary schools is of special importance especially in those countries which have moved into later stages of development. Unfortunately, provision for the training of teachers for secondary schools is lacking in most of the developing countries.²²⁷ Thus, the United Nation's Economic Commission for Latin America advocates that "the university . . . assume responsibility for the training of secondary teachers as one of its most imperative tasks."²²⁸ Butts has shown concern for the lack of teacher training for secondary schools, especially those teachers who will teach in "the academic secondary schools that prepare students for the universities and the normal schools that train teachers for the primary schools."²²⁹ The African Report in Higher Education and Social Change recommends giving secondary teachers special training in universities. Several universities in Africa have formed a consortium to accomplish this and other aims.²³⁰

4. Training of elementary school teachers. Few universities in underdeveloped countries undertake the training of elementary teachers.²³¹ This occurs for several reasons. The great numbers of elementary teachers needed have not permitted the luxury of university degrees for all.²³² Thus, training of elementary teachers is usually given at secondary-level normal schools, which leads to the institutionalization of primary school teacher training in nonuniversity schools. Secondary teachers, on the other hand, in order to have more education than the students they are teaching, must necessarily be trained at tertiary level institutions. Thus, the few universities which train teachers have tended to concentrate on secondary teachers, leaving primary teacher education to the normal schools. As nations reach higher levels of development, the traditional separation of the training of primary and secondary teachers tends to remain.²³³

The result of the separation is an almost complete lack of cooperation and coordination between normal schools and universities. Therefore, teacher education in many underdeveloped countries is characterized by disjunction when congruity and continuity are needed. In addition, the duplication of effort and inefficient use of personnel result in unnecessary costs when economy is of the essence.²³⁴ Butts suggests two ways of overcoming the disjunction between the training of primary and secondary teachers: train both primary and secondary teachers at the university level and establish ties between universities and normal schools.²³⁵

In countries which have passed beyond the elemental stages of development, preparing both primary and secondary teachers at the university level has several advantages. It renders teacher training more efficient by offering some of the same courses to prospective teachers at both levels. More important, it forces educators to begin to look at primary and secondary education as an articulated, integrated whole rather than two distinct pieces. It also stimulates badly needed research related to primary schooling.²³⁶ The establishment of relationships between university and normal schools, suggests Butts, could help upgrade normal school instruction and at the same time play a part in the integration of content and teacher methodology at all educational levels.²³⁷

5. Training of university professors. As developing countries reach the stage of rapidly increasing university enrollment, the training of professors becomes crucial. Benjamin, writing about universities in the Americas, says, "The most pressing problem of professional preparation confronting all these countries in the next three decades will be that of educating professors for higher education institutions."²³⁸ The training of professors is especially important in the areas of the natural and social sciences, since these are two areas which need to be emphasized in developing countries and in which there tend to be few well-trained professors.

6. In-service training. Simply offering teacher-training programs at the university level does not guarantee that the numbers of trained teachers will be greatly increased. It is difficult to

attract students into a five-year program to become teachers when, with the same investment in time, they can become lawyers, engineers, architects or enter other professions which offer more pay and prestige. One of the solutions to this problem, long recommended by the authorities and more recently put into effect with some success in several countries, is the in-service training of teachers who are presently teaching but not certified. Curle states the rationale succinctly:

. . . There are, in fact, considerable numbers of keen and intelligent teachers who have never had the opportunity of obtaining higher qualifications. Many of these . . . would, after a year's training, be excellent teachers in all but the top levels of secondary schools.²³⁹

To give in-service teachers appropriate training, Curle recommends the establishment of special centers, including some attached to the universities. By permitting the course work in these centers to count toward a degree, Curle believes that this kind of program would provide "a powerful incentive to people both to remain in the profession and to keep up their studies."²⁴⁰

The in-service training of teachers at universities has several advantages. First, it invariably involves two or three-year programs, thus cutting in half the time needed to obtain other professional degrees and making it more attractive. Second, it is usually made available on weekends or evenings and during vacations so that working people may enroll in the courses.²⁴¹ Third, in-service training is consistent with the concept of life-long training, a particularly important point for teachers who must be knowledgeable concerning advances in content and methodology.

It is certain that in a technological age we can no longer wait until a whole generation of teachers has died out before introducing new mathematical, scientific or other concepts into the classroom. . . . There is some reason to believe that teachers who have received their basic professional training and subsequent training while already in service might be more inclined to continue with the procedure provided the appropriate institutions were made available on the basis of a modern approach to genuine adult education.²⁴²

A form of in-service training has worked well in the preparation of teachers of the Palestinian refugees in Lebanon, Syria, and Jordan.²⁴³ In this instance, training institutes were set up by UNRWA/UNESCO in 1964 to meet the nearly overwhelming task of upgrading the instruction given by untrained teachers who had been pressed into service to meet the educational needs of 250,000 children. The program, carried out through a combination of correspondence work and periodic field representative supervision, trained thousands of teachers.²⁴⁴

In-service training has also been conducted in Costa Rica at its national Superior Normal School in which practicing, non-degreed teachers take courses during their vacation periods, receiving certification at the end of two years.²⁴⁵ In-service training has also been used in the Faculty of Education at the University of Antioquia, a project in "which teachers in small rural schools receive special training and specially designed teaching materials to improve the quality of rural elementary school education."²⁴⁶

7. Teaching of values. Writers on development are coming to place an increasing amount of importance on value orientation in

determining how fast and in what ways countries develop. Writing for the Encyclopedia of Education, Hanson states

. . . changing motivations and the creation of an environment in which change or innovation can occur, or in which they are actively prized may prove to be a more crucial contribution than manpower education.²⁴⁷

Whyte argues that values prevalent in Latin America are obstacles in themselves to development. Specifically, he mentions strong traditionalism, paternalistic relationships, belief in ascribed status, lack of faith in people outside the family circle, reluctance to cooperate, little sense of loyalty to community or nation, and aversion to blue collar work.²⁴⁸ To this list, Adams and Bjork add the "fatalistic belief that events cannot be predicted or controlled."²⁴⁹

Brembeck argues that fatalism is a serious deterrent to modernization. He says that "the better life will depend on our ability to turn from fatalism to dynamism," and asks that education be used to "unfreeze resistance to change and open the mind to new ideas." Education, he says, must "create new values around applied intelligence. It must teach people to move from discourse into action. . . . Finally, it must help people control their own destinies."²⁵⁰

Research by McClelland indicates that the presence of what he calls "achievement motivation" and "other-directedness" in the national value system are important predictors of economic growth. McClelland contends that the most important ingredient in development is people and that their values should and can be changed to increase the speed of modernization. To accomplish this aim, he

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suggests a variety of methods including the modification of children's textbooks and literature to contain heavy emphasis on achievement motivation and other directedness values.²⁵¹ This was tried out in Turkey in the early 1960s, and presently the Universidad de Antioquia is training teachers to use achievement motivation methodologies for working with rural children in Colombia.²⁵²

Several authors hold that schools can be vehicles for value training. Curle, although critical of efforts to "mould a development-oriented personality," suggests that teachers try to inculcate in their students "regular and constructive habits of work, an inquiring and experimental attitude, a sense of balance between individuals and society, a respect for accuracy, a delight in the imagination."²⁵³ Adams and Bjork argue that some of the traditional and inhibitive values in Latin America should be modified "in order to make the school more of a force for modernization."²⁵⁴ They suggest that teachers provide an environment of system and order in which behavior of others and circumstances in general are predictable. They argue for the instruction to focus on "the scientific method, critical thinking, and the careful analysis and evaluation of empirical evidence" as a way of helping students overcome their belief in fatalism.²⁵⁵

The inculcation of values in children requires that the teacher hold the desired values.²⁵⁶ This has important implications for the selection and training of teachers. If teachers must hold attitudes appropriate for development, they must also have some understanding of and sensitivity to their students' cultural

backgrounds.²⁵⁷ Teachers with modern values are unlikely to have much success in inculcating their values if they misunderstand or degrade their students. Teachers in developing countries must be "marginal men"; they must "bridge the gap between the traditional and modern sectors of the society."²⁵⁸

8. Development of teaching techniques and materials. The development of teaching techniques and materials to meet particular educational needs is an important function of a teacher-training institution. At the University of Antioquia in Colombia, two important primary school programs were developed to respond to rural education needs. One is a program to prepare teachers and teaching materials for instruction in the rural schools which have one teacher, and an average of thirty students spread over five grades. The other is a program to adopt flexible scheduling and individualized teaching methods to rural schools in which children are unable to attend classes every day.²⁵⁹

In the first program, teachers are given special training in such areas as group dynamics, learning psychology, and evaluation. The University has brought together normal school representatives, Ministry of Education supervisors, and illustrators to design and print a series of teaching materials specifically aimed at aiding instruction under conditions in which one teacher is responsible for five different grade levels. To date, seventy primary schools have been supplied with trained teachers and teaching materials.²⁶⁰

In the second program, an attempt has been made to prepare programmed materials and train teachers to work with students in

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rural areas in which low attendance is a problem. Students are required to attend classes only three days a week, determined in consultation with the parents. During the two days the children are not in attendance, some work is done in the home.²⁶¹

9. Teacher-training institutions as a model. If a university is to be an effective force for the education of educators, it must provide an appropriate model. It must be a center for innovation and research; it should encourage the application of research results and innovation; it should be in touch with the community; it should maintain close contact with teachers and schools both in appraising the present status of education and to guide the teachers in improving their instruction.²⁶²

The quality of instruction must also provide a model. A former Minister of Education of Guatemala warns, "If the teacher trainers in initial training were to impart out-of-date methods and attitudes in their own teaching, this would, of course, have long-lasting and fatal consequences for the whole system."²⁶³ Butts further asserts that "a university that would improve the quality of teachers in its nation's schools must improve the quality of its own instruction."²⁶⁴

Butts stresses the importance of full-time teaching at the universities as a way to "strengthen the image of teaching as a career worthy of one's full energies and powers throughout a lifetime."²⁶⁵ Finally he says:

As university administrators and faculties take steps to discipline themselves and to improve their full-time teaching practices, modernize their curriculums, and give more attention

to knowing their students through counseling and testing, they are taking steps to reduce the spirit of indiscipline among students.²⁶⁶

Training in science and social science. The Economic Commission for Latin America states that "development is largely the result of the transformation of social life by science and technology."²⁶⁷ The teaching of science at universities produces scientists and technicians, but also "scientifically and technically literate people who can live safely and sanely in a new kind of world."²⁶⁸ All students should have some grounding in science since it is the base of modern society, i.e., developed society.

The attitudes and values implicit in science are of supreme importance for development. Snow notes that scientists are basically optimistic concerning the ability to overcome problems and improve the lot of society in general.²⁶⁹ This kind of approach to life is crucial. For as Curle says, "The solvent for resistance to the social and technical revolution demanded by development is hope generated by the understanding of the possibility of change."²⁷⁰ The scientific approach, with both its optimism and proven ability to make change possible, is the ingredient needed as the "solvent" Curle refers to.

The scientific approach, with its emphasis on observation and control of the environment, critical thinking and problem solving, provides an excellent model for the development process.²⁷¹ The training of teachers in science is important as a way to disseminate the values, knowledge, and techniques of science throughout society. The training of science teachers is implicit in the list of education

needs included in the Act of Bogotá, 1960. It includes a specified national objective of "training in the industrial arts and sciences with due emphasis on laboratory and work experiences and on the practical application of knowledge for the solution of social and economic problems."²⁷²

Scientists are needed in developing countries to improve, increase and exploit their natural resources--soil, water, minerals, and plants. Scientists are needed to perform adaptive research, i.e., "the application of already existing technological knowledge to the climatic, geological, chemical peculiarities of the local situation."²⁷³

The high mortality rates, especially from infectious and parasitic diseases, require scientists trained in biology, entomology, and medicine.²⁷⁴ Agriculture is almost universally the main industry in developing countries, but the land is usually ineffectively farmed. One of the often cited needs in developing countries is the preparation of agriculturists who can conduct research aimed at improving crop production. In addition, there is a need for people trained in the food sciences.²⁷⁵

Training in the social sciences is also strongly recommended by development authorities. Economists, sociologists, anthropologists, and other professionals in the social sciences are needed to analyze the present social conditions of their countries and plan for changes which are a necessary part of modernization.²⁷⁶ The social scientist is needed to collaborate with the natural scientist in the development process. Simply developing new low cost nutritious food, for example,

may not be sufficient to improve the nutrition of a nation. Finding ways to induce the masses of people to eat the food is equally important and requires the expertise of the social scientists.²⁷⁷

A final recommendation is to ensure that students in the natural sciences and social sciences have adequate opportunity to apply their training in field work experiences. For knowledge without the ability to apply it is worthless. Development is application.²⁷⁸

Research

Research is generally recognized as an important ingredient in the development process. Unfortunately, the Latin American university is based on a model which excluded research. According to one source, the lack of research is "the main defect of the Latin American universities."²⁷⁹ Recently, however, several institutions of higher education in Latin America as well as other parts of the world have begun conducting research on a variety of matters.²⁸⁰

The importance of research is made clear by many authors. Paddock describes his frustrating and unsuccessful attempt to make an imported cornpicker work on a farm in a Central American country. His specific point is that successful adaptation requires local research and development in order to design a machine to pick the particular kind of corn grown in that locality. The more general point he makes is that without research, development is difficult, if not impossible.²⁸¹

The Economic Commission for Latin America notes that the lack of scientific and technological research helps keep Latin

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American countries backward and dependent.²⁸² Hanson and Brembeck point out that insufficient research is a characteristic of underdevelopment:

The establishing of policies and programs on the basis of objective and relevant data rather than upon traditional matters of personal whims is a characteristic of that modernity still being sought in the developing nations.²⁸³

They go on to say that since education is now viewed as an important tool for development, great effort must be expended to analyze problems and plan programs for education in underdeveloped nations. This requires extensive research not only in education but in related fields as well.²⁸⁴ Similarly, the World Bank reports that educational policy making requires research and urges the development of local research capacity in less developed countries.²⁸⁵

Educational research. Research is important in the field of education not only because its impact is so large, but also because the general tendency in developing countries has been to adopt uncritically educational practices from the more developed countries. There is a need for research related to improved teaching methods, materials, and curriculum for the schools of poor nations.²⁸⁶ There is also a need for research related to the training of educators on a wide variety of issues such as the content of teacher education curriculum, the length of the training courses, methods of attracting teachers into rural areas, and causes of student dropout.²⁸⁷

Research and analysis related to the functions of universities is called for. Although universities have existed for many centuries, very little research has been undertaken with respect to their

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effectiveness. With universities taking on a broader role in society, Fafunwa argues for "analytic writing and data-based research . . . on higher education in developing countries."²⁸⁸

Research institutes. One common organizational mechanism for conducting research at universities is the research institute. There have been many research institutes established in Latin America, including several in the Central American universities: the Institute for Educational Research and Improvement at the Universidad de San Carlos in Guatemala, the Social and Economic Research Institute at the Universidad de Costa Rica, the Comparative Law Institute in Honduras, and the Penal Sciences Institute in El Salvador. These institutes are projects of CSUCA and meant to be specialized research centers similar to those mentioned earlier. The major problems with institutes in the Central American region have been financing.²⁸⁹

Research on social problems through institutes has increased in the last ten years.²⁹⁰ To systematize and communicate this research, Phillips recommends the establishment of "an international center for educational research and development for the developing countries."²⁹¹

One of the chief functions of research institutes is that they provide a vehicle for bringing together researchers from various disciplines to collaborate in problem-oriented projects. They are frequently involved in action research as well as theoretical and applied research. Creation of research institutes, as mentioned earlier, is an administrative device for "breaking down artificial walls between fields of knowledge."²⁹²

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Research patterns: theoretical and applied research. Traditionally, research in universities has been theoretical or "pure" research. The business of applying theoretical research findings has been left to technical institutions. Now the authorities stress the need for applied and action research; that is, research used directly for the solution of problems.²⁹³

It has been pointed out that even though applied research is important, it should not be done at the expense of ". . . the continuous search for data needed to enhance our understanding our own society."²⁹⁴ Clearly development-oriented universities must engage in both pure and applied research.²⁹⁵

Relationship of research to teacher and service. The idea that research should be combined with teaching and service is gaining acceptance at development-oriented universities.²⁹⁶ Fogel suggests that research, training, and teaching should be blended together in an academic program so that each element benefits the other.²⁹⁷

Thompson and Fogel state the following:

In all operational programs, there should be an easy flow among all three aspects of a project; each affects the other. Faculty members should be required to participate in field activities and have time to carry out field research; service activities should be planned on the basis of solid research and should enrich teaching. Students should have opportunities to see theory in action in the field and to bring service or work experience back into the classroom for analysis.²⁹⁸

Training of researchers. Several authorities stress the importance of training people to conduct research of all kinds. Fafunwa lists graduates specialized in research as one of the five types of

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personnel which should be trained by universities in less developed nations.²⁹⁹ Anderson emphasizes the need to prepare educational researchers, saying that the educational investigator in a developing nation "will have distinctively large responsibilities as compared to his colleague in chemistry or meteorology."³⁰⁰ A LASPAU report reflects the reasoning that research experience enhances the training of students and "improves the quality and relevance of the curriculum."³⁰¹

Dissemination. Many authorities insist on the dissemination of research results as a crucial element of the research process. Benjamin urges the publishing of research results in journals sponsored by scholarly and scientific societies and by the universities themselves.³⁰² The University of Addis Ababa places strong emphasis on research dissemination, requiring the Research Center of the Faculty of Education and the Institute of Development Research to publish all research conducted in these two centers. As part of this responsibility, the Research Center of the Faculty of Education publishes the Ethiopian Journal of Education.³⁰³

The following are some recommendations concerning the communication of research projects from Design for Change:

1. Local research should always be published and given the widest possible distribution nationally and even internationally.
2. Dissemination can be carried out through publication in journals and newspapers (The Institute of Development Studies in Nairobi has a column in a local newspaper), seminars, general meetings with community, radio and television.
3. The communication, either written or oral, should be made in clear language which can be understood by intelligent laymen.³⁰⁴

The following are some recommendations for planning and utilizing research in universities, also taken from Design for Change.

1. Encourage pertinent research in new fields related to local environments, attracting both local and foreign scientists.
2. Require teaching staff and students to participate in on-the-scene action research (agriculture, health sciences, social sciences).
3. Give university credit to students for participation in field work through research programs.
4. Involve people from various disciplines on projects, and provide time for them to dialogue on such topics as teaching, research, and service, and the relation among these activities.
5. Arrange for technicians to work with researchers and professional practitioners.
6. Get confidence of the community by involving village leaders in the project, eliciting their help and knowledge in organizing local councils, deciding on priorities, and implementing activities. Encourage initiative and leadership among locals.
7. Show respect for community thinking to overcome disillusionment and disappointment caused by previous government bungling in this respect.
8. Exchange knowledge and experience with government and industry.
9. Write reports for the benefit of lay readers instead of in heavy-toned jargon.
10. Consult with government on social and economic priorities.³⁰⁵

Service

According to McConnell, "It is terribly important that universities abroad be persuaded to accept a responsibility for service activities in addition to the traditional role of educating youth in liberal and professional studies."³⁰⁶ The practice of requiring students to participate in some kind of service program or "internship" is not new to Latin America. The most common application of this concept is the sending of medical students to communities for

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designated periods of time to engage in work "frequently unrelated to the student's academic program, and in no way involving the faculty. . . ." ³⁰⁷

In the last decade or two, especially among the handful of universities that are making serious attempts to participate in national development, the concept of service is taking on new meaning. Several universities are "developing extension programs, service institutes, and research agencies directed toward regional problems." ³⁰⁸ Thompson and Fogel report several educational institutions engaged in

. . . extension programs, adult education, consultancy centers, assistance to small and medium-sized landowners, health delivery in rural and urban areas, experimental farming, high-priority manpower training, land reform and human settlement, preparation of business technicians and middle managers, and primary and secondary education. ³⁰⁹

One-third of the faculties of Mexican provincial universities provide community courses: adult education, in-service for teachers, and ". . . special courses for state and federal agencies, particularly in the fields of public health and social welfare." ³¹⁰ University staff offer courses for the Padres de familia in cooperation with the Institute of Social Security. ³¹¹

The authorities point out several reasons for believing that service should be an integral part of the university endeavor. First, it is a direct contribution to national development which can have many benefits for the communities in which the programs are instituted. The PRIMOPS program at the Universidad del Valle in Colombia, for example, provides important health care that has resulted in measurably better community health and lowered mortality rates. ³¹²

Another benefit to the community is the contact with university personnel which can result in changing values and attitudes that will remain after the service program ends. The agricultural service program at the National Agrarian University of Perú arranges for the students to live with the local farmers. This has had positive results in achieving adoption by the farmers of the newer and more effective techniques. The University of Bahia in Brazil involves community members in its urban development service projects in planning and implementing its program.³¹³

A second reason for encouraging service projects is the value to the students who participate. Personal involvement may be a means of improving their learning and influencing their attitudes. Working in a health delivery service program can be of great value to the medical student. Conducting a sociological survey as part of a community service program should be valuable to the prospective social scientist. Working as part of a multidisciplinary team on a project such as the one in Thailand or the CEDUR project in Brazil also provides invaluable experience in the combination of several disciplines directed at solving social problems.³¹⁴

Although some authors stress the importance of changing students' attitudes to favor work for development, there is less than universal belief that this will occur. Compulsory student service has been opposed in many places by students and faculty members.³¹⁵ Conceivably, under these circumstances, more harm than good could be accomplished.

A third argument in support of service projects is that they provide a vehicle for applying teaching and research to practical problems.

. . . The theoretical researcher hears about practical problems from the extension workers, and the teacher of practical skills draws on the researcher's findings and results. For students, service activities can illuminate theory and link up with textbook study.³¹⁶

It is recommended that the professors take part in community service programs. Involvement by professors is likely to encourage positive student participation on the one hand.³¹⁷ On the other, teachers who work in the field are more likely to incorporate field experience in their teaching, thereby making both more useful.

At the Monterrey Institute of Technology in México, extension projects are used primarily to improve teaching and only indirectly to contribute to community development.³¹⁸ The same is true at Haile Selassie I University in Ethiopia. In that program called "Ethiopian University Service," service is one function, but the primary rationale is educational. There both the faculty and students are directly involved in the selection of and realization of research projects.³¹⁹

A number of objections to community service are raised by members of recipient communities, students, and professors; however, in many cases the objections have been overcome by analysis and planning. Sometimes community members are hostile because they have had "experience of past deceit on the part of agencies and politicians." Farmers often feel that research and service programs are useless. Many are "passive or disinterested."³²⁰ Programs

developed in Perú, Thailand, and Nigeria have overcome these obstacles by careful planning with community participants; discovering the traditional practices before trying to change the people or the methods; encouraging the community members to solve their own problems insofar as possible; keeping communications open between the community and university personnel; arranging for students and farmers to live and work together if possible.³²¹

There are numerous conditions which militate against the students participating actively in service projects, particularly rural ones. They may feel isolated and neglected when assigned to a distant region; they may feel the training is substandard since it is more physical than mental; they may show little interest in or knowledge of local conditions; they may not desire to work in outlying areas after graduation and, therefore, see no reason for working there as part of their training. Again, the participating persons must be carefully selected, prepared, counseled, supervised, and involved in the planning of the project.³²²

Many staff members may be unwilling to participate in voluntary field activities. They usually identify education with traditional classroom lecture-from-notes methods, based on abstract scholarship. They may feel threatened by new teaching approaches which require practical applications of theoretical knowledge. If the professors are included in the planning of the projects; thoroughly informed of all the ramifications; provided more money for appropriate housing and transportation; and compensated for extra salary they might have received for outside consultation and

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services at home; given additional security and incentive to work on special projects involving teaching-research-consulting which, in effect, upgrade their professional standing; and given some prestige for their participation, these negative attitudes can be overcome as they have been in México, Perú, Tanzania, Brazil, and several other countries where significant contributions are being made to nations through university service programs.³²³

Involvement in service projects and research may make it possible for universities to offer full-time employment to staff members, an idea receiving considerable positive attention.

Both staff members and students should receive appropriate recognition in the national and international communities "as bona fide scholars and scientists." Recognizing the cultural values of the country, prestige factors may be purposefully manipulated through financial and nonfinancial incentives.³²⁴

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Chapter 3

GUATEMALA: THE SETTING FOR CHANGE

PHYSICAL SETTING

Physical Environment

Guatemala is the northernmost nation of Central America, bordered by Mexico, Honduras, and El Salvador, with coastal access to the Pacific and the Caribbean. In both size and shape it resembles the state of Ohio. Its climate and landforms vary from hot and humid coastal lowlands and rain forests to cold highlands where frosts are common. There are two seasons: the rainy season, which lasts from May to October, and the dry season, which lasts from November to April. Because of the variety of climate and altitude, any crop grown in the Western Hemisphere may be grown in Guatemala.¹

Guatemala is a land of considerable volcanic and seismic activity. A chain of volcanoes, several of which are active, extends across the country. Their eruptions cause some damage to crops and homes and occasionally result in death to humans. The serious danger, however, is from earthquakes which have caused much death and destruction throughout Guatemala's history. The most recent

earthquake, on February 4, 1976, killed 23,000 people, caused millions of dollars of damage, and left over 1,000,000 people homeless.²

Settlement Patterns

Guatemala has a rapidly growing population of over six million people.³ Two-thirds of the population, mostly Indian, live in rural areas, the vast majority of whom engage in subsistence agriculture on small plots of land or work as agricultural laborers on the middle-sized to large plantations.⁴ Most rural inhabitants are poor, living in one-room dwellings of adobe or cane stalk construction.⁵

About one-third of the population, mostly ladinos, live in urban areas which are located in the highlands. Over one million inhabitants reside in the capital city, Central America's largest metropolitan area.⁶

Migration of the poor from the country to the city, which had risen steadily during the last few years, increased radically after the earthquake of 1976, due in part to the fact that most of the homes destroyed belonged to rural poor. This migration, which has caused a population growth in the urban areas of more than twice the amount in the country as a whole, is occurring much more rapidly than the expansion of services and jobs in the city. The result is crowded living, unsanitary conditions with high rates of crime, disease, and other social problems.⁷

The tropical lowlands of the northern area, El Petén, and the Pacific Coast are sparsely populated. Certain Pacific lowlands are

being developed industrially, due to the hydroelectric potential of rivers there, and agriculturally, because of the rich volcanic and alluvial soil.⁸

ECONOMIC PATTERNS

Agriculture

Because of the favorable climate, much fertile soil, and slow technological growth, agriculture has remained a dominant element of the Guatemalan economy. Agriculture accounts for about 30 percent of the gross national product, commerce for 28 percent, and manufacturing for 15 percent.⁹ Although the recent growth rate in agriculture is high, the gain is principally in nonfood crops for export.¹⁰ Even though Guatemala is an exporter of coffee, cotton, and bananas, it has to invest heavily in imported food crops to feed its people. This is a paradox since Guatemala has enough fertile land which, if cultivated effectively, could feed all of Central America.¹¹

A small percentage of the farmers are owners of middle-sized to large plantations, a phenomenon common to Latin America called latifundismo.¹² More than 70 percent of agricultural lands are controlled by 2 percent of all landowners.¹³ These are the wealthy elite whose plantations produce the bulk of Guatemala's export crops. Theirs is the best land, farmed with modern techniques and equipment. Most large plantations have substantial portions of good land not in use.¹⁴ The government also owns much uncultivated agricultural land.¹⁵

Until new laws can be effected relating to transfer of land, specifically improvement of credit facilities, the balance of land ownership will remain as it is. Major banks will not give small farmers credit on long-term loans, and unless one can accumulate sufficient capital to pay cash, land purchase is ordinarily not possible for the less affluent. Large landholders are disinclined to sell property to small holders since they must act as the credit agents.¹⁶

In contrast to latifundismo is a contrapuntal phenomenon, minifundismo, the working of small, uneconomical plots of land (milpas). As has been indicated, many Guatemalans, mostly Indians, live according to this pattern. Nine out of ten farmers work plots of land less than five acres in size.¹⁷

The staple foods of most rural Guatemalans are corn, beans, and squash. Usually, all three foods are grown on the milpa. Often hogs and chickens are raised on the family plots as well. Unfortunately, the milpa agriculture practiced by Indians and poor ladinos is inefficient. Much land is exhausted from years of continuous planting without crop rotation and slash and burn farming techniques. Many plots are located on the sides of hills, decreasing productivity. Corn, beans, and squash are planted in many highland areas not particularly suited for efficient growth. To date there has been little attention paid to seed selection or improvement, nor to careful breeding of hogs and chickens. Finally, milpa agriculture employs primitive production techniques. A digging stick, hoe, and machete are the three principal tools for planting and harvesting.¹⁸

Given the inefficiency on the milpas in Guatemala, and the resultant subsistence lives of the majority of Guatemalans, extensive agricultural research is urgently needed.¹⁹

In addition to the milpa farmers, there are "thousands of landless peasants who work on the large farms."²⁰ Many farm laborers, called colonos, work the land for the finca owners and till a small plot of land for themselves which is loaned them in partial payment for their work. Other farm laborers migrate from the highlands to the coffee and cane plantations at certain times of the year to assist with the harvests.²¹

Industry and Commerce

Most industry, commerce, and banking activities are concentrated in Guatemala City. The export of agricultural products is the chief source of dollar influx for the country. The import of most manufactured items, including heavy machinery, accounts for a large part of the dollar outflow. With the encouragement of the Central American Common Market, consumer goods produced all over Central America can be exchanged without customs duties. This has engendered growth in industrial and commercial activity. Guatemala now has a growing light industry producing such products as plastics, paper, paints, automobile tires, textiles, chemicals, and pharmaceuticals which are distributed throughout Central America.²²

Manpower

Between 1950 and 1973 the population of persons ten years of age or older rose from almost two million to over three and one-half million, a growth rate of 2.6 percent annually. In that same period

the economically active population of the same age range grew at the rate of 2.1 percent annually or less than the corresponding growth of the same age group. About three-fourths of the population ten years of age or older is economically active. Of the total working population, about 12 percent are women.²³

The largest occupational group, about 57 percent of the work force, includes farmers, hunters, fishermen, and loggers. The next largest group works in industry and manufacturing, about 13 percent. Professionals and technicians account for about 3 percent. Only 1.6 percent of the work force are administrators, executives, and managers, a lower percentage than in most other Latin American countries. Guatemala has only 186 scientists and engineers engaged in research: one researcher per 22,435 people.²⁴

Two basic labor laws which are presently operative are the Labor Code of 1961 (with alterations in 1963), and the Organic Law of the Guatemala Social Security Institute. Indians and ladinos are covered equally: equal pay, eight-hour work day, forty-eight hour week, paid vacations, maternity leave, and the right to organize and strike. Obligations of the employer, including working conditions, are specified. Later additions to the code are a mandatory Christmas bonus, a retirement plan, and survivors' benefits.²⁵

Economic Growth

Guatemala has enjoyed a period of economic growth during the last two decades. The Central American Common Market has contributed to the expansion of the export market, and several years of favorable coffee prices have greatly increased revenue. There is much

construction evident in the capital city and, although inflation is high, there is a general sense of economic growth in Guatemala. Nevertheless, Guatemala confronts many obstacles to sustained economic growth. Some of the problems are: (1) low local demand for manufactured goods, (2) ineffective marketing and distribution, (3) inadequate technology to enforce quality control, (4) lack of long-term financing, and (5) lack of economic infrastructure (shortage of roads, power, irrigation, sanitary water supplies, etc.).²⁶

Political instability has long had a dampening effect on local investment. Given the political uncertainties, many Guatemalans prefer to invest outside the country. At the time of this writing, for example, bankers report a heavy outflow of money from Guatemala, attributed to the fear that the recent revolution in Nicaragua may spread to Guatemala.²⁷

Worldwide inflation has affected the Guatemalan economy. For example, the rate of inflation in 1978 was 12.6 percent.²⁸

As an exporter of crops with but a fledgling industrial base, much of which is in the hands of foreigners, Guatemala finds itself quite dependent on other nations. Most manufactured goods and raw materials must be imported. The recent increases in the price of petroleum have put an economic burden on Guatemala since all of its oil is imported. During the past few years, prices on Guatemala's export crops have been high, bringing relative prosperity. However, a substantial decrease in the price of coffee on the world market could send the economy into a recession.²⁹

Guatemala is not without its supply of natural resources. It has reserves of antimony, tungsten, nickel, copper, lead, and zinc.³⁰ To date, however, only nickel has been mined in quantity, and that by a foreign company. It is believed that petroleum reserves exist in the north of Guatemala. Several oil companies are presently exploring the Peten area. Guatemala also has an abundant supply of excellent hardwood in the Peten, and there are good fisheries off both the Atlantic and Pacific Coasts. Guatemala's inability to exploit its natural resources is rooted in its lack of capital, technology, transportation, and properly trained manpower.³¹

SOCIAL SETTING

The Two Cultures

Guatemalan society is actually two cultures in one, with very few links between the Indian and ladino. Kinship patterns, status in society, religious beliefs, and social values differ radically from one culture to another.³²

At the time of the last census, 1973, 44 percent of Guatemala's population was classified as Indian and 56 percent as ladino.³³ The Indians lead an agricultural life that has remained essentially unchanged for centuries.³⁴ The values in Indian society stress the importance of loyalty to community, earned status, and a world controlled by supernatural forces to which one must conform. The traditional Indian views life as an unchanging and "timeless present."³⁵

The ladino, on the other hand, is governed by values which place more importance on the individual and family than on the community, and emphasize ascribed status and material wealth. In contrast to the submissive view of the Indians, ladinos tend to

believe that "the universe can be controlled or manipulated by man, and that an individual can determine his own destiny and guide that of his fellows."³⁶

There is some incorporation of the Indian into the economic and social structure, but as an inferior. For the most part the Indian lives on the margin of modern economic and social life. There are enormous disparities between Indian and ladino with regard to access to good land, employment, infrastructure, and public services. It is this "economic dualism" which some analysts believe is responsible for the restriction of Guatemala's development, since only a limited segment of the population contributes to and enjoys the benefits of economic and social progress.

It should be pointed out that the process of acculturation of the Indian is beginning to accelerate. In the 1950 census, 53 percent of the Guatemalan population were described as Indian.³⁷ That dropped to 44 percent in the 1973 census, and is presently estimated at 40 percent. As the communication systems continue to improve, medical and educational services expand, and life on mini-fundia farms becomes more difficult forcing Indians to move to the cities, the acculturation process will continue to accelerate. Some authorities believe that within the next century, the Indian culture as it is known now will have died out.³⁸

Social Structure

Much of Guatemala's wealth is in the hands of plantation owners, a few industrialists and successful professionals, and high government officials. Their lifestyle is luxurious: an extensive

social life, frequent trips abroad, several homes, a retinue of servants, the finest schools for their children. This so-called elite, or upper class, is concentrated in the cities, particularly the capital.³⁹ The upper class is conservative politically, has strong ties with the military, and exercises great influence on government and the economy.

The middle class is composed of teachers, middle level government employees, small businessmen, military officers, the majority of doctors and lawyers, and a few skilled laborers. Most of the middle class reside in the cities, although the number of rural middle class families is on the rise.⁴⁰ Generally speaking, middle class families have reasonably comfortable homes, an automobile, several modern appliances, a servant, and access to good medical care. Most send their children to private schools.

Recently, the middle class has begun to assume a position of some importance in the social and political structure. It is the hope of some that the expansion of number and influence of the middle class in the last few years will permit Guatemala to move decisively toward development without violent revolution.⁴¹

The preponderance of Guatemalans belongs to the lower class: subsistence farmers, migrant and residential workers, servants, bus drivers, taxi drivers, industrial laborers, and the unemployed. Most of the nation's poverty is here: high illiteracy, inadequate sanitation and health services, poor housing, malnutrition, frequent sickness, and early death. As in most countries, the lower class exerts little or no political influence.⁴²

Health

Malnutrition is endemic in Guatemala, especially in the rural areas. A survey made by the Inter-American Development Bank shows that the average per capita consumption in Guatemala is about 2,000 calories and 25 grams of protein per day. The minimum daily requirements for the region as estimated by the Food and Agricultural Organization of the United Nations are 2,550 calories and 71 grams of protein.⁴³ Protein-calorie malnutrition is significantly related to many deaths in pre-school children. It is also responsible for the mental retardation of children and reduced efficiency of laborers.⁴⁴

The mortality rate in Guatemala is 11.8 per 1,000 inhabitants.⁴⁵ The average life expectancy at birth is forty-nine years, the third lowest in Latin America.⁴⁶ It is estimated that one child in ten dies before reaching the age of one year.⁴⁷

The ratio of doctors to inhabitants is low: one to 4,344. About 83 percent of the doctors reside in the cities. Thus, many rural inhabitants do not have adequate medical attention.⁴⁸ As many as one in five people who die of illness never see a doctor during the illness which kills them.⁴⁹

The insufficient supply of doctors is not the only reason for inadequate medical attention. Many rural inhabitants, especially the Indians, are superstitious about their health. The use of witch doctors and folk cures leads to much illness and untimely death.⁵⁰

Water and sanitary facilities are almost universally inadequate in rural areas. About 90 percent of the rural population and 15 percent of the urban population lack adequate water and sewerage

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facilities. With rare exceptions, only the urban dwellers have indoor sanitary facilities.⁵¹ Gastroenteritis, a disease directly related to unsanitary conditions, is the largest cause of death in Guatemala.⁵² It is estimated that nearly 40 percent of the deaths in Guatemala are caused by infections and parasitic diseases.⁵³

Malaria, which had nearly been eradicated by the end of the 1960s, is resurging throughout Central America. The rise in the number of confirmed cases in Guatemala has been dramatic: from 5,000 cases in 1975, to 60,000 in 1978.⁵⁴

The high mortality rate is offset by a high birth rate estimated to be nearly 3 percent per year.⁵⁵ This means a doubling of the population during the next twenty years should the rate remain constant.⁵⁶ The high birth rate results in a decrease in the percentage of the population which is economically active with a concomitant increase in the number of dependents. One result is an increasing burden for the nation's schools.

Given the rapid increase in population, some interest has been generated in family planning. Since 1965, several organizations have been established to train family planning personnel and to give advice and contraceptives to people throughout Guatemala. Nevertheless, only a small percentage of the Guatemalan population uses birth control techniques. Some experts point out that in order to have a greater effect on family planning, it is necessary for sex education to be introduced in the secondary and even elementary schools "so that the individuals can more readily accept the idea of discussing problems of contraception and asking for advice."⁵⁷

EDUCATION

The Constitutional Framework

The Constitution of 1965, which is in effect as of this writing, lists the following educational goals for the nation:

1. integral development of the personality,
2. physical and spiritual betterment,
3. improvement of individual responsibility of the citizen,
4. civic progress of the nation,
5. improvement of sense of patriotism, and
6. respect for human rights.⁵⁸

The Constitution proclaims the right of all to an education, makes primary education free and obligatory for all children within the age limits to be set by law, authorizes the functioning of private schools under the supervision of the state, and makes contribution to literacy a social obligation.⁵⁹

The Administration of Education

Figure 2 provides a graphic description of the Guatemalan education system. As can be seen, education is organized on four levels: preprimary, primary, secondary, and higher. Of the first three levels, public and private education are under the control of the Ministry of Education, headed by a Minister and Vice-Minister of Education, both appointed by the President of the Republic. Four advisory groups assist the Minister: Technical Council of Education, Office of Educational Planning, Legal Office, and Office for the Coordination of International Matters.⁶⁰

There are two major divisions within the Ministry of Education: General Office of Education and Office of Culture and Fine Arts, each managed by a director appointed by the Minister of

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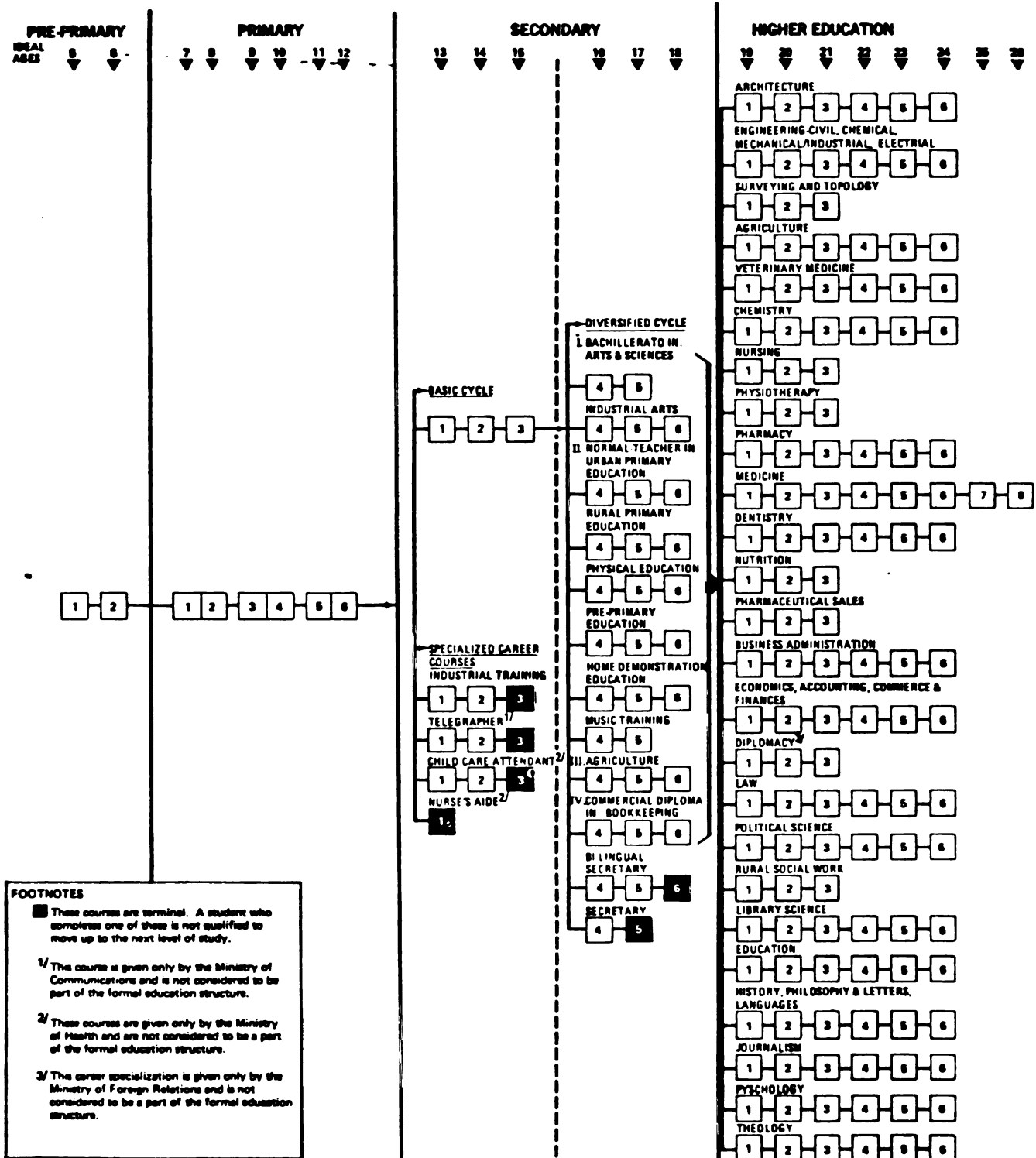


Figure 2

Educational System of Guatemala

SOURCE: Statistics for the Analysis of the Educational Sector: Guatemala (Guatemala: Agency for International Development, 1974), p. 8.

Education. Each of the two major divisions is subdivided into offices and departments.⁶¹ For a diagram of the administrative structure of the Ministry of Education, please refer to Figure 3.

Literacy

In spite of the Constitution's emphasis on literacy and myriad literacy campaigns, only about half the Guatemalan population can read and write.⁶² Literacy rates in Guatemala vary according to sex, place of residence, cultural background, and other factors. About 70 percent of the urban population is literate as compared with 30 percent of the rural population. Sixty-three percent of the ladinos are literate, but only 23 percent of the Indian population can read and write. The literacy rate is considerably higher among males than females: 52 percent and 38 percent, respectively. The most literate group is urban ladino males: 85 percent. The group with the lowest literacy rate is rural Indian females: 10 percent.⁶³

Enrollment in Preprimary, Primary, and Secondary Schools

About one-third of the school-age children in Guatemala are enrolled in preprimary, primary, or secondary schools. In 1977, of a total enrollment of 864,378 children, 37,105 (4%) were enrolled in preprimary schools, 681,503 (79%) in primary schools, and 145,770 (17%) in secondary schools.⁶⁴ School enrollment data by sector and area are shown in Table 1.

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Minister
Vice-Minister

<u>General Office of Education</u>		<u>Office of Culture and Fine Arts</u>	
Urban preprimary and primary education		Institute of History and Anthropology	
Rural socioeducational development		National Library	
Secondary education		Guatemalan social integration seminar	
Literacy and adult education		Censorship of public activities	
Esthetic education		Music	
Physical and health education		Dance	
Student welfare and special education		Theater	
		Literary activities	
		Plastic arts	
		National folkloric arts	
		National Institute of Fine Arts	
Technical Council of Education	Office of Educational Planning	Legal Office	Office for the Coordination of International Matters

Figure 3

Administrative Structure of the Ministry of Education

SOURCE: Ministerio de Educación, Ley Orgánica de Educación Nacional, Decreto-Ley Número 317 (Guatemala: Centro Editorial José de Pineda Ibarra, 1965), pp. 20-26.

Table 1

Enrollment in Preprimary, Primary, and Secondary Schools: 1977

Level	Sex		Sector		Area	
	Male	Female	Public	Private	Urban	Rural
Preprimary	13,381 (50%)	18,724 (50%)	21,976 (59%)	15,129 (41%)	37,105 (100%)	--
Primary	374,043 (55%)	307,460 (45%)	585,566 (86%)	95,937 (14%)	343,726 (50%)	377,777 (50%)
Secondary	<u>82,554 (57%)</u>	<u>63,216 (43%)</u>	<u>75,046 (51%)</u>	<u>70,724 (49%)</u>	<u>145,770 (100%)</u>	--
Total	474,978 (55%)	389,400 (45%)	682,588 (79%)	181,790 (31%)	526,601 (61%)	377,777 (39%)

SOURCE: "Guatemala: Inscripción Inicial Según Sexo Por Nivel, Sector y Area 1977," Hoja Estadística No. 1 (Guatemala: Ministerio de Educación, Unidad Sectorial de Investigación y Planificación Educativa, January 1979), pp. 1-2.

Preprimary Education

Preprimary education in Guatemala comprises the equivalent in the United States of kindergarten and first grade. Only about 10 percent of the five- and six-year-old children in Guatemala are enrolled in preprimary schools, all of which are located in urban areas. Children are promoted on the basis of age. Since preprimary education is not compulsory, children may enter primary school without having studied in a preprimary school.⁶⁵

Primary Education

Primary education comprises the equivalent in the United States of grades two through seven, and attendance is compulsory by Guatemalan law. Nevertheless, only about half of the nation's primary-age children, seven to fourteen, are enrolled in primary schools.⁶⁶

The Ministry of Education imposes a uniform curriculum throughout the primary school system: social studies, arithmetic, sciences, Spanish, health and safety, agriculture, industrial arts, home economics, handicrafts, art, physical education, and music.⁶⁷ The Ministry distributes textbooks, paper, chalk, and other materials to the public schools, but, in general, there is an insufficient supply of teaching materials. Often teachers assign books which the students cannot afford, in which case they go without.⁶⁸

Attrition. The attrition rate in primary schools is high. The data in Table 2 indicate that of the students enrolled in first grade in 1972, only 24 percent were still enrolled in sixth grade in 1977 when the group should have finished the primary program.

Table 2
Primary School Enrollment: 1972-1977

Sector	Enrollment by Year and Grade						Retention
	1972	1973	1974	1975	1976	1977	
	First	Second	Third	Fourth	Fifth	Sixth	
Public	179,226	101,163	83,360	60,304	48,975	41,379	23%
Urban	68,125	47,268	43,323	38,030	33,742	29,554	43%
Rural	111,101	53,895	38,037	22,274	15,233	11,825	11%
Private	28,243	16,396	12,807	9,848	8,845	8,634	31%
Urban	10,237	9,189	8,685	8,158	7,814	7,870	77%
Rural	18,006	7,207	4,122	1,690	1,031	764	4%
All	207,469	117,559	94,167	70,152	57,820	50,013	24%
Urban	78,362	56,457	52,008	46,188	41,556	37,424	48%
Rural	129,107	61,102	42,159	23,964	16,264	12,589	10%

SOURCE: "Educación Primaria: Retención y Pérdida por Sector y Area Cohorte 1972-1977," Hoja Estadística No. 10 (Guatemala: Ministerio de Educación, Unidad Sectorial de Investigación y Planificación Educativa, May 1979), pp. 1-18.

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Urban-rural differences. In Guatemala, as in most developing countries, a child living in an urban area is more likely to attend school and remain longer than a child living in a rural area. Although two-thirds of Guatemala's population live in rural areas, over half the total primary school enrollment is in urban schools.⁶⁹ The information in Table 2 indicates that whereas about half the children who enroll in urban primary schools reach the sixth grade, only one in ten children who enroll in rural primary schools reach the sixth grade.

Below are several reasons why the attendance in rural schools is much lower than in urban schools.

1. Lack of schools. Fewer schools are available in rural areas. Wright points out that in 1967 there was one classroom per 140 primary-age children in rural areas as compared to one classroom per 49 primary-age children in urban areas.⁷⁰ In addition, few rural schools offer all six grades. Thus, many rural children who would otherwise continue their schooling are forced to drop out before completing the sixth grade. The data in Table 3 indicate that less than one-third of the rural primary schools offer more than the first three years of school, and only 6 percent offer the full primary program.

2. Inaccessibility of schools. The inhabitants in rural areas are scattered throughout the countryside, and most live some distance from the communities in which the rural schools are located. In addition, transportation facilities are poor in most of rural

Guatemala. Thus, the limited physical accessibility to the few schools which do exist is an obstacle to school attendance.⁷¹

Table 3

Rural Public Schools Offering 1, 1-2, 1-3, etc.
Grades as Percentage of Total Public
Rural Schools

One-grade schools	8%
Two-grade schools	19%
Three-grade schools	45%
Four-grade schools	16%
Five-grade schools	6%
Six-grade schools	6%

SOURCE: Peter C. Wright and Luis Arturo Lemus, "Guatemala's Approach to Rural Education," Educational Innovations in Latin America, eds. Richard L. Cummings and Donald A. Lemke (Metuchen, N.J.: Scarecrow Press, 1973), p. 186.

3. Interference of planting and harvesting. The need for rural children to help with the planting and harvesting, and in many cases, to migrate to plantations for seasonal work, is a major factor in lowered school attendance, repetition, and dropout.⁷²

4. Unqualified teachers. Although all primary school teachers in urban schools are certified, about one-third of the rural primary teachers are not certified.⁷³ According to T. David Williams, who studied the relationship between teacher training and dropouts in Guatemala's rural schools, children are more likely to leave schools in which uncertified teachers work.⁷⁴ In addition, the majority of the certified teachers in rural areas hold urban school certificates.⁷⁵ Wright points out that these teachers tend to live apart from the rural community in which they work, do not

identify with the community's problems, and are unable to make the curriculum relevant to the exigencies of rural conditions.⁷⁶

5. Inadequate curriculum and teaching materials. Curriculum tends to be urban-oriented, theoretical, based on rote learning, and little related to the rural needs.⁷⁷ Research conducted by AID in Guatemala indicates that the formal education is of little use to rural farmers other than the status which it confers.⁷⁸

6. Inadequate supervision and administration. Supervision in rural areas is insufficient and practically nonexistent for many schools. Most of the qualified supervisors in Guatemala work in urban areas. Few school administrators in rural areas have any training for handling the administrative tasks of personnel, curriculum, school-community relations, and discipline.⁷⁹

7. Problem of language of instruction. The native language of the majority of rural inhabitants is an Indian dialect, yet the language of instruction in Guatemala's schools is Spanish. Thus, most of the rural children in Guatemala must learn a second language in order to study in the primary schools.⁸⁰

8. Rejection of formal education by Indians. Indians do not include formal education in their cultural tradition, and many Indian parents are hostile to an educational system which teaches new values and gives a theoretical education which appears unrelated to local needs.⁸¹

Public-private differences. Approximately 80 percent of primary schools are public and 20 percent private.⁸² Most of the rural private schools are provided by plantation owners as required by the Organic Law of Education. They are poorly attended and generally of low quality.⁸³

Quality of education in the private schools varies from the very poor plantation schools to excellent ones in the capital which offer modern education similar to that of good schools in developed countries. The urban private schools have lower dropout rates than do urban public schools. Table 2 shows that in 1977, sixth grade enrollment in private urban schools was 77 percent of the initial enrollment in the same schools five years earlier, while in the public urban schools, the sixth grade enrollment was 43 percent of the first grade enrollment five years earlier.

The better private schools are expensive and available to only the middle and upper classes. For most children, primary education, if it is available at all, must be taken in the public or low-priced private schools which are, generally speaking, low in quality.

Salary schedules. In the public schools, beginning primary teachers are paid Q3,000 a year, with automatic increments of 20 percent every five years up to twenty years and other increments based on additional training and performance. Salaries for private-school teachers vary.⁸⁴

There are two teaching schedules in public schools:

7:00 a.m. to 1:00 p.m., and 1:00 p.m. to 7:00 p.m. In private schools, the schedules also vary.

Special education. In the past few years there has been a growing interest in Guatemala in education for the physically and mentally handicapped and for children with learning problems. Recently, several government and private institutions have been established for the mentally retarded, and some private schools have begun to offer programs for children with learning problems.

Secondary Education

Secondary education in Guatemala comprises the equivalent in the United States of grades eight through twelve or thirteen. About 15 percent of the secondary school-age population is enrolled in secondary schools.⁸⁵

The secondary curriculum includes two cycles, pre-vocational and diversified. The pre-vocational cycle, three years in length, is a general studies program required of all secondary students and is prerequisite to the programs in the diversified cycle.⁸⁶ In Figure 4 is the pre-vocational program of studies.

The diversified cycle is of two or three years in length, depending on the program. Figure 2 shows the various kinds of programs offered in the diversified cycle, the number of years required to complete them, and whether they are terminal or lead to admission to higher education.

First Year	Second Year	Third Year
Mathematics	Mathematics	Mathematics
Spanish	Spanish	Spanish
Social Studies	Social Studies	Social Studies
General Sciences	General Sciences	General Sciences
Foreign Language	Foreign Language	Foreign Language
Music	Music	Music
Art	Art	Art
Physical Education	Physical Education	Physical Education
	Industrial Arts	Industrial Arts
		Typing

Figure 4

Pre-Vocational Program

SOURCE: Robert B. MacVean, "Guatemala," Perspectives on World Education, ed. Carlton E. Beck (Milwaukee: Wm. C. Brown Publishers, 1970), p. 361.

Not many teachers hold a certificate in secondary education. Most secondary teachers hold the normal school diploma for primary teaching, and a few have completed some university studies.⁸⁷ Waggoner describes the lack of properly trained secondary school teachers as "the most acute problem in all of Guatemalan education." He points out that in 1969 "99 percent of secondary teachers lack the educational background and professional qualifications for teaching at this level."⁸⁸

About 12 percent of the secondary-age children (14-20) are enrolled in the nation's secondary schools.⁸⁹ Nearly 80 percent of the students who finish elementary enter secondary schools. However, less than 30 percent of those students earn a secondary school diploma.⁹⁰

Urban-rural differences. All secondary schools in Guatemala are located in urban areas. Thus, rural children must move to the cities if they wish to continue their secondary education. Although the writer could not locate figures to indicate the number of rural children enrolled in urban schools, several respondents indicated that the number must be very low.⁹¹

Private-public differences. The private schools play a major role in secondary education. Whereas the vast majority of the elementary students are enrolled in public schools, over half the secondary students are enrolled in private schools, and the trend is toward an increased role for private schools in secondary education.⁹² The public institutions are poorly equipped and are generally inferior to the private schools which tend to have better installations, lower teacher-student ratios, and better teachers.⁹³

Students in private schools are more likely to finish the programs in which they enroll than their cohorts in the public schools. This is attributed to the fact that private school students are generally wealthier than public school students and thus less likely to drop out for economic reasons.⁹⁴

At present there are not enough places to accommodate all of the students who enroll in the public schools; new schools are needed to furnish space for the burgeoning enrollment in secondary.

Graduates. Table 4 lists the number of graduating secondary school students by area of study in 1977. It is interesting to note that 41 percent of all secondary school graduates received teaching certificates.

Table 4
Secondary School Graduates: 1977

Area of Study	Total	Sex		Sector	
		Men	Women	Public	Private
Education	4,667 (41%)	2,004 (43%)	2,663 (57%)	3,049 (65%)	1,618 (35%)
Bachillerato	3,556 (31%)	2,832 (79%)	724 (21%)	1,179 (33%)	2,377 (67%)
Accounting	2,503 (21%)	1,648 (66%)	855 (34%)	1,287 (51%)	1,216 (49%)
Secretary	637 (6%)	1 (-%)	636 (100%)	149 (23%)	488 (77%)
Marketing	14 (1%)	8 (57%)	6 (43%)	-	14 (100%)
Total	11,377 (100%)	6,493 (57%)	4,884 (43%)	5,664 (50%)	5,713 (50%)

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SOURCE: "Nivel Medio Oficial: Alumnos Graduados Según Rama de Enseñanza y Sexo Por Departamento 1977," Hoja Estadística No. 4 (Guatemala: Ministerio de Educación, Unidad Sectorial de Investigación y Planificación Educativa, November 1978), pp. 1-2.

Salary schedule. Secondary school teachers are paid a starting salary of Q3,700 per year for approximately twenty hours of classroom teaching per week. Many teach extra classes for extra pay. As do elementary school teachers, secondary school teachers receive salary increments of 20 percent every five years, up to twenty years, and other increments in accord with their studies and evaluations by their supervisors. Secondary school teachers earn a higher salary than elementary school teachers with the same amount of training and experience.⁹⁵

Teacher Education

Because the preparation of teachers is a critical task in a developing nation and a major program at the Universidad del Valle de Guatemala, it is important to present here a brief outline of antecedents of teacher education in Guatemala.

During the colonial period, formal education was entirely in the hands of the clergy. Indians and poor ladinos received little more than instruction in catechism and the basics of reading if they received any education at all. For the children of the elite, a handful of primary and secondary schools were established which provided the traditional liberal arts education as given in Spain. At the time of independence, with the exception of a few priests and upper-class men, the population was almost totally illiterate.⁹⁶

Independence in 1821 was accompanied by a new democratic spirit which brought with it an attempt to extend education to more people. The extension of education, however, required more trained teachers than the clergy could possibly provide. An institution to

prepare teachers was obviously needed, and in 1835 the first normal school was established by the liberal president, Dr. Mariano Gálvez. The school was public and free to anyone who could pass the meager entrance requirements: ability to read and write Spanish with an elementary knowledge of grammar and arithmetic. The curriculum was modest: religious and moral instruction, reading, arithmetic, drawing, geography, history, and gymnastics.⁹⁷

Under the liberal leadership of President Justo Rufino Barrios, several normal schools were established during the last quarter of the 19th century. The first, Central Normal School for Boys, was opened in 1875. Four years later, the Normal School for Girls was opened. During the next few years several normal schools were established throughout the country.⁹⁸

The normal schools established during the Barrios period required a primary school education for admission and, although not free, trained a large number of students at the government's expense. They soon developed into four-year institutions which offered courses in methodology and psychology as well as standard secondary school courses in grammar, literature, science, mathematics, history, geography, French, and shorthand.⁹⁹

The next major development in the normal school movement was the establishment in 1920 of the Normal School for Indians. This represented a novel approach to the problem of educating Indians who had been excluded previously from formal education. The trainees were required to return to their villages to teach.¹⁰⁰

During the first quarter of the 20th century, kindergartens became popular. It soon became evident that the regular normal school training was insufficient to meet the requirements of teaching the very young. In response to the new need, the Normal School for Kindergarten Teachers was established in 1928. Of particular note here is the fact that the completion of a regular normal school program was prerequisite to entrance in the two-year kindergarten training program.¹⁰¹

Another positive though short-lived development was the establishment of the Superior Normal School in 1929. Its purpose was to train administrators and teachers for the secondary and normal schools throughout the country as well as train officials and supervisors for the Guatemalan Ministry of Education. Completion of a regular normal school program was prerequisite to entry into the Superior Normal School. Unfortunately, the dictator, Jorge Ubico, closed the school for political reasons in 1932. Interestingly, one of the first public ceremonies after his ouster in 1944 was the graduation of the first, and only, class from the Superior Normal School which had completed its studies but had been denied the ceremony because of the school's untimely closing.¹⁰²

Prior to 1945, little attention was given to the preparation of teachers for instruction in rural areas. The social reform movement of the "Revolution of 1945" brought about much concern for the betterment of conditions in rural areas. Thus, with great fanfare, the Rural Normal School, "La Alameda," was opened in 1946. Some of the best educators in Guatemala were sent to staff the

school and help train new staff. A special curriculum provided instruction in the following areas:

1. agriculture production,
2. national natural resources,
3. modernization of industry,
4. improvement of living conditions,
5. local dialects, and
6. Indian culture.¹⁰³

In 1948, the first evening normal school was established to service those who worked during the day.¹⁰⁴

The normal school program has evolved into six years of secondary level training: three years of general cultural education given to all secondary students, and three years of teacher preparation courses, which include pedagogy, psychology, teaching methods, ethics, educational organization, philosophy, history of education, educational statistics, evaluation, and practice teaching.¹⁰⁵

Today there are 104 normal schools in Guatemala, 76 private and 28 public, with a total enrollment of over 18,000 students.¹⁰⁶ Please refer to Table 5 for a listing of the normal school graduates by area of study in 1977. Over 40 percent of all secondary school graduates are products of normal schools. Of this group, 85 percent receive teaching certificates in urban elementary education. Only 6 percent of the normal school graduates receive rural elementary school certificates even though half the elementary school enrollment is found in rural areas.

In 1945, Guatemala's national university, Universidad de San Carlos, initiated a five-year teacher preparation program under the auspices of the School of Humanities. The School of Humanities also offers a Master's Degree and doctorate in pedagogy. However,

Table 5
Normal School Graduates: 1977

Types of Programs	Total	Sex		Sector	
		Men	Women	Public	Private
Urban Primary	3,990 (85%)	1,770 (44%)	2,220 (56%)	2,536 (64%)	1,454 (36%)
Rural Primary	255 (6%)	174 (68%)	81 (32%)	255 (100%)	--
Preprimary	251 (5%)	--	251 (100%)	87 (35%)	164 (65%)
Home Economics	91 (2%)	--	91 (100%)	91 (100%)	--
Physical Education	55 (1%)	47 (85%)	8 (15%)	55 (100%)	--
Music	25 (1%)	13 (52%)	12 (48%)	25 (100%)	--
Total	4,667 (100%)	2,004 (43%)	2,663 (57%)	3,049 (65%)	1,618 (35%)

SOURCE: "Nivel Medio Oficial: Alumnos Graduados Según Rama de Enseñanza y Sexo Por Departamento 1977," Hoja Estadística No. 4 (Guatemala: Ministerio de Educación, Unidad Sectorial de Investigación y Planificación Educativa, November 1978), pp. 1-2.

by 1961 the teacher preparation program at San Carlos had produced only sixty secondary teachers, an average of four a year.¹⁰⁷

In 1964, the newly established private university, Universidad Rafael Landívar, initiated its secondary teacher preparation program under the auspices of its School of Humanities.

These first efforts at teacher training at the university level were generally unsuccessful because the program took five years to complete, just as for the more prestigious and lucrative professions. In addition, they were not geared specifically for practicing teachers.¹⁰⁸

The first university program to produce large numbers of secondary school teachers was established by the Faculty of Humanities at the Universidad de San Carlos in 1967. The program, offered on weekends in several towns throughout Guatemala (but not in the capital), requires the completion of thirty courses for certification and is aimed primarily at the certification of practicing teachers.¹⁰⁹

In 1969, the Universidad de San Carlos launched a second secondary teacher certification program in concert with the World Bank and the Guatemalan Ministry of Education. This is a three-year full-time program to train recent secondary school graduates as science and mathematics teachers. The program enrolls approximately one hundred students per year, all of whom receive scholarships. The program has produced many graduates in the areas of science and mathematics.¹¹⁰

In 1969, the Universidad del Valle de Guatemala began the first weekend secondary teacher certification program to be offered

in the capital. The program, offered on Saturdays from 8:00 a.m. to 1:00 p.m., requires thirty courses for completion. In 1977, the Universidad del Valle in Guatemala began an elementary teacher certification program, the first of its kind in Guatemala. Both of these programs will be described in Chapter 4.

In 1976, the Universidad Francisco Marroquin began a weekend secondary teacher certification program based on the model of the Universidad del Valle de Guatemala. Both Universidad Mariano Galvez and Universidad Rafael Landívar also have weekend secondary teacher certification extension programs.

Higher Education

The Constitution authorizes the functioning of higher education in Guatemala, giving autonomy to the Universidad de San Carlos, guaranteeing it a minimal annual income of 2.5 percent of the national budget and authorizing it to direct and develop higher education in Guatemala. The Constitution also recognizes the existence of the private universities and authorizes the creation of new private universities provided, among other things, they "contribute . . . to the study and solution of national problems." Supervision of the private universities and responsibility for approving their organization is given to the Council of Private Higher Education, comprising the Minister of Education (who presides), two representatives from the Universidad de San Carlos, two representatives from the private universities, and two representatives without university responsibilities who are named by the presidents of the professional associations.¹¹¹

The Universidad de San Carlos. The Universidad de San Carlos was the first university in Central America, established in 1676 by King Charles of Spain.¹¹² It has remained the dominant university in Central America and, until 1961, the only university in Guatemala. During the Colonial period, San Carlos was the center of higher education in the region and educated many of the Central American leaders. Until 1944, it was controlled by the state through the Ministry of Education. The Revolution of 1944 was strongly supported by the University, and the ensuing Constitution of 1945 gave the University autonomy.¹¹³

San Carlos is governed by a rector and the Superior Council which is composed of the rector, the secretary, the deans, the treasurer, one student and one professor from each faculty, and one representative of each professional association.¹¹⁴

The Universidad de San Carlos enrolls students in the following thirteen faculties: Law, Engineering, Economic Sciences, Medicine, Humanities, Pharmacy, Architecture, Dentistry, Agronomy, Veterinary Medicine, Psychological Science, History, and Communication Sciences.¹¹⁵

From 1963 through 1968, San Carlos experimented with a School of General Studies as a part of the regional effort through CSUCA to put general studies programs in all of the Central American national universities. The School of General Studies offered a two-year program required of all students prior to entering the professional schools. However, the program was never well received by either the students or professors and was abolished at the end of 1968. Since then, students enter directly the faculty in which they wish to pursue their

degrees.¹¹⁶ Waggoner gives the following explanation for the failure of general studies at San Carlos:

The existence of this large school outside of the facultad pattern and as a direct dependency of the Higher University Council, the belief that it added at least a year to degree requirements, the dislike by many students of course requirements that did not appear to relate directly to their vocational aims, the erroneous belief of many students that the attrition rate was higher than under the old system of direct entry to a professional school, and the assertion by leftist groups that the basic concept of general studies was a North American, imperialist import--all of these factors contributed to the abandonment of the School of General Studies.¹¹⁷

In 1964 and 1966, the Planning Office of the Ministry of Education criticized San Carlos for failing to define its role in national development and for not orienting its program to provide graduates needed for national development. The Planning Office recommended a reduction in the length of many of its programs, a shift in attention to intermediate level technical and scientific programs, and more effective vocational orientation for its students.¹¹⁸

San Carlos has a high attrition rate. The UNESCO Statistical Yearbook for 1965 shows that Guatemala has one of the lowest rates of graduates compared to students enrolled in the world: 2.1 percent.¹¹⁹ One of the causes of the high attrition rate is the fact that, on the average, students are failed in about half their courses each term. The average length of time in school for those who are graduated is fourteen years.¹²⁰

About 20 percent of the professors hold full-time appointments. The majority are graduates of San Carlos, and most hold no more than the Licenciatura degree. Five percent hold a Master's or a Ph.D. degree.¹²¹

San Carlos is growing at a rapid rate. Between 1957 and 1966, enrollment increased 88 percent from 4,336 to 8,171 students.¹²² By 1979 enrollment had increased to 37,000, an increase over 1966 of 353 percent.¹²³

San Carlos has several research centers, but Waggoner claims that "at present there is no vigorous activity in research or serious emphasis upon it in San Carlos as a whole."¹²⁴ In 1962 the Institute for Research and Improvement of Education (IIME) was established at San Carlos as a research vehicle for CSUCA with the help of Michigan State University. For several years IIME was funded by AID's Regional Office for Central America and Panama (ROCAP), and the Institute produced twenty-five studies related to education in Central America. When ROCAP funding was withdrawn, however, Michigan State University discontinued its collaboration and the research dwindled. Although the Institute survives, little research is presently undertaken.¹²⁵

The Universidad de San Carlos has tried to respond to the criticism of its neglecting national development needs by establishing extension centers in various parts of the country and offering only the programs which are most needed there. It has also begun a series of short courses aimed at supplying manpower in accordance with national needs. As a requirement for graduation most students must spend a year in the field working in their area of study. A description of this field work replaces the requirement for a thesis.¹²⁶

Universidad Rafael Landivar. The first private university in Guatemala, Universidad Rafael Landivar, was founded in 1961. It has grown rapidly and now has an enrollment of approximately 6,000 students.¹²⁷

Universidad Rafael Landivar is governed by a directive council and a university council. The Directive Council is appointed by the Jesuit Order which established the university. It is a thirteen-member, self-perpetuating body made up of "the rector, the secretary-general, the general treasurer, and nine other members."¹²⁸ The Directive Council has the major control of the university including

. . . responsibility for the property of the university; the budget; the organization of the university; the naming and removal, when necessary, of the rector, deans and professors; the fixing of admission quotas and student fees; and it is the court of last resort for all university problems.¹²⁹

The University Council, which includes "the rector, deans and vice-deans, directors of departments, the secretary-general, one elected professor for each faculty of the university, and one student, has the responsibility for setting the academic year and approving plans of study."¹³⁰

Universidad Rafael Landivar offers extension programs in teacher education in four other departments of the nation. In Quetzaltenango, the University also offers intermediate courses in tourism and industrial and financial administration.¹³¹

Universidad Rafael Landivar offers degree programs in the faculties of Economics, Humanities, Engineering, Architecture, and Law. The Department of Education, located in the Faculty of Humanities, offers a licenciatura degree in pedagogy and three-year secondary teacher certification programs in (1) pedagogy and psychology; (2) language, philosophy, social studies; (3) mathematics and physics; (4) art; and (5) secretarial science. It also offers a variety of intermediate courses in other areas such as tourism, diplomatic service, product design.¹³²

Universidad Doctor Mariano Gálvez. Universidad Doctor Mariano Gálvez was established by Protestant groups in 1966. Its organizational structure is centralized with a system of departments grouped into schools, all closely controlled by the central administration. Presently, about 2,500 students are enrolled in programs both in the capital and its Regional Center of Chiquimula.¹³³ The emphasis at Universidad Doctor Mariano Gálvez is on the training of technicians in management, business administration, law, civil engineering, and medicine. It has a secondary teacher certification program in its regional center.¹³⁴

The Universidad del Valle de Guatemala. The Universidad del Valle de Guatemala, established in 1966 as an experimental institution of higher education, will be discussed in detail in Chapter 4.

Universidad Francisco Marroquín. Universidad Francisco Marroquín was established in 1971 in response to what was seen by its founders as the abandonment by the Universidad de San Carlos of "a liberal arts focus in the classical sense."¹³⁵ It also has a highly centralized structure with no administrative decision-making authority in the hands of professors or students. Presently there are 1,200 students studying for Licenciatura degrees in law, economics, business administration, architecture, social communications, and theology. Another three hundred students are enrolled in a Saturday program to train secondary school teachers in the areas of language and literature, social studies, mathematics, and physics.¹³⁶

Other institutions of higher education. The Universidad de San Carlos officially recognizes the degrees awarded by (1) the School of Social Service, (2) the Institute of Higher Education for Women, and (3) the Center of Higher Education for Nutrition and Food Sciences. The School of Social Service, part of the Guatemalan Social Security System, offers a three-year degree in social work.¹³⁷

The Institute of Higher Education for Women has two schools: the School of Social Work and the School of Interior Design. Both programs last three years and result in degrees in social work or interior decorating.¹³⁸

The Center for Higher Education in Nutrition and Food Sciences is sponsored jointly by INCAP and the Universidad de San Carlos. In its School of Nutrition, it offers four-year courses in biology, chemistry, social science, education, economics, food and nutrition science, public health, and mathematics. The Center also offers post-graduate courses in public health, animal nutrition, and food sciences. The Center is financed by several international organizations and the Central American nations. It enrolls students from all the Central American Countries.¹³⁹

In addition to the five universities and the three institutions mentioned above, there are three other post secondary institutions whose degrees are not recognized by the Universidad de San Carlos. The National School of Nursing, sponsored by the Ministry of Public Health, offers a three-year program in nursing. The National School of Physical and Occupational Therapy offers a four-year program in Physiotherapy. The Central American School in International Relations offers a three-year degree in diplomacy.¹⁴⁰

Change

In 1950 the literacy rate in Guatemala was 30 percent, considerably lower than the 48 percent level in 1973.¹⁴¹ In 1950, 24.4 percent of the seven-fourteen age group attended school; by 1978, it had increased to 50 percent.¹⁴² The increase in the percentage of school attendance from 1950 to 1973 was greater for Indians (10.8 to 29.2) than for ladinos (40.4 to 61.7) indicating a trend toward equalizing the enrollment of the two groups. From 1960 to 1977, primary school enrollment rose by 135 percent: rural primary school enrollment by 252 percent, and urban primary school enrollment by 51 percent, indicating a trend toward equalizing educational opportunities in the two areas.¹⁴³

The most marked rate of increase is in higher education. In 1957 there was one university, Universidad de San Carlos, with an enrollment of 8,000 students. By 1979 there were five universities with a total enrollment of nearly 48,000 students, a 500 percent increase in a little over twenty years.

In 1955, 84 percent of the rural elementary teachers and 23 percent of the urban primary teachers were classified as empiricos.¹⁴⁴ At present there are no empiricos teaching in urban primary schools and the number of empiricos in the rural schools has been reduced to 30 percent.¹⁴⁵

The number of classrooms increased from 1960 to 1977 by 135 percent: 80 percent for primary schools and 200 percent for secondary schools.¹⁴⁶

The increases in enrollment and in classrooms has been much greater than the increase in teachers. In 1960, the student teacher ratio for elementary was 29:1 and for secondary 7:1. By 1978 the ratio had grown to 34:1 for elementary and 17:1 for secondary.¹⁴⁷ These ratios, however, do not indicate the actual conditions. The majority of classrooms in Guatemalan public education have well over forty students, and many have up to one hundred or more.¹⁴⁸

The number of rural teachers graduated each year has also increased greatly. In 1963, seventy-seven rural teachers were graduated.¹⁴⁹ In 1978, 407 rural teachers were graduated.

Finally, the retention rates have improved. In a cohort study conducted in Guatemala from 1957 to 1962, only 15 percent of the students who enrolled in first grade in 1957 were enrolled in the sixth grade in 1962.¹⁵⁰ The cohort study mentioned earlier indicated that by 1975 the retention rate in elementary had increased to nearly 25 percent. The greatly increased graduation rates in secondary, because they have increased faster than the enrollments, indicate improved retention in the secondary schools.

CHAPTER 3--NOTES

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- ²⁹ Dombrowski, op. cit., p. 221.
- ³⁰ The New World Almanac and Book of Facts 1979, loc. cit.

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- ³²Dombrowski, op. cit., p. 93.
- ³³La Población de Guatemala, Hoy y Mañana, op. cit., p. 39.
- ³⁴Dombrowski, op. cit., pp. 1-2.
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¹²¹*Ibid.*, pp. 47-48.

¹²²*Ibid.*, p. 48.

¹²³"AEU y Sindicato Integran la Comisión Creada Para Alcanzar el Incremento y Presupuestario de la Universidad de San Carlos," 7 Días en la USAC (Guatemala: September 10-16, 1979), p. 1.

¹²⁴Waggoner and Waggoner, *op. cit.*, p. 49.

¹²⁵Willard H. Mitchell, CSUCA: A Regional Strategy for Higher Education in Central America (Lawrence, Kansas: University of Kansas Press, 1967), pp. 50-51.

¹²⁶Statement by Licenciado Daniel Contreras, *loc. cit.*

¹²⁷Phone Conversation with Registrar's Office, Universidad Rafael Landívar, Guatemala, October 26, 1979.

¹²⁸Waggoner and Waggoner, *op. cit.*, p. 42.

¹²⁹*Ibid.*

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¹³⁰Ibid.

¹³¹Plan Nacional de Educación para la República de Guatemala 1972-1979, op. cit., p. 104.

¹³²Información 1977, Universidad Rafael Landívar (Guatemala: Universidad Rafael Landívar, 1977).

¹³³Phone Conversation with Registrar's Office, Universidad Mariano Galvez, Guatemala, October 26, 1979.

¹³⁴Waggoner and Waggoner, op. cit., p. 43.

¹³⁵The Guatemala News, September 8, 1978, p. 11.

¹³⁶Phone Conversation with Registrar's Office, Universidad Francisco Marroquín, Guatemala, October 26, 1979.

¹³⁷Plan Nacional de Educación para la República de Guatemala 1972-1979, op. cit., p. 107.

¹³⁸Ibid., p. 108.

¹³⁹Ibid., pp. 108-110.

¹⁴⁰Ibid., pp. 110-111.

¹⁴¹La Población de Guatemala, Hoy y Mañana, op. cit., p. 41.

¹⁴²Ibid.; "Guatemala: Nivel Preprimario y Primario, Población, Inscripción y Tasas de Cobertura Por Años 1965-1982," loc. cit.

¹⁴³Statistics for the Analysis of the Educational Sector: Guatemala (Guatemala: Agency for International Development, 1974), p. 3; "Guatemala: Inscripción Inicial Según Sexo Por Nivel, Sector y Area 1977," loc. cit.

¹⁴⁴Whetten, op. cit., p. 277.

¹⁴⁵Plan Nacional de Educación para la República de Guatemala 1972-1979, op. cit., cuadros 11-34, 11-35.

¹⁴⁶ Statistics for Analysis of Educational Sector, op. cit., p. 6; "Guatemala: Número de Aulas que Funcionaron en la República en 1978," Hoja Estadística No. 6 (Guatemala: Ministerio de Educación, Unidad Sectorial de Investigación y Planificación Educativa, January 1979), pp. 2-3.

¹⁴⁷ Statistics for Analysis of Educational Sector, op. cit., p. 6; "Guatemala: Maestros en Servicio Según Jornada y Area Por Nivel Educativo y Sector 1978," Hoja Estadística No. 11 (Guatemala: Ministerio de Educación, Unidad Sectorial de Investigación y Planificación Educativa, June 1979), p. 1; "Guatemala: Nivel Preprimario y Primario, Población, Inscripción y Tasas de Cobertura Por Años 1965-1982," loc. cit.

¹⁴⁸ Statement by Sr. Julio Rizzo, Administrative Assistant, Universidad del Valle de Guatemala, personal interview, Guatemala, June 25, 1979.

¹⁴⁹ Wright and Lemus, op. cit., p. 187.

¹⁵⁰ Waggoner and Waggoner, op. cit., p. 33.

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Chapter 4

THE UNIVERSIDAD DEL VALLE DE GUATEMALA

INTRODUCTION

. . . universities are rarely born full blown where nothing existed before. Most have been based on one or more existing institutions, programs, colleges, faculties, or schools, and the predecessor institutions influence their successors in many and often intangible ways.¹

The Universidad del Valle de Guatemala is an outgrowth of the laboratory school program of the American School of Guatemala. The relationship between the School and the University is close, long-standing, and important to both institutions. The establishment of the University could not have been effected without the support of the School. School personnel were influential in laying the groundwork for the University, defining its objectives, structuring programs of study, and promoting the idea of a private, liberal-arts institution of higher education dedicated to national development. School personnel teach courses and work with the University's Center for Educational Research on the programs which were originally designed and implemented at the School. The School has long shared its library, laboratories, cafeteria, classrooms, playing fields, and teaching materials with the University.²

Thus, to appreciate the aims and development of the University, it is necessary to know the history of the American School of Guatemala, especially its experiences as a laboratory school.

THE AMERICAN SCHOOL OF GUATEMALA

History and Organization

The American School of Guatemala is a day school established in 1945 to provide a bilingual education employing modern materials and teaching methodology. Until 1972, the School was operated by the self-perpetuating American School Association, a nonprofit corporation, without political or religious commitments. The membership of the Association elected a five-member board of directors for two-year terms which was responsible for policy making and financing. In 1972, the American School Association was transformed to a foundation, a matter that will be discussed later.³

The American School began with an administrator, two teachers, and thirty-five children in a rented house. The School grew rapidly, moving first to temporary wooden buildings on a seventeen-acre site and, later, to its permanent brick and concrete structure on a fifty-one acre tract. Today it has modern facilities, plentiful equipment and educational resources, over one hundred professional employees, and a student population of 1,350. About 80 percent of the students are Guatemalan, 15 percent from the United States, and 5 percent from other countries.⁴ The majority of the students come from middle and upper-class homes and pay high fees by Guatemalan standards.

In order to permit the School to enroll qualified children regardless of the financial status of their parents, a financial aid

program was established to assist students unable to pay the tuition. Until the end of 1956, aid was given exclusively in the form of reduced fees. In 1957, in light of its limited resources, the School established a scholarship committee of interested parents and friends who engage in extensive fund-raising activities to provide full and partial scholarships to needy and deserving students. In 1973, the Committee was transformed to the Guatemalan Scholarship Association and separated from the School. Now the Association raises funds to help send children to several schools, although most are placed in the American School of Guatemala.⁵

In addition to fund raising, the Association carries out a selection program using examinations prepared by the School. The Association helps the scholarship recipients in a variety of ways such as ensuring that they have appropriate clothing, medical care, and school supplies. To date, 120 scholarship students have been graduated.⁶

In an average year, about 10 percent of the students at the School receive some kind of financial aid. A long-range goal of the School is to reach a maximum of 25 percent of the students receiving such assistance.

Laboratory School Experience

In 1948, the School was granted laboratory status through a presidential decree which was subsequently extended for periods of twenty years in 1958 and in 1978.⁷

The decree of 1948, making the School the first laboratory school in Guatemala, permitted the designing and realization of

activities pertinent to the educational needs of Guatemala within the limits of resources available to the School. It is important to note here that primary and secondary education in Guatemala are controlled by the Ministry of Education. Curriculum, methodology, testing, grading, promotion, and other aspects of education are dictated to the public and private schools and closely supervised. Consequently, experimentation and change in the nation's schools are difficult to effect. Therefore, the laboratory school status is of particular significance, for it frees the School to offer a modern bilingual education to its own students and at the same time experiment with and develop curriculum, materials, methodology, and testing to improve education in the nation.⁸

In 1954, Butterfield, Corey, and Rehage evaluated the first five years of the laboratory school activities. Their report gives the following definition of laboratory school status:

1. The faculties include men and women who have not only special competence in educational research, but are also strongly committed to the use of scientific methods in their attempt to solve pedagogical problems.
2. A laboratory school is normally freed from some of the curricular or instructional restrictions that apply to other schools.
3. The laboratory school has access to additional funds needed for accumulating and interpreting data.
4. The laboratory school develops relationships with other schools and institutions that make it possible to exchange resources and communicate results of experiments.
5. The laboratory school develops materials and teaching methods.
6. The program of studies must be superior and the methods of administration, supervision, and curriculum development subjected constantly to evaluation and improvement.⁹

Butterfield et al. used the above criteria in their evaluation and concluded that "the American School of Guatemala illustrates all six of these unique characteristics of a laboratory school."¹⁰

The following is a description of the major laboratory school activities which have been undertaken since 1948. All of the activities were begun early in the School's existence and continue to date under the auspices of the Universidad del Valle de Guatemala.

Longitudinal Study of Child Development. It is generally accepted in educational circles that knowledge of the physical and mental growth patterns of children is an important basis for developing educational programs. However, although longitudinal growth and development studies had been conducted in various parts of the world for several decades prior to 1950, the School could find no evidence of such studies having been conducted in Latin America. Generalizations about child development in Latin America were based ". . . on simple assumptions, individual experiences, or analogous reasoning from studies made in Europe and the United States."¹¹

A longitudinal study of child growth and development in Latin America was needed, and the School possessed the necessary personnel, funds, and contacts with other institutions to accomplish this goal. Thus, a longitudinal study of child development was initiated in 1954, designed according to a model developed at the University of Michigan. The study measures the yearly development of height, weight, grip strength, skeletal growth, number of permanent teeth erupted, and academic achievement of thousands of children in various schools in Guatemala. One of the important aspects of the study is the comparison of children from lower, middle, and upper socioeconomic levels.¹²

Over the years, the School has worked with the Institute of Nutrition of Central America and Panamá (INCAP), the University of San Carlos, the University of Michigan, and the dental clinic of the American School of Guatemala on the gathering of information, writing of research reports, and dissemination of information concerning the child growth study.¹³

Curriculum development. Since 1948, the School has developed its own curriculum and cooperated with the Ministry of Education in the development of curriculum for the nation. In 1955, the Ministry of Education established the Commission for Reorganization of Secondary Education in Guatemala in an attempt to effect major change in the secondary curriculum. Three staff members of the American School of Guatemala participated on the Commission, one as its president. Through its representation on the Commission, and based on its own experimentation, the School was able to exert substantial influence on the recommendations made to the Ministry of Education. One of the major changes recommended by the School was the dividing of the secondary curriculum into two phases:

1. three years of work following the elementary school, more or less the same for all students, to provide a minimum of experience and training in general education . . .;
2. a more diversified program during the last two years of the secondary school during which a student could prepare for a specific university career or follow specialized training for a vocation.¹⁴

Previous to this change, specialization began at the first year of the secondary program, forcing students to make decisions about their careers at unreasonably early ages and providing inadequate general education.

In 1956, the Ministry of Education asked the School to develop "new courses of study in science, social studies, language, and mathematics for the elementary schools."¹⁵ After a year of intensive work, the School provided the Ministry with drafts of curriculum guides which were then used experimentally in selected schools in the capital city during the next three years and utilized in The American School of Guatemala. In 1961, the programs, with modifications by the Ministry, were instituted in elementary schools throughout Guatemala.¹⁶

More recently, the School has continued its experimentation with curriculum in the areas of English as a second language, psychomotor and perceptual activities for children with learning disabilities, and accelerated programs for outstanding secondary students.

Development of teaching materials. Since 1951, the American School has reproduced low-cost teaching materials affordable by poor families. Because there were no pre-reading materials available in Spanish at the time, the School initiated its materials program by publishing a teacher's guide written for inexperienced teachers. Over the following twenty-five years, the School produced other pre-primers and reading texts accompanied by cards with illustrations, words, sentences, and word endings.¹⁷

In 1962, the W. K. Kellogg Foundation provided a grant to the School and INCAP to develop a nutrition education program. During the next three years, nine pamphlets were produced and utilized in Guatemala and El Salvador.¹⁸

In addition to the production of formal materials for sale, the School has experimented with the making of informal teaching aids which can be created by teachers from inexpensive items readily available throughout Guatemala. On several occasions the School has prepared displays of these devices for teachers from the public and other private schools.

Test development. Until 1976, testing played a major role in Guatemala's centralized educational system. The Ministry of Education, in its attempt to control and effect standardization of instruction, prepared the tests which all students took. Results of Ministry tests were of crucial importance in determining student promotion or failure. For example, midterm tests accounted for 25 percent of the final grade, and the final examination accounted for 50 percent. In addition to this importance in determining final grades, the Ministry tests required memorization of large quantities of facts rather than development of understandings and skills.¹⁹

The American School personnel considered the improvement of test instruments as a valuable contribution to education in Guatemala, not only because of the importance of testing, but also because of the influence of tests on teaching. For example, if a teacher knows that his pupils will pass or fail on the basis of their ability to recall large quantities of isolated facts, the major emphasis in his class probably will be rote memory. Tests to measure understanding are more likely to produce teaching for understanding.²⁰

The work on tests by the School has fallen into the following two basic categories:

1. Adaptations and translations of standardized tests from the United States
 - a) General ability tests
 - b) Aptitude tests
 - c) Reading readiness tests
 - d) Reading tests
 - e) Interest tests
 - f) Differential aptitude tests
2. Development of reading tests²¹

The School uses most of the tests it has prepared in its own programs and cooperates with the Ministry of Education and individual schools in Guatemala in administering these tests for such purposes as student selection, diagnosis, and evaluation of programs. In addition, many of these tests are made available to schools, commercial entities, and professional people throughout the Western Hemisphere.

In-service training. In 1955, the School began an in-service training program in which recent graduates of normal schools are paid a stipend for one year and given a combination of course work and the opportunity to observe and teach under the supervision of an experienced teacher in the American School. The program has grown gradually over the years and now produces about eight in-service trainees each year. Many of the trainees are hired by the School as regular teachers after finishing their year of training. Most of the remainder accept employment in other schools or the Ministry of Education.²²

In addition to its own in-service program, the School has cooperated with the Ministry of Education in the training of public school teachers. On one occasion, the School helped prepare forty industrial arts teachers.²³ On another, the School offered an

intensive three-month program to six selected elementary teachers who then became the "nucleus of personnel for the first public laboratory school."²⁴

Educational services. Throughout the years, the School has received requests for a variety of services related to its status and experience as a laboratory school. In addition to the kinds of services already mentioned above, the School has given workshops and seminars on teaching methodology, development of simple teaching materials, and many other topics. It has received countless visits from groups and individuals who observe the School's teaching activities, organization, physical plant, and materials. The School has accommodated all requests for services from the Ministry of Education and most of such requests from private institutions.²⁵

As a requirement of the laboratory school charter, the School publishes all of its activities each year and sends those reports to the Ministry of Education.

THE ORGANIZATION OF THE UNIVERSIDAD DEL VALLE DE GUATEMALA

Aims and Establishment

Over the years, it became increasingly evident that the School's training, research, and service activities could be better carried out in cooperation with a university. It was clear as well that the laboratory school experiences provided a solid base on which to establish a university. In 1965, the American School Association conducted a feasibility study whose purpose was to ascertain whether

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or not a need existed for a small, private university dedicated to research and the preparation of educators, natural scientists, and social scientists. The results indicated that such a university was needed and would be favorably accepted in Guatemala.²⁶ Accordingly, with the laboratory school experience as a substantial base and a need for a new university in evidence, the American School Association requested the establishment of the Universidad del Valle de Guatemala. The University's goal was to "produce persons who are able and willing to assume responsibility in promoting progress in economic, political, educational, and cultural development of Central America."²⁷ Its objectives were to

1. promote understanding of regional problems,
2. develop education in Guatemala and the Central American region,
3. conduct long-range research and train research workers,
4. further the aims of general education, and
5. educate teachers and educational specialists.²⁸

The request was granted by the Universidad de San Carlos, which at that time held the power under the Constitution to authorize the establishment of private educational institutions. Shortly thereafter, a government decree transferred this authority to the Council on Private Higher Education. The Universidad del Valle de Guatemala received its charter in January 1966, and University activities began that March.²⁹

Development

For the first decade, the small number of students and the scheduling of classes after 2:15 P.M. made it possible for the University to operate entirely in the American School buildings.

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By the mid-1970s, however, growth of the student body, the planned addition of morning classes, and the need to have facilities suitably designed for a university required the construction of buildings specifically for the University. It was decided to combine the final phase of the American School development program (construction of a multi-purpose learning center and gymnasium) concomitantly with the initial phase of the University development program (construction of a library and science laboratories).³⁰

In 1974, the Foundation obtained a \$2,800,000 loan from the Inter-American Development Bank to build and equip the four buildings. Construction on the buildings began in 1975, and was to have been completed by the end of 1976.³¹ However, the earthquake of February 4, 1976, seriously damaged the partially completed learning center and generally delayed the construction. By 1979, the laboratory and library buildings and the learning center were in use, but the gymnasium was delayed and was not scheduled to be constructed until 1980.

All four buildings are intended for use by both institutions. The learning center classrooms, cafeteria and auditorium are shared with the University. The School's students have access to the University library and laboratories. The gymnasium will be used for physical education and other activities by both the School and University.

Leadership

Dr. Robert B. MacVean, who presently occupies the dual role of Executive Secretary of the Foundation and acting Rector of the

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Universidad del Valle de Guatemala, was the director of the American School of Guatemala for thirty years and is the major force responsible for the conceptualization, founding, and guiding of the University. In addition to a Ph.D. from the University of Michigan, he holds an honorary doctorate from Western Michigan University for his contribution to the development of education in Guatemala and is highly regarded in Guatemala for his work in educational innovation.

Dr. MacVean has been able to gather around him respected Guatemalan educators first as staff members of the American School of Guatemala and later as administrators for the Universidad del Valle de Guatemala. From 1966 to 1976, the Secretary of the University was Ricardo Estrada, an esteemed university professor and recognized literary figure in Guatemala. It was Estrada who played the largest role in conceiving and founding the University with Dr. MacVean. The present Secretary, Daniel Contreras, is a well-known historian and former Dean of the Faculty of Humanities at the Universidad de San Carlos. The Director of Studies, Miguel Canga-Arguelles, is a chemist and leader in Guatemalan higher education. An invited member to the Directive Council, who also serves as the Coordinator of the Institute of Research at the Universidad del Valle de Guatemala, Jorge Arias, is a former Rector of the Universidad de San Carlos, and is respected internationally as a demographer and researcher in population dynamics. Francisco Nieves, Coordinator of the University College and invited member of the Directive Council, worked as principal of the secondary school at the American School of Guatemala for twenty-five years and is respected in Guatemala as an educational administrator. The

individuals mentioned above form the Directive Council, the administrative decision-making body at the University. With the exception of Arias, they have been associated with the Universidad del Valle de Guatemala since its inception and were instrumental in conceiving and establishing the University. Arias has been a long-time friend of the University, although not a member of the administration until 1975.

The Coordinator of the Faculty of Sciences and Humanities, Jorge Antillón, is one of two doctors in physics in Guatemala. He received his Ph.D. degree at the University of Texas, supported by financial aid from the Universidad del Valle de Guatemala. The Coordinator of the Faculty of Education, Gloria Aguilar, has worked at the University since 1966 and holds a Master's degree in Education from the University of New Mexico. The Coordinator of the Faculty of Social Sciences, Alfredo Méndez, is one of the few Guatemalans with a Ph.D. in Anthropology, which he received from the University of Chicago.

Many of the present trustees of the Foundation have been with the institution since the establishment of the American School of Guatemala. Their interest and dedication to both the School and the University are well known.

The trustees have given hundreds of hours of their time over the years to both the School and the University with no remuneration. The salaries of the administrators at the University are below the salaries of administrators at the other universities in Guatemala, and the time devoted to their work is much greater.³²

Institutional Structure

The Universidad del Valle de Guatemala is a centralized institution in which the decision-making power is held by the Board of Trustees and its executive body, the Directive Council.

Centralization. The Universidad del Valle de Guatemala was founded by the American School Association. However, to facilitate the operation of both the School and the University, the Association was transformed to a foundation (Fundación de la Universidad del Valle de Guatemala) in 1972. The Foundation retained the nonpolitical, nonsectarian, nonprofit characteristics of the Association. Please refer to Figure 5 for an organizational chart of the Foundation.

The statutes of the Foundation establish a self-perpetuating board of trustees, not to exceed thirty, who have the following rights and privileges:

1. to participate with voice and vote in all sessions of the General Assembly, and, if a member is unable to attend, to delegate his vote to another active member;
2. to elect and be a candidate for the Executive Committee;
3. to submit ideas to the General Assembly and the Executive Committee; and
4. other rights indicated by the constitutive writ, these statutes, and the by-laws of the Foundation.³³

The Foundation is authorized to engage in the following activities:

1. establish, create, administer, sustain, and support all kinds of educational, academic, and cultural establishments and those devoted to scientific and philosophical research, at any and all levels recognized by the State; and it may operate laboratory schools and educational extension centers of all kinds;
2. contribute to raising Guatemala's educational level through the development of new pedagogical systems and techniques adapted to urban and rural conditions; the conduct of surveys, seminars, and other activities tending to this end; and the preparation of instructions, textbooks, and other teaching materials;

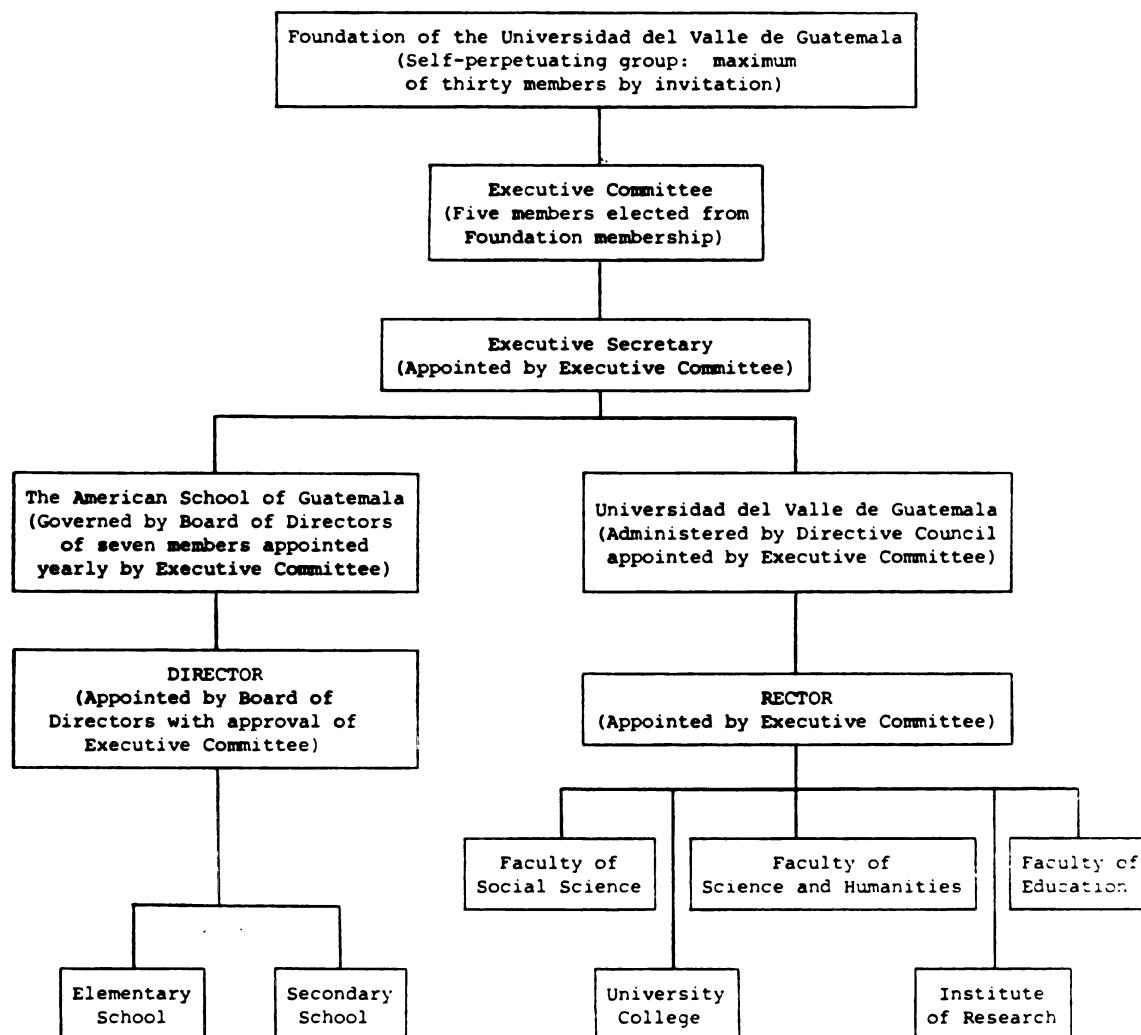


Figure 5

Organization of the Foundation of the Universidad del Valle de Guatemala

SOURCE: Keith D. Miller, "Organization of the Foundation of the Universidad del Valle de Guatemala" (Guatemala: Fundación de la Universidad del Valle de Guatemala, June 17, 1979). (Mimeographed.)

3. cooperate with the educational authorities of the Country and with universities that operate in the Republic or abroad, in accordance with the aims of the Foundation;
4. provide pedagogical assistance and any other help consonant with its aims to institutions and entities that carry on analogous activities;
5. receive and accept donations, contributions, loans and economic assistance, in general, and also scientific aid and any other kind of help which may be necessary or convenient for the furtherance of the Foundation's aims and activities;
6. in general, execute all acts and contracts which may be necessary or convenient for the furtherance of its aims.³⁴

The General Assembly, composed of all members of the Foundation, meets two times per year to hear reports from the Executive Committee, approve the budget, elect and remove members of the Executive Committee, elect and remove active members of the Foundation, elect the members of the Superior Council of the Universidad del Valle, and conduct other appropriate business.³⁵

The Executive Committee is composed of a minimum of five and a maximum of seven officers elected by the General Assembly. In addition, the Executive Secretary of the Foundation and the Rector of the University serve as members ex officio. The officers of the Executive Committee hold office for two-year periods, but may be re-elected indefinitely. Half the seats are subject to the election each year.³⁶

The following are functions of the Executive Committee:

1. to execute the resolutions and carry out the recommendations made by the General Assembly;
2. to administer the assets and resources of the Foundation;
3. to manage the sale, alienation, and mortgaging of assets of the Foundation;
4. to issue the by-laws deemed convenient for the best development of the Foundation and for the government, administration, and organization of the same;

5. to designate and remove the Executive Secretary and the functionaries and trusted employees of the Foundation and to determine their duties;
6. to exercise all the powers pertaining to the Foundation as the successor in totality of the Association of the American School of Guatemala in accordance with the statutes and regulations of the Universidad del Valle de Guatemala, and which are not specifically assigned to the General Assembly;
7. to establish the committees, commissions, work groups, and advisory or assessorial groups that are deemed convenient, designate their members, fix their duties, and delegate to them the legal representation of the Foundation in those matters which may be incumbent on them;
8. to formulate the minutes, balance sheets, and budget proposals of the Foundation in order to present them to the Ordinary General Assembly;
9. to approve or disapprove the investments which are necessary or convenient for the pursuance of the purposes of the Foundation;
10. to decide with regard to contracting loans, obligations, financing, and the acceptance or refusal of donations and contributions with conditions attached;
11. to pass on all kinds of initiatives, proposals, motions, and suggestions to the General Assembly;
12. to call the ordinary and extraordinary sessions of the General Assembly;
13. to authorize the President of the Foundation to exercise the legal representation of the Foundation in all kinds of contracts; and
14. in general, to direct and administer the Foundation and exercise all those functions which do not pertain specifically to the General Assembly.³⁷

The Executive Secretary is the administrative agent of the Foundation. He is charged with the duties of directing the personnel of the Foundation, administering the Foundation, and representing the Foundation before courts of law either together with or separately from the President of the Foundation.³⁸

The Executive Committee is empowered to select boards of directors for all of the educational establishments it sustains. To date, the Foundation has appointed a Board of Directors for The American School but has no such body for the University. Policy for the University is determined by the Executive Committee.³⁹

Administration of the University is managed through the Directive Council made up of the Rector, Vice-Rector, Secretary, Director of Studies, the Executive Secretary of the Foundation, and invited advisors. The Directive Council meets as necessary to discuss and make decisions concerning the overall functioning of the University.⁴⁰

The University comprises five academic units: the Institute of Research, the University College, and the faculties of Science and Humanities, Social Science, and Education. Each unit is directed by a coordinator. Within the Faculty of Science and Humanities, there are department directors for Chemistry, Biology, Agricultural Sciences, Humanities, Computer Science, Civil Engineering, and Psychology. Within the Faculty of Education, there is a director for the Master's Program in Educational Measurement, Evaluation, and Research. Within the Institute of Research, there are directors for the Center for Educational Research and the Center for Studies in Population, Evaluation, Environment, and Natural Resources.⁴¹

An Academic Council, made up of the members of the Directive Council, coordinators of the five academic units, heads of departments, and directors of centers and programs meets twice a month to discuss academic plans and programs and to coordinate academic offerings.⁴²

As a group, professors have no formal role in decision making. The Academic Council meets periodically with the Directive Council to discuss academic matters. Occasionally, the Directive Council will meet with groups of professors. Although the ideas of professors are often influential, final decisions are made by the Directive Council.

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This is the general pattern at the private universities, which is a departure from the strong influence held by professors at the national university. As one professor stated,

It is understood that at the private universities in Guatemala, a teacher has little voice in the institution's affairs. If he does not like it that way, he simply leaves. At the Universidad del Valle de Guatemala, a few have left for this reason, but the majority do not consider it a big issue.⁴³

Students take no direct role in decision making at the University. Occasionally students' suggestions are taken up by the Directive Council, but that is the extent of their influence.

Students. Generally speaking, the students at the Universidad del Valle de Guatemala pursue their studies seriously. They demonstrate little interest in politics or in exerting influence on the administration of the University.

1. Selection. The Universidad del Valle de Guatemala practices selective admission in all but the teacher certification program. Applicants for the regular undergraduate program must present proof of having completed a college preparatory secondary school program and take an academic aptitude test. Only those students who place in the top 50 percent are eligible for admission. In addition to the admissions test scores, secondary school grades are taken into consideration.⁴⁴

Candidates for the Masters and Ph.D. programs are chosen on the basis of their university record, recommendations from professors, and probable influence on education.⁴⁵

The students in the medical program are carefully selected by the Universidad Francisco Marroquín. This will be explained later in the chapter.

Enrollment in the secondary teacher certification program is not selective. Only proof of successful completion of a college preparatory program is required for admission. However, students in the elementary teacher certification program are carefully chosen. Admission is limited to those teachers with a normal school diploma who demonstrate special interest and intellectual capacity for meeting the requirements of the program.⁴⁶

2. Financial aid. Fees at the Universidad del Valle are approximately \$1,000 per year for full-time students. The teacher certification program offered on Saturdays charges \$20 per course per semester plus a matriculation fee of \$5.00 each semester.

Financial aid is available to full-time students who can demonstrate economic necessity. To qualify for the scholarships, students must be in the middle to lower income brackets. Presently about half of the full-time students receive some kind of scholarship assistance. Students who receive scholarships are expected to work at the University about ten hours a week during their last two years in positions such as laboratory assistant, teaching assistant, or librarian's helper.⁴⁷

Financial aid is given to the Saturday students indirectly by charging low fees which do not cover the operating expenses of the program. It is estimated that the income from these fees pays approximately half the total cost of the program.⁴⁸

The organization of American States (OAS) and the United States Agency for International Development (USAID) provide scholarships for students who qualify for enrollment in the Master's degree program and workshops offered by the Faculty of Education.⁴⁹

The University administers the Program of Guidance and Scholarships for Higher Education (POES) which relates both to selection and scholarships. Through this program, financial aid is obtained and made available to exceptional students from needy families to study at any of the five universities in Guatemala.⁵⁰

3. Enrollment. In accordance with trends throughout Guatemala, enrollment at the Universidad del Valle de Guatemala has increased rapidly in the last few years. Table 6 shows the enrollment figures in the various programs at the Universidad del Valle since 1966. In a little over a decade, the number of students enrolled in certification and degree-granting programs has increased from ten to nearly eight hundred students.

University officials project an ultimate enrollment of somewhere between five hundred and one thousand full-time undergraduates in the regular degree programs, as many as five hundred students in the Saturday program, and an undefined number in post-graduate and special programs.⁵¹

To date, 190 students have been graduated from the Universidad del Valle de Guatemala. Please refer to Table 7 for a listing of the degrees granted.

Table 6
Enrollment at the Universidad del Valle de Guatemala: 1966-1979

Academic Unit Program	Y E A R													
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
University College														
General Studies	6	12	15	44	52	41	14		26	25	14	10	8	97
Medicine													54	116
Faculty of Social Sciences			1	15	20	20	25	29	24	27	27	23	29	19
Faculty of Science and Humanities														
Mathematics	4	13	15	25	29	29	31	51	24	21	24	21	20	14
Physics									6	10	12	17	16	13
Biology				1	3	3	2	3	3	10	15	26	28	18
Chemistry								4	3	5	10	18	17	13
Computer science												25	39	22
Agricultural science												14	23	14
Psychology												19	24	25
Letters												1	1	3
Civil engineering												6	24	17
Faculty of Education														
Teacher certification							99	141	218	318	290	376	374	322
Licenciatura							30	19	26	38	26	26	22	22
Master's degree									38	28	7	12	11	9
Free courses							84	41	13			23	35	50
Totals	10	25	31	85	90	93	285	288	381	482	425	617	715	774

SOURCE: Licenciado Daniel Contreras, "Enrollment at the Universidad del Valle de Guatemala: 1966-1979" (chart prepared for the writer, Guatemala, August 7, 1979).

Table 7
Graduates of the Universidad del Valle de Guatemala: 1972-1978

Faculty Specialization	Year							Degree				Total
	1972	1973	1974	1975	1976	1977	1978	Tr. Cert.	Lic.	MA	Ph.D.	
Faculty of Social Science			1		1	4	2		8			8
Faculty of Science and Humanities												
Mathematics	2	1	2	5	2	3			15			15
Physics		3	1			3	2		9			10
Chemistry							2		2			2
Biology							2		2			2
Faculty of Education												
Mathematics	3	2	7		2	3	1	18				18
Science				1	1		1	3				3
Hist. & Soc. St.		1		12	7	7	11	38				38
Lang. and Lit.				2	6	6	4	18				18
Health Education					3	7	3		13			13
Administration					1				1			1
Psychology					1				1			1
Measurement			18	16	7	11	9			61		61
Totals	5	7	29	36	32	44	37	77	51	61	1	190

SOURCE: Licenciado Daniel Contreras, "Graduates of the Universidad del Valle de Guatemala: 1972-1978" (chart prepared for the writer, Guatemala, August 7, 1979).

Below are some enrollment statistics obtained from responses to the student questionnaire administered by the writer.

Ninety-three percent of the students at the Universidad del Valle are Guatemalan. Seven percent come from twenty other countries, mainly in Latin America.⁵²

Nearly half the students are women, about 62 percent of whom are enrolled in the faculties of Education and Social Science. Men predominate in the Faculty of Science and Humanities (57%) and the pre-medicine program (68%).

Sixty percent of the students are employed: 85 percent of the students in the Faculty of Education, and about 50 percent of the students enrolled in the other programs. Of the people enrolled in the Faculty of Education, over 80 percent are employed in education-related fields. Interestingly, about 45 percent of the working students in the other faculties also work in education-related fields. Even in the pre-medicine program, 25 percent of the students who work are employed in education.

Five percent of the students have a grade average in the 51-60 range, 35 percent in the 61-70 range, 40 percent in the 71-80 range, 15 percent in the 81-90 range, and 5 percent in the 91-100 range.

About one-third of the students have studied at other universities. Of that number, 62 percent studied at the Universidad de San Carlos, 13 percent at Rafael Landívar, 4 percent at Mariano Gálvez, 3 percent at Francisco Marroquín, and 18 percent at universities outside Guatemala.

4. Rules and regulations. Rules at the Universidad del Valle de Guatemala are strict. Students are warned that behavior which detracts from an academic atmosphere of rigorous study and research may result in expulsion from the institution.⁵³

Students are required to attend classes regularly and punctually, and professors are required to keep attendance records. Students who are absent from a given class more than 20 percent of the time without an acceptable excuse will fail the course and must repeat it.⁵⁴

Student organizations are permitted to exist as long as they are not disruptive of the academic atmosphere. Political and religious proselytizing are prohibited.⁵⁵

Generally speaking, the tenor at the University is one of seriousness and hard work. There is no defacing of buildings as is common at national universities. The only student organizations formed to date are a theater group, a newspaper, and a cultural organization. A student government does not yet exist, although such an organization is permitted.

The strict rules, lack of political activism on campus, and the generally serious behavior of the students are in keeping with the behavioral norms and educational policies of the private universities in Latin American countries.⁵⁶

5. Guidance. All entering students take the Differential Aptitude Tests and receive explanations concerning their scores. With this profile of academic strengths and weaknesses, students are better able to choose an area of study appropriate to their

abilities. The year of general studies provides additional guidance in that the students have the opportunity to study within several disciplines and further mature before choosing a field of specialization.⁵⁷

Once a student enrolls in a degree program, the department director acts as his academic counselor. In addition to the guidance received from the department director, many teachers give academic counseling to students. The University has no formal guidance office and makes no attempt to provide students with information about career opportunities or placement.⁵⁸

6. Grading. Grading is done on a 1-100 number scale with 51 as the lowest passing mark. Table 8 shows number grades and their letter equivalents. Final examinations count for a maximum of 30 percent of the final grade or less depending on the professor. The University policy on final examinations is designed to discourage the common practice in Latin American universities of placing inordinate importance on a single examination at the end of a term. Further, the University requires students to maintain an average of at least fifty points in a course to be eligible to take the final examination.⁵⁹

Students who fail a final examination have one opportunity to take a make-up examination at the beginning of the next semester. A student who fails the make-up examination must take the course again. Re-enrollment is dependent on a student's having an average of at least 60 in all the courses he took the previous year and no more than one failed course. If he has less than a 60 average or has

failed two or more courses, his case will be reviewed by the Directive Council for a decision as to whether he may continue and under what conditions. Few students are forced to leave the University because of low grades.⁶⁰

Table 8

Number Grades and Letter Equivalents at the
Universidad del Valle de Guatemala

Numbers	Letters
0 to 50	E
51 to 62	D
63 to 69	C-
70 to 75	C
76 to 82	C+
83 to 93	B
94 to 100	A

SOURCE: Licenciado Daniel Contreras, "Number Grades and Letter Equivalents at the Universidad del Valle de Guatemala" (chart prepared for the writer, Guatemala, August 7, 1979).

Autonomy. The Universidad del Valle de Guatemala enjoys freedom from government interference, as do the other universities in Guatemala. At the same time, the University has cooperated with government agencies on several projects related to national development: (1) research to eradicate the Pine Bark Beetle, (2) research on River Blindness, (3) scoring and analyzing tests for the Ministry of Education, and (4) the training of technicians for the Guatemalan National Malaria Eradication Service. These projects will be discussed later in this chapter.

Interdisciplinary activity. The Universidad del Valle de Guatemala engages in the interdisciplinary training of its students primarily through its program of general studies which will be explained later in this chapter. Beyond that, little is done to expose students to an interdisciplinary approach to problem solving.⁶¹

Interinstitutional and international involvement. The Universidad del Valle de Guatemala has long cooperated with other institutions on a variety of projects of importance to national and regional development. The University serves as a Multinational Center for Evaluation and Educational Test Development for the Organization of American States, offering short workshops on testing and evaluation to hundreds of educators from many countries in Latin America. The University cooperates with the Center for Disease Control by providing headquarters for its tropical research station. It also cooperates with the National Reforestation Institute on a major project to control the Pine Bark Beetle which is destroying much of the pine tree population in Guatemala and the region. The University has contracts with The Institute of Nutrition for Central America and Panamá (INCAP) and the Central American Institute for Industrial Research and Technology (ICAITI) to cooperate on a variety of development-related projects. The University recently entered into a three-way cooperative project with the University Francisco Marroquín and the Herrera Llerandi Hospital to train medical doctors. The University sends promising students and professors to pursue advanced studies in the United States through the Latin American Scholarship Program of American Universities (LAUSPAU) and hires many visiting

professors through the Latin American Teaching Fellowship program (LATF). In addition, the University has obtained grants and loans equaling several millions of dollars from foundations, government agencies, and development banks.

The Universidad del Valle de Guatemala does not belong to any regional organization of universities. Membership in CUSCA is not possible since this organization serves state universities only. The University has not chosen to become a member of FUPAC because of the tendency of this organization to make political statements on behalf of all the member institutions, a practice which is contrary to the nonpolitical posture of the Universidad del Valle de Guatemala.⁶²

Institutes. The Institute of Research of the Universidad del Valle de Guatemala was established to coordinate and oversee the University's research activities. It will be described later in this chapter.

Support facilities. The Universidad del Valle de Guatemala has several laboratories for teaching and research in the natural sciences, a computer center, a library, a print shop, and a 110-acre tract of land for agricultural experimentation. The following is a description of those support facilities.

1. Laboratories and equipment. The University has teaching and research laboratory facilities for physics, chemistry, biology, and agricultural science. It is the general opinion of the professors, department heads, and coordinator of the Faculty of Science

and Humanities that the teaching laboratory facilities are good to excellent and better equipped than at any other University in Central America. Several weaknesses are noted, however. The agricultural science laboratory facilities are considered poor for both teaching and research purposes and most of the laboratories are deficient for research. In addition, the department heads point out that due to the recent surge in student enrollment, the laboratory facilities are now at full capacity and must be expanded soon in order to maintain high quality facilities. Several department heads and the coordinator note that there is a serious lack of storage space for collections, equipment, and materials, and maintenance of live animals.

In 1979, there were signs that the laboratory facilities would be improved and expanded in the near future. The grant from the American Schools and Hospitals Abroad Branch of AID included an item of \$140,000 for science equipment and an item of \$40,000 to construct the medical entomology building. The Center for Disease Control has agreed to furnish the medical entomology laboratory building with sophisticated research equipment.⁶³

2. Computer Center. In 1975, the Universidad del Valle de Guatemala purchased a Hewlett-Packard 21M computer with a 64,000 byte capacity to be used for administrative, teaching, research, and service functions. The Computer Center has an optical and punched-card reader, six teletype terminals, one console and screen terminal, a line printer, and a card punch.

The computer serves the administrative needs of the Foundation by printing employee checks, controlling the cafeteria and school supply accounts for students and professors, maintaining a statistical file on all students, keeping a record of courses taken by the students, and scoring tests. Presently, plans are being considered to computerize the billing process.

All students in the Faculty of Science and Humanities must take at least one course in computer programming. The Department of Computer Science uses the Computer Center as its laboratory facility for all computer courses. In addition, students in the Master's degree program in Educational Measurement must take a course in the programming and operation of computers.⁶⁴

The computer has had limited use as a research tool. Several Master's degree students have used the facilities to carry out part of their thesis work. The writer used the computer to read questionnaire answer cards and list the results. Some research related to the longitudinal child growth and development study has required the use of the computer facilities.

With regard to service, the Computer Center processes many answer cards for the Ministry of Education and other universities. In addition, it scores the answer cards for the Program in Counseling and Scholarships for Higher Education, operated by the Universidad del Valle de Guatemala.

The Director of the Department of Computer Science, who is also the Director of the Computer Center, indicates that the present computer has served the University well to date, but has reached the limit of its capacity given the increasing work load. In 1980, as a

result of a grant from the American Schools and Hospitals Abroad branch of AID, the Center will make a substantial addition to its facilities, adding 128,000 bytes of memory, a second line printer, 3 CRP's, a 50 megabyte disk unit, and a magnetic tape unit.⁶⁵

The Director projects a need for a computer capacity of 256,000 bytes memory, 400 million bytes access memory, and up to 20 terminals. He suggests purchasing all new equipment and using the present computer for laboratory work for the students taking computer courses. The new facilities, he says, will be large enough to accommodate all administrative, service, and research activities of the University for several years and can also be employed to do major research projects for the nation and region. In addition, the facilities can be used to do commercial work, the income from which can repay the cost of maintenance and operation.⁶⁶

3. Library. The present library holdings number about 20,000 books and 150 periodical subscriptions. Many of the books and subscriptions have been acquired through grants, loans, and gifts. An annual budget for books does not exist, leading to the difficulty that in some years many books are ordered by the library and in other years no books are purchased. This problem is acute with periodical subscriptions which on occasion have been canceled for lack of funds. When funds are available again, it is difficult and expensive to replace the back issues which were not received during the time of the canceled subscription.⁶⁷

The University library processes books for both the University and the American School of Guatemala, a practice which increases efficiency for both institutions.

The Head Librarian holds a Master's degree in library science from the University of Southern California and has forty years of experience in library work.⁶⁸ Her staff is composed of two clerical workers and a circulation desk assistant, none of whom had previous library experience prior to working at the Universidad del Valle de Guatemala. The Head Librarian has trained three librarians who now hold head positions at other libraries in Guatemala.⁶⁹

The library tends to fall behind in the cataloging of books and processing of journals. Many of the library holdings are not available to the public because they have not yet been processed.

The library has shelf space for 50,000 volumes, a large area for study tables, a medium-size conference room, a large processing room, a photocopying machine, a microfilm reader, two electric typewriters, a book binder, and a small mimeographic machine to duplicate catalog cards. It also has an electronic book detector at the exit to the stacks to protect against book theft.⁷⁰

The holdings of the library are available for loan to all personnel of the School and University. The usual loan period is four weeks with no renewal. Material in great demand is lent for just one week. Loans of up to one year are made to faculty for professional use. Any individual who identifies himself may use the materials within the library, but may not check them out unless he is a member of the School or University staff or student body.⁷¹

The library maintains a reserve system in cooperation with the professors of the University and the School. The professors determine the reserve loan policies (library use only, overnight, weekend).

To date, there is no inter-loan mechanism operating among the universities in Guatemala, although such a system is under consideration.⁷²

Most acquisitions are made on request from the various academic units. In spite of some of the problems mentioned above, the library is considered to have good services, and is rated highly by both students and professors. "In some areas, the holdings are the most complete in all of Central America and requests are frequently received from colleagues at other institutions for permission to use the library for research efforts."⁷³

4. Print shop. The University and School have a large printing facility on campus which includes an IBM Composer, four Platen presses, one offset press, two paper cutters, one pagination machine, and one paper-folding machine. The printing of all standardized tests developed by the School and University, some of the teaching materials, computer cards, and a variety of other materials is carried out through the print shop. The print shop is staffed by a printer, an assistant, and two helpers. The print shop has not been able to keep up with the expanding printing needs of the School and University. It is the intention of the Foundation to purchase new printing equipment to meet the increasing printing demand as funds become available.

5. Preserve land tract. In order to carry out biological and agricultural research, it has been necessary to request permission for access to private and public properties. Because of the need to exercise some control over land usage for this research, the University has attempted to obtain land tracts for research demonstration projects around the country to be used both for research and extension purposes. In 1977, the first such preserve area, a 110-acre tract in the Department of El Quiché, was donated to the University. Other donations of land are expected over the following few years.⁷⁴

Planning

Over the years, planning has been given special attention at both the School and University. Much time and money were spent designing the plant and programs. Indeed, \$100,000 was spent on plans for the recent construction of buildings for the School and University.⁷⁵ However, there is little evidence of systematic long-range planning for the University during the last few years. The trustees and members of the Directive Council (those charged with planning for the University) have tended to dedicate most of their planning time to meeting the short-term needs. The writer was unable to obtain any written long-range plans for the University.

A few weeks before the completion of this study, however, a Future Plans Committee was formed at the University, made up of members of the Directive Council, coordinators of the academic units, department heads, and invited participants. The Committee meets periodically to discuss all aspects of the long- and medium-range

growth of the institution. Attention is given to assessment of national needs, the ways in which the University can meet some of those needs, the development of new programs, expansion of present programs, construction, financing, and other topics. The following are the major areas of discussion of the Committee to date, as noted by the writer who attended the Committee meetings.

Improvement of teaching. The Committee discussed the need to improve the quality of teaching through the following ways:

- (1) careful selection;
- (2) training of professors in teaching techniques;
- (3) increasing the numbers of half-time and full-time teachers;
- (4) increasing incentives by offering higher salaries, better benefits, opportunities to conduct research, opportunities to further studies; and
- (5) to improve the evaluation and supervision process.

Development of academic programs. All department directors have stressed the need to increase the number of degree programs offered. In addition, they call for greatly increased research activity. The Coordinator of the Faculty of Education has recommended using several public schools as laboratory schools.

Building program. It is clear from the reports given by each of the coordinators that major construction must be carried out to permit the expansion foreseen. In fact, according to the predictions made by members of the Future Plans Committee, over 5,000 m² of new space will be needed in the next decade.

Financing. Committee members have pointed out that the expansion of the University's teaching, research and service programs will require major, sustained efforts to obtain more income by attracting more students to the University and by intensifying activities to raise funds from outside sources. To attract more students, many of the committee members have recommended that the University advertise its programs extensively and engage in various promotional activities such as television programs and open houses on campus for graduating secondary school students.

It has been recommended that individual faculty members be more aggressive in seeking financing from outside sources for research projects. To do this, the University has prepared information for the professors on how to apply for research financing.

Evaluation

There is no systematic institution-wide system of evaluation at the Universidad del Valle de Guatemala. Department heads supervise the professors in their departments and report periodically to the faculty coordinators. The Academic Council meets regularly to review the present situation and make some evaluation, but most of the evaluation of programs is accomplished at the Directive Council level.⁷⁶

In 1979, the University prepared professor evaluation forms to be completed by the students at the end of each course. The writer was permitted to review the results of the first evaluation, which were generally complimentary of the professors. The Directive Council reviews the evaluations, using them to point out professors

who are rated low by their students. These professors are then supervised more closely by the coordinators.⁷⁷

There is an attempt to ensure that professors arrive punctually at their classes by having administrators periodically walk the hallways and observe the classrooms. It has been noted that the full- and half-time professors are more punctual and regular in their attendance of classes than are professors paid by the course.⁷⁸

Financing

The Universidad del Valle de Guatemala is unable to support itself from student fees alone for the following reasons: (1) a small institution with few students, the University is not cost efficient; (2) the acceptance of qualified applicants regardless of their ability to pay the fees necessitates an ample financial aid program; (3) the research activities are costly; and (4) the emphasis on sciences requires investment in expensive facilities and equipment.⁷⁹

At present, student fees account for about half the University's income and do not pay the operating expenses. Please refer to Table 9 for the 1978 current operations budget. Projections indicate that when the maximum enrollment is reached, the teaching program will be self-sufficient. However, the research and development activities will probably always require financing from outside sources.⁸⁰

Since its inception, the University has sought and obtained outside financing for its programs. In 1972, the American School Association was transformed to the Fundación de la Universidad del

Valle de Guatemala, primarily to enhance the ability to finance the University and the School. The Foundation status frees the institution from paying taxes and assists the procurement of outside financial support. The loan from the Inter-American Bank, for example, was facilitated because the University is sponsored by the Foundation.⁸¹

Table 9

1978 Budget for Current Operations for the Universidad del Valle de Guatemala

<u>Income</u>			
Student fees		\$225,000	56%
Grants, program assistance		125,000	31%
Donations (unrestricted)		40,000	10%
Miscellaneous		12,000	3%
<u>Expense</u>			
Salaries	\$318,000	79%	
Cost of subsidized programs	64,000	16%	
General expense	20,000	5%	
	\$402,000	100%	\$402,000 100%

SOURCE: "1978 Budget for Current Operations" (Guatemala: Fundación de la Universidad del Valle de Guatemala, January 1978). (Mimeographed.)

To further improve its ability to raise money, the Foundation established a counterpart organization in the United States, the Foundation of the University of the Valley of Guatemala, which is incorporated in Delaware and has Internal Revenue Service approval as a tax-exempt institution. The members of the Foundation are people of substance in their professions, their businesses, or their government service who are willing to represent the University in the United States among individuals, companies, foundations, and

organizations that may be in a position to help the University financially or in some other way. Their first major success was the obtainment of a development grant of \$675,000 from the American Schools and Hospitals Abroad branch of AID (ASHA) in 1979.⁸²

Since 1967, the Universidad del Valle de Guatemala has received over half its total income in the form of donations, grants, and contracts from a variety of outside sources.⁸³ Please refer to Table 10 for a complete listing of the University's income from outside sources.

In addition to the income listed in Table 10, the Foundation has also obtained a loan of 2.8 million dollars from the Inter-American Development Bank which was mentioned earlier.

Calendar and Schedule

The regular academic year is divided into three terms as follows:

First term February to beginning of June (17 weeks)

Second term June and July (9 weeks)

Third term August to November (17 weeks)

The Faculty of Education has a different calendar to permit better attention to in-service teachers:

First term February to June (Saturdays)

Second term June to October (Saturdays)

Third term November (Monday through Saturday)

In the faculties of Social Science and Science and Humanities most classes are held from 2:00 P.M. to 8:00 P.M. In the pre-medicine

Table 10
Income from Outside Sources for the Universidad del Valle de Guatemala: 1967-1979

Source	Y E A R														Totals
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979		
AID	2,500.	3,000.	49,000.	10,000.	72,000.	92,000.	132,600.	165,000.	100,000.	40,000.	----	----	----	666,100.	
Ford	----	7,000.	24,000.	5,000.	----	----	66,000.	87,000.	72,000.	55,000.	35,000.	5,000.	10,000.	366,000.	
United Brands	----	----	5,000.	5,000.	5,000.	7,500.	10,000.	10,000.	10,000.	10,000.	10,000.	7,000.	6,000.	85,500.	
Miscellaneous	----	----	2,000.	1,000.	----	----	7,200.	5,000.	7,000.	40,000.	36,000.	6,000.	10,000.	114,200.	
ASHA*	----	----	----	----	----	----	100,000.	----	----	----	----	----	675,000.	775,000.	
OAS	----	----	----	----	----	----	----	23,000.	32,500.	47,500.	45,000.	45,000.	25,000.	218,000.	
Development Associates	----	----	----	----	----	----	----	----	----	10,000.	7,500.	30,000.	30,000.	77,500.	
Tinker	----	----	----	----	----	----	----	----	----	----	15,000.	15,000.	15,000.	45,000.	
Battelle	----	----	----	----	----	----	----	----	----	----	----	35,000.	54,500.	89,500.	
IDRC** and Bank of Guatemala	----	----	----	----	----	----	----	----	----	----	----	30,000.	----	30,000.	
Totals	2,500.	10,000.	80,000.	21,000.	77,000.	99,500.	315,800.	290,000.	221,500.	202,500.	148,500.	173,000.	825,500.	2,466,800.	

SOURCE: "Income from Outside Sources at the Universidad del Valle de Guatemala: 1967-1979" (chart prepared by Dr. Robert B. MacVean, Executive Secretary, Fundación de la Universidad del Valle de Guatemala, June 5, 1979).

* American Schools and Hospitals Abroad branch of AID

** International Development Research Center

program, classes are held from 7:30 A.M. to 1:30 P.M. In the Faculty of Education, most classes are held on Saturdays from 8:00 A.M. to 1:00 P.M.⁸⁴

THE FUNCTIONS OF THE UNIVERSIDAD DEL VALLE DE GUATEMALA

Instruction

Four of the five academic units of the Universidad del Valle de Guatemala serve the function of instruction: the University College, the Faculty of Education, the Faculty of Science and Humanities, and the Faculty of Social Science. The writer will not attempt to describe all of the instructional programs offered at the Universidad del Valle de Guatemala. Rather, he has selected certain programs for description on the basis of their pertinence to the University's role as a contributor to national development.

Staff. Table 11 lists the numbers of teaching staff by academic degree and time contracted. The staff includes all of the Guatemalans with Ph.D. degrees in Physical Chemistry, Physics, and Mathematics, as well as one of the few with a Ph.D. degree in Anthropology.⁸⁵

There are three categories of teaching faculty: full, adjunct, and assistant. The full professors are entirely responsible for the courses they are assigned to teach. When it is necessary to divide a class into sections, adjunct teachers cooperate with and work within the norms set by the full professors. Assistants help in the preparation of the teaching or laboratory activities in accordance with instructions of the full professors.⁸⁶

Table 11

Teaching Staff at the Universidad del Valle de Guatemala by Academic Degree
and Time Contracted: 1979

Unit	Degree			Time Contracted			Number of Professors		
	Ph.D.	Masters	<u>Licenciado</u> No Degree	Full time	Half time	10-15 Hrs. By Course			
University College	1	2	8	2	1	3	6	13	
Science and Humanities	12	8	28	5	7	18	1	27	53
Social Science	2	-	5	1	3	-	-	5	8
Education	4	1	14	8	2	3	-	22	27
Research	2				2				2
Administration	1		4		3	1	1		5
Totals	22	11	59	16	18	25	5	60	108

SOURCE: Licenciado Daniel Contreras, "Teaching Staff of the Universidad del Valle de Guatemala by Academic Degree and Time Contracted: 1979" (chart prepared for the writer, Guatemala, August 7, 1979).

1. Staff development. Because there is an insufficient supply of Guatemalan professors with advanced training in the natural and social sciences, the Universidad del Valle de Guatemala operates two parallel programs to provide the needed teaching expertise. One is the importation of visiting faculty by means of the Latin American Teaching Fellowship program (LATF) run by Tufts University. Since 1974, there has been an average of five visiting faculty per year in such fields as biology, anthropology, library science, physics, sociology, and economy.⁸⁷ The second is the sending of selected faculty members and students abroad to do advanced study in areas in which there is a scarcity of trained personnel in Guatemala. The University has spent over \$45,000 to send faculty to the United States to receive graduate degrees: two Ph.D. degrees in Education, two Ph.D. degrees in Physics, one Ph.D. degree in Mathematics, and two Master's degrees in Mathematics. The University has also helped students obtain scholarships through the Latin American Scholarship Program of American Universities (LASPAU). To date, ten students have obtained LASPAU scholarships to study in the United States and returned to teach at the Universidad del Valle de Guatemala.⁸⁸

In addition to sending professors and advanced students abroad to work toward academic degrees, the University also gives short leaves of absence for professors to attend conferences and workshops in and out of Guatemala.⁸⁹

2. Teaching schedules. Professors are hired on one of four schedules: full-time, half-time, ten to fifteen hours, or by the course. A full-time load is forty hours a week on campus teaching

three courses a semester which meet an average of three times a week. There are many variations of full-time work: some teachers having some time for research, others teaching more laboratories and fewer classes, etc. The half-time assignments are from twenty to thirty hours a week with a proportional teaching load. Many teachers, and all but one of the Saturday program teachers, are hired by the course.⁹⁰

It should be pointed out, however, that excluding the Faculty of Education, 20 percent of the professors are full time. When the half-time professors are added, nearly 50 percent of the professors in the regular academic programs are hired a major portion of the day. The professors in the Saturday program are hired by the course since there are no full-time or even half-time assignments possible.

3. Salaries. Salaries are determined on the basis of academic degree. For full-time work, a person with a Ph.D. degree receives \$10,000, a person with a Master's degree receives \$8,400, and a person with a Licenciatura degree receives \$7,200. There is some extra pay for extra responsibility such as coordination of a faculty or directorship of a center or program. People who work half time or by the course are paid a proportional amount of full-time salary according to the degree they hold.⁹¹

Salaries at the University have not been increased in several years, at a time of inflation and increased salaries at other universities. The result is an increasingly uncompetitive salary schedule. Many professors mention low salaries cause them

to consider leaving the University. To date, however, there has been no major exodus of personnel.

4. Women on the staff. About 28 percent of the staff are women, a rather surprising fact since traditionally in Latin America university teaching has been almost exclusively a man's profession.⁹² Generally speaking, the women have less academic preparation than the men at the University. Fourteen percent of the professionals with a Ph.D. degree are women. Thirty percent of the persons with a Licenciatura are women.⁹³

5. Tenure. The University hires its professors for a one-year period. There is no system of tenure. According to Guatemalan law, if a teacher is fired, he is entitled to separation pay equalling one month's salary for every year of continuous work at the institution.⁹⁴

6. Academic freedom. The University insists on academic freedom. It is nonreligious and nonpolitical in nature; proselytizing is not permitted. Any point of view is appropriate for study and discussion, but not for indoctrination. The following statement on academic freedom is translated from a student handbook:

The University believes that the principle of academic freedom is an indispensable condition for teaching and must be evidenced by respect for scientific method, teaching methodology, and the thinking of the students so that students are prepared to formulate their own conclusions which are honest and valid. Thus, the University maintains and stimulates mutual respect for political and religious opinions.⁹⁵

University College. The University College was established in 1977.

It has an enrollment of about two hundred students.

1. Objectives. The following are the objectives of the University College:

1. compensate for any deficiencies in the education of incoming students,
2. provide students an overview of the disciplines prior to their choosing a field of study, and
3. provide future leaders with a general education background which will serve them in whatever field of specialization they choose.⁹⁶

2. Programs. The University College comprises the following programs: General Studies, Bachillerato Avanzado, and Pre-Medicine.

- a. General Studies. All regular first-year students enroll in the general studies program for one year. Only if they successfully meet the requirements of the general studies program may they enroll in a faculty to pursue a licenciatura degree. With a few exceptions, all students must take the same courses, none of which is a requisite for a given faculty program. Below is a listing of the courses required in the general studies program:

1. Mathematics
2. Introduction to the Biological Sciences
3. Introduction to the Physical Sciences
4. Introduction to the Social Sciences
5. Introduction to Literature (Spanish)
6. English⁹⁷

The University requires the general studies program of all its students as a means of giving them basic knowledge in the major areas of study prior to choosing a discipline for intensive study. The program is in keeping with one of its

major objectives which is to "further the aims of general education."⁹⁸ Even though the required courses in general studies are offered formally in the first year, "there are elective courses available to students in accordance with the nature of the selected program during the five years of undergraduate studies."⁹⁹

A discussion of the attitudes of students, professors, and administrators toward the general studies program is found in Chapter 5.

- b. Bachillerato Avanzado. Bachillerato Avanzado is a cooperative program between the American School and the University which offers accelerated studies to outstanding students in their last two years of secondary school. During the two-year period, students enrolled in Bachillerato Avanzado take intensive instruction in mathematics, chemistry, physics, biology, social studies, Spanish literature, and English as a second language. Upon successful completion of the program, the students are able to enter the Universidad del Valle de Guatemala at the second-year level or take advanced placement exams at other universities.¹⁰⁰

Cooperation between the School and the University is essential for the successful functioning of this program. Teachers from both institutions meet periodically to prepare the curriculum content in order to facilitate the students' transition from the School to the University. In addition, students take Biology in the regular university

program. Other courses require the use of the University library and laboratories.

The program, which began in 1977 with twenty-four students selected from the American School and other Guatemalan secondary schools, graduated eight students in November 1978, four of whom have entered the Universidad del Valle de Guatemala. Recent interviews with several of the students in the first group indicate a respect for the program and acknowledgment that they are better prepared academically than they would have been in a regular secondary bachillerato program.

Admission to Bachillerato Avanzado for American School students requires a grade average of 80 in the three previous years of study and recommendations from teachers. Students applying from other schools must take the Differential Aptitude Test in Spanish and a general ability test. To be accepted into the program, they must have high scores in the psychological tests, high grades in their previous three years of school work, and recommendations from teachers.¹⁰¹

The University plans to follow the Bachillerato Avanzado program carefully to see how the graduates perform at the Universidad del Valle de Guatemala and other universities. One Licenciatura candidate is studying the program as the subject of her research thesis. Student interest in the program has grown rapidly both within the American School and in many other schools in Guatemala.

- c. Pre-Medicine. The pre-medicine program is part of a joint effort to provide high-quality private medical training in Guatemala. The Universidad Francisco Marroquín provides the medical training and the Hospital Herrera Llerandi the clinical training for the program. The Universidad del Valle de Guatemala gives a three-year pre-medicine program in the basic sciences and general education.¹⁰²

The students enroll at the Universidad Francisco Marroquín and then take their courses at the Universidad del Valle de Guatemala. The Universidad Francisco Marroquín selects the students carefully using an admissions program test developed by the Universidad del Valle de Guatemala. About half the medical students receive some type of financial aid.¹⁰³

The first students (60) entered the program in 1978. In 1979, another sixty entered the program. The students take courses in the social sciences, humanities, English, and the natural sciences. Since the students enroll in all three terms each year, they take approximately thirty-five courses. The Universidad del Valle de Guatemala will grant the Bachelor of Science degree at the end of the pre-medical program.¹⁰⁴

- d. B.A./B.S. degree. University officials have plans to offer a four-year B.S. or B.A. degree in the near future. This will be a liberal arts program designed to prepare students for specialized work in Guatemala and other countries.¹⁰⁵

Faculty of Education. The largest of the three faculties, the Faculty of Education has an enrollment of approximately four hundred students. It was established in 1969.

1. Objectives. The Faculty of Education attempts to improve the general level of education in Guatemala by

1. providing short courses leading to teacher certification to large numbers of teachers,
2. giving refresher courses to in-service teachers, and
3. giving specialized education to carefully selected candidates for leadership positions as counselors, curriculum coordinators, teachers, and administrators for primary, secondary, and higher education.¹⁰⁶

2. Certification and degree programs. The Universidad del Valle de Guatemala offers the following certificates and degrees through the Faculty of Education:

1. Secondary Teaching Certificate
 - a) Mathematics
 - b) Natural Sciences
 - c) History and Social Studies
 - d) Language and Literature
2. Elementary Teaching Certificate
 - a) Special Education
 - b) Learning Problems
3. Licenciatura Degree
 - a) Preprimary Education
 - b) Primary Education
 - c) Educational Administration
 - d) Special Education
 - e) Health Education
 - f) Educational Research
 - g) Learning Problems
4. Master's Degree in Educational Measurement, Evaluation and Research¹⁰⁷

As noted in Chapter 3, one of the most acute problems in Guatemalan education a decade ago was the lack of trained secondary school teachers. The Universidad del Valle de Guatemala attempted to respond to the problem by offering a secondary teacher

certification program for in-service teachers in the capital city, the first of its kind in Guatemala. The program, which was initiated in 1969 and now enrolls an average of four hundred students, is offered on Saturdays to make it possible for practicing teachers to attend. The program requires thirty courses (about sixty semester hours) including courses in general education and the area of specialization, three semesters of a modern language, supervised practice teaching, and a comprehensive final examination. Certificates are awarded in History and Social Studies, Natural Science, Mathematics, and Language and Literature.¹⁰⁸

In light of the recent establishment of institutions for the mentally retarded and interest in helping children with learning problems in Guatemala, the Faculty of Education initiated an elementary teacher certification program in 1977 to prepare teachers to work with the mentally retarded and the learning disabled. The requirements for elementary teacher certification are similar to those for the secondary program, except that more emphasis is placed on classroom observation and supervised practice. Certificates are awarded in special education and learning problems.¹⁰⁹

Students majoring in special education must observe in an institution for the mentally retarded for two semesters. To facilitate this requirement, the Universidad del Valle de Guatemala offers some of its courses at the National Center for Special Education. Students majoring in learning problems must spend two semesters or a minimum of one hundred hours observing and working with children with learning problems under the supervision of a University professor.¹¹⁰

Most of the courses for the teacher certification program are offered on Saturdays from 8:00 A.M. to 1:00 P.M. The time is divided into three ninety-minute periods so that students may enroll in three courses each semester. Some courses are also available during the week in the afternoons and evenings. Thus, it is possible for a student to be graduated from the teacher certification program in a minimum of three years. For most students, however, the time for graduation is greater.¹¹¹

The Faculty of Education requires a common core of courses for students in all the teacher certification programs: Introduction to Philosophy, Basic Themes in Education, Psychology, Guatemalan History, Statistics, Use of Information Sources to Prepare Reports, Evaluation and Construction of Tests, and Teaching Techniques. All students make field trips to observe in schools and write term papers. In addition, supervised practice teaching is required of all teachers. Each student must prepare, teach, and evaluate a unit in a school approved by the Faculty of Education. Approximately forty students complete the practice teaching requirement each year in a number of Guatemalan schools, both public and private. The American School of Guatemala, as a laboratory school of the University, accepts students for practice teaching.¹¹²

In 1979, the teacher certification program suffered a reduction in students for the first time in its history. A report published by the Faculty of Education attributes this to three factors:

1. the existence of a similar program at the Universidad Francisco Marroquín which offers the same secondary certificates for fewer courses of shorter duration at a fee per course slightly lower than the fee charged at the Universidad del Valle de Guatemala;

2. high academic standards required at the Universidad del Valle de Guatemala; and
3. lack of advertising of the University's programs.¹¹³

The report attributes an increase in new students the second semester of 1979 to a newspaper advertisement announcing the program.¹¹⁴

The Licenciatura in Education degree program at the University is designed to prepare a small number of selected individuals for leadership in Guatemalan education. The same admission requirements as practiced in the other faculties obtain for admission to the Licenciatura in Education program, except that graduates of the University's teacher certification program with a 75 grade average or better are admitted without taking entrance examinations.¹¹⁵

The following are the requirements for the completion of a Licenciatura degree in the Faculty of Education:

1. successfully complete 53 three-credit courses as follows:
 - a) fourteen courses in general studies,
 - b) twenty-five courses in general education,
 - c) fourteen courses in the area of specialization;
2. complete supervised practice teaching; and
3. write and defend a thesis before a committee of professors in the Faculty of Education.¹¹⁶

The courses are offered on Saturday mornings and during the week from 4:00 P.M. on to permit working students to enroll. Presently, there are nineteen students enrolled in the Licenciatura program, ten of whom have completed all the course work and are preparing their theses. The Coordinator of the Faculty of Education believes that within the next two years most of the present students in the program will have been graduated.¹¹⁷

Fourteen students have received the Licenciatura degree to date, thirteen in Health Education. Because of the relationship to

national development and its example as a cooperative effort with the government, the writer will briefly describe that program. In 1973, officials of the Ministry of Public Health approached the Universidad del Valle de Guatemala to request cooperation in giving a professional degree to a group of outstanding nurses who had recently graduated from the National School of Nursing. These nurses, on receipt of the Licenciatura degree from the Universidad del Valle de Guatemala would then form the nucleus of the teaching staff of the National School of Nursing. The University designed a Licenciatura degree program in Health Education and fifteen selected nurses enrolled in it. By 1978, thirteen of the nurses had obtained a Licenciatura degree.¹¹⁸

In 1974, the Universidad del Valle began offering a Master's program in Educational Measurement, Evaluation and Research to professional educators throughout the region. Lasting a full academic year, it is an intensive program requiring the writing of a research thesis. As a prerequisite to admission, a prospective student must hold a Licenciatura degree, or the equivalent, and have some professional experience. In addition, the candidate must score well on an academic aptitude test administered by the Universidad del Valle de Guatemala. Five scholarships are available through the Organization of American States. Since the students tend to be professionals working in ministries of education in their countries, often their home countries assume responsibility for the expenses incurred.¹¹⁹

The courses required are as follows:

1. Seminar on education: three terms
2. Statistics: three terms

3. Educational measurement and test construction: two terms
4. Research methodology and experimental design: three terms
5. Individually guided work: three terms
6. Introduction to computer programming: one term
7. Master's thesis: two terms¹²⁰

3. Relationship of curriculum to national development. The Faculty of Education attempts to relate the instruction to national development issues. All students in the teacher certification program must take two courses in which national development is part of the instruction: Guatemalan History and Basic Themes in Education. All students in the secondary teacher certification program must take the Seminar on Secondary Education which requires them to conduct research on matters related to national education and development. Students majoring in History and Social Studies must take a Seminar on National Problems, a course which focuses on the role of education and Guatemala's development needs. All students in the Licenciatura program must take a seminar entitled Problems in Education which deals with national education and development. Teachers in the certification and degree programs receive instruction in the techniques of large and small-group instruction as well as the use of simple audio visual devices. In addition, they receive instruction in the use of inexpensive and common materials to produce teaching materials.¹²¹

Much attention is given in the Faculty of Education to supervision of students and professors and insisting on punctual and regular attendance, well-prepared classes, and the use of a variety of teaching techniques and methodology in the giving of the classes.¹²²

4. In-service training for University professors. In November 1979, the Faculty of Education offered a workshop to all of its professors in an attempt to improve their teaching ability and their expertise in evaluation of students. The workshop, the first of its kind at the University, was given on each of the four Saturdays in November from 8:15 A.M. to 10:15 A.M. and was attended by thirty-six professors from the Faculty of Education and four professors from other faculties. The workshop sessions focused on the following themes:

1. Teaching Techniques in Higher Education
 - a) group dynamics
 - b) use of the scientific method
2. Planning Techniques
 - a) writing of behavioral objectives
 - b) selection of appropriate teaching-learning activities
 - c) selection of appropriate teaching-learning resources
3. Techniques of Educational Evaluation¹²³

Since this study was completed while the course was still in progress, an evaluation of the workshop had not yet been made.

Faculty of Science and Humanities. The Faculty of Science and Humanities was established in 1966. It has an enrollment of approximately 140 students.

1. Objectives. The following are the objectives of the Faculty of Science and Humanities:

1. develop a basic studies program common to all degree programs through which the science and humanities are integrated so that the student
 - a) may have an integrated education,
 - b) can meet the faculty requirements, and
 - c) may be able to pursue graduate studies;
2. give a sound specialized professional training in each discipline based on a solid scientific base; and

3. prepare professionals able to think critically and contribute to the body of scientific knowledge.¹²⁴

2. Degree programs. The Universidad del Valle de Guatemala offers the following degrees through the Faculty of Science and Humanities:

1. Licenciatura Degree

a) Biology	g) Biochemistry
b) Physics	h) Chemistry
c) Civil Engineering	i) Agricultural Science
d) Mathematics	j) Psychology
e) Computer Science	k) Letters
f) Chemical Engineering	l) Food Science and Technology
2. Master's Degree

a) Biology	g) Chemical Analysis
b) Ecology	h) Soil Chemistry
c) Physics	i) Clinical Psychology
d) Electronics	j) Guidance
e) Mathematics	k) Educational Psychology
f) Chemistry	
3. Doctorate Degree

a) Physics
b) Mathematics ¹²⁵

The program of studies for the Faculty of Science and Humanities is designed according to the following scheme:

1. General studies
 - a) Humanities
 - b) Social sciences
 - c) Education
 - d) Modern language
2. Basic courses in the sciences
3. Courses in the student's major area¹²⁶

Prior to the establishment of the Universidad del Valle de Guatemala, science instruction in Guatemalan universities was given only as part of professional training; there were no programs available for the training of scientists. Students who wanted to take degree programs in the natural sciences were obliged to study abroad. The degree programs at the Universidad del Valle de Guatemala

were the first such programs in Guatemala. The emphasis in the Licenciatura program is on giving the students a general grounding in science, the scientific method, and critical thinking in order to provide a sound base for those who wish to pursue graduate work in the sciences and to provide sufficient knowledge in a scientific specialization to be able to work professionally in that field. It is the aim of the University to prepare future scientists capable of advancing science and technology in Guatemala.¹²⁷

To date, the University has awarded twenty-eight Licenciatura degrees and one Ph.D. degree. The majority of these graduates have gone abroad to pursue graduate work. In addition, several University professors have been given leaves of absence and financial support to do graduate work in physics, mathematics, and biology.¹²⁸

In the last few years, the University has expanded its program offerings from the basic sciences into the applied sciences in areas in which there is a perceived need for well-trained professionals with a strong scientific preparation. The programs in Civil Engineering, Computer Science, Pre-Medicine, and the Agricultural Sciences are cases in point.¹²⁹

The Civil Engineering and Computer Science programs have a strong emphasis on mathematics and physics and are aimed not so much at preparing technicians as at preparing professionals capable of adapting established technology, designing new technology, and generally adding to the development of these two professions in Guatemala. There is a strong emphasis on instruction in structures in the civil engineering program in light of the need for engineers able to design and construct buildings capable of withstanding earthquakes.¹³⁰

As mentioned in Chapter 3, although Guatemala is primarily an agricultural country, it must import large amounts of food. The Universidad del Valle de Guatemala has identified the following factors which contribute to insufficient food production:

1. inadequate use of technology;
2. failure to convey technological information to the small and middle-sized farmer;
3. deficient administration of human, physical, and economic resources; and
4. failure to achieve a functional organization which permits efficient development of the region's agricultural resources.¹³¹

In response to these deficiencies, the Universidad del Valle designed a program in agricultural sciences to train professionals to perform needed tasks in agricultural production, administration, animal production commercialization, and research and extension.¹³²

The program will prepare students to work in agriculture as professionals and to take post-graduate work in agricultural management. The five years of study provide students with extensive training in four areas:

1. agricultural science (biology, chemistry, physics, and mathematics)
2. agricultural economics (money, banking, credit, marketing and management of agricultural enterprises)
3. general education (philosophy, language, literature, foreign language, social sciences)
4. direct experience in agricultural practice (each summer during the five-year program, the students spend nine weeks working on some kind of agricultural enterprises)¹³³

A new development in the Agricultural Sciences Program occurred in 1978 when the Eacuela Agrícola Panamericana, a well-known agricultural technical training institute in Honduras, requested the Universidad del Valle de Guatemala to prepare a post-technical program for studies in agricultural science which leads to a

Licenciatura degree. In Central America, there are several institutions such as the Escuela Agrícola Panamericana which prepare agricultural technicians. Graduates of these programs are well-trained at the technical level but are not able to carry out research and develop new technologies.¹³⁴

These technical programs are three years in length and are considered to be of generally high quality (the Escuela Agrícola Panamericana has an international reputation for excellence). However, to date, none of the other Central American universities has recognized these programs, even though many universities in the United States have. The Universidad del Valle de Guatemala has completed plans to offer post-technical studies in agricultural science to selected graduates of the Escuela Agrícola Panamericana. The program is incorporated into the regular Licenciatura program in Agricultural Sciences and will permit students to complete the degree in two years.¹³⁵

The first students will enroll in this program in 1980. Because of the importance of selecting highly qualified students regardless of their financial status, the Universidad del Valle de Guatemala is presently attempting to obtain scholarship funds.¹³⁶

A recognized need in Guatemala and the region is to increase the efficiency of the production, conservation, and transformation of food. To meet this need, the Universidad del Valle de Guatemala has designed a Licenciatura degree in Food Science and Technology in collaboration with the Institute of Nutrition of Central America and Panama (INCAP).

The purpose of the program is the preparation of professionals who can work to overcome the problems in the production, transport, and storage of foods; to improve processing and quality control; and to contribute to the research and development of new foods.¹³⁷

The specific objectives of the Food Science and Technology Program are as follows:

1. provide fundamental training in the basic sciences--biology, chemistry, physics, and mathematics--as instruments for research in Food Science and Technology;
2. introduce the student to the methods, success, and limitations of scientific research in his particular area of interest;
3. develop the ability to work professionally in the areas of
 - a) post-harvest technology,
 - b) production engineering of foodstuffs,
 - c) analysis and control of quality,
 - d) research and development of new products,
 - e) assessment of health and nutritional value of foods, and
 - f) reduction of agricultural and industrial wastage in food production and processing; and
4. introduce the future professional to the implications of the foregoing areas regarding human affairs and the well-being of the population.¹³⁸

In 1979, the Department of Agricultural Sciences initiated a Master's degree program in Agricultural Economics which will be offered to professionals with Licenciatura degrees in Agronomy, Veterinary Medicine, and Economics. The program is offered in the evenings so that working professionals may participate.¹³⁹

As was mentioned earlier, the Universidad del Valle de Guatemala has become the headquarters for the Tropical Research Station of the Center for Disease Control (CDC), United States Bureau of Public Health. Three researchers from the CDC are now conducting research at the University on vector-borne diseases prevalent in Guatemala. At present, the researchers are using existing University laboratories. However, as a result of grants

from the American Schools and Hospitals Abroad branch of AID and the CDC, the University is presently constructing a medical entomology laboratory building which will be furnished with sophisticated equipment and materials. This new research facility will be complete by mid-1980.¹⁴⁰

In 1979, members of the CDC staff taught a course in medical entomology to biology students at the University. In addition, the CDC staff gave short courses to technicians who work for the Guatemalan Service for the Eradication of Malaria (SNEM).¹⁴¹

In 1980, the University will initiate a program to train specialists in medical entomology. The program will be conducted by the Department of Biology of the University in cooperation with the CDC, the SNEM, and the Guatemalan Ministry of Public Health. Its objectives are as follows:

1. offer theoretical and practical training to professionals in the areas of medical entomology, epidemiology of vector-borne diseases, and control of these diseases;
2. provide training in designing and carrying out scientific research on biomedical programs in Central America; and
3. prepare professionals able to evaluate ecological and entomological problems in Central America and help in the search for their solution.¹⁴²

The medical entomology program will offer training at three levels: (1) technical, without an academic degree; (2) Licenciatura degree in biology with a major in medical entomology; and (3) Master's degree in medical entomology. Members of the CDC staff will conduct the program.¹⁴³

An important aspect of the presence of the CDC on the University campus is that some of the advanced students are selected to

participate in the research. This provides University students with valuable training in research of national and regional importance.

3. Relationship of curriculum to national development. There is little attempt to relate the instruction in the Faculty of Science and Humanities to national development problems in a direct and systematic way. Officials at the University argue, however, that the programs themselves are carefully chosen for their pertinence to development needs in Guatemala and that some of the students are engaged in conducting research directly related to development, i.e., the Filaria studies conducted by CDC.¹⁴⁴

Faculty of Social Science. The Faculty of Social Science was established in 1969. It has a small student body of approximately twenty students.

1. Objectives. The following are objectives of the Faculty of Social Science:

1. prepare professionals trained in research, able to work in social change and improvement programs and teach at the university level;
2. conduct social research;¹⁴⁵
3. foment interest in the study of social sciences in Guatemala; and
4. operate a center for bibliography and social documentation to serve those interested in the study of social problems in Central America.¹⁴⁶

2. Degree programs. The Universidad del Valle de Guatemala offers the following degree programs through the Faculty of Social Sciences:

1. Licenciatura Degree
 - a) Archaeology
 - b) Anthropology
 - c) Social Psychology
 - d) Sociology
 - e) Economics for Development
 - f) Linguistics
2. Master's Degree in Anthropology¹⁴⁷

The following are requirements for the Licenciatura degree:

1. pass 53 three-hour semester courses as follows:
 - a) ten courses in general studies,
 - b) 27 general professional courses in social sciences,
 - c) four advanced courses in the area of specialization,
 - d) ten courses in methodology, including field research,
 - e) two optional courses;
2. prove ability to read in a foreign language by passing courses at the University or taking proficiency examinations; and
3. write and defend a thesis before professors in the Faculty of Social Sciences.¹⁴⁸

The following are the general requirements for a Master's degree in the Faculty of Social Sciences:

1. obtain an average of 85 on a scale of 100 in ten courses;
2. complete three months of supervised field research; and
3. present and defend a Master's thesis before a selected group of professors in the Faculty.¹⁴⁹

3. Training in research. The most notable aspect of the programs of the Faculty of Social Sciences is the emphasis on training students in the techniques of social research. All students must participate in three field research activities during the five-year Licenciatura program. The field research training is based on the following premises:

1. practice should complement classwork;
2. first-hand knowledge of differing cultures and societies can provide an objective view of one's own social world; and
3. academic concerns should be balanced by an acquaintance with the conditions and social problems of the people of the region.¹⁵⁰

Each year, a two-month field research session is offered by the Faculty. One or more professors are charged with the organization of the research. The selection of the topics and subsequent planning occur in March and April. The field work, usually conducted in June and July, takes place in one or more communities with a group assigned to each community. Each group is supervised by a professor; students in their last two years are given auxiliary responsibilities which usually involve assisting the professor to supervise the group.

The students learn to develop their own research projects, build rapport with people in the community under study, and gather pertinent and reliable data. The data are analyzed in regular courses and are used by the students for writing term papers, articles, and theses. Although the main objective of the field research sessions is training, they also provide a store of important information on social conditions in Guatemala.¹⁵¹

Below is a brief review of the student field research accomplished to date:¹⁵²

- a. Studies of cognition. For two consecutive summers, a study was conducted in several localities to measure changes in thought patterns of Indians in connection with various stages of urbanization and modernization. The results were presented at the IX International Meeting of Anthropology and Ethnological Sciences in Chicago and later published in Psychological Anthropology, by Thomas William Mouton, the Hague.¹⁵³

- b. Studies of the family. Three summer sessions have been dedicated to studies of the family in Guatemala. These studies have resulted in several theses, two papers (one presented at the First Central American Congress on Sociology at San Jose, Costa Rica, 1974, and another at the XIII Pacific Science Congress, Vancouver, Canada, 1975), and an article in the Journal of Comparative Family Studies, 1974, entitled "Family Structure and Religious Symbolization among Guatemalans."¹⁵⁴ In addition, the research is presently being compiled in a book on kinship and family in Guatemala. The book, the first to deal with this topic, will encompass historical, ethnological, organizational, demographic, and social-psychological aspects of the family in Guatemala.¹⁵⁵
- c. Studies of myths, rites, magic, and illness. Six field sessions have been devoted to myths, rites, magic, and illness in twenty indigenous communities throughout the country. The amount of data collected was extensive, and it is being used as the base for several theses.¹⁵⁶

4. Relationship of curriculum to national development. As in the Faculty of Science and Humanities, little attention is given to instructing students in the relationship between the social sciences and the development of Guatemala or the region. There are no courses which treat national development issues. There is an attempt, however, to give students a strong multidisciplinary background in the social sciences. Well over half the courses are required of all

students in the program and expose them to the major social science disciplines. All students in the program take the same field research experiences. But there is no attempt to demonstrate to the students how to make a concerted effort, employing several disciplines, in researching and solving social problems.

Research

The University attempts to identify national and regional problems that can be solved through research conducted by its personnel alone or in cooperation with persons from other institutions.

The Institute of Research (IOR). The Institute of Research was established in 1975 as a vehicle for directing and coordinating many of the University's research activities. It is headed by a coordinator who is assisted by the Advisory Council, composed of the Coordinator, the Directive Council of the University, and the persons conducting research through the Institute.¹⁵⁷

Centers have been established within the Institute to permit better supervision of research by general area: the Center for Educational Research (CER) and Center for Studies in Population, Environment, and Natural Resources (CSPER).

1. Center for Educational Research. The purpose of the CER is to direct "basic and developmental research projects that are related to the needs of education in Guatemala and Central America."¹⁵⁸ To date, the CER has concentrated on the continuation of the laboratory activities of the American School of Guatemala.

a. Longitudinal study of child and adolescent development.

The CER now has complete responsibility for the longitudinal study of child and adolescent development which it conducts with little change from the original research design. Indeed, methodological constraints of a longitudinal study require continuity.

Data from the longitudinal study are stored on computer cards and made available to scholars and researchers on request. To date, the data have been used in several studies by researchers in Guatemala and other countries. Doctors Barry Bogin of Temple University and Robert MacVean of the Universidad del Valle de Guatemala wrote their doctoral dissertations based on information from the longitudinal study. Several Master's degree students from the Universidad del Valle de Guatemala and the Universidad de San Carlos have utilized the data for research projects. The Institute of Nutrition of Central America and Panama (INCAP) has also used data from the longitudinal study in several of its research and development projects.¹⁵⁹

The CER now wishes to expand the study to investigate the development patterns of pre-school urban children and their relationship to the environment. A proposal was prepared in 1979 by the CER to initiate the pre-school study which would, among other things, "Identify social and demographic characteristics, as

well as parental attitudes, values, and behaviors which are associated, in a casual relationship, with variability in cognitive performance."¹⁶⁰ The study will be longitudinal and has been designed so that pre-school children will continually enter into the ongoing longitudinal program. The study will begin as soon as funding is obtained.

- b. Program in counseling and scholarships for higher education. The CER is responsible for administering the Program in Counseling and Scholarships for Higher Education mentioned earlier. The CER translated and standardized the Differential Aptitude Test (DAT) with permission from the Psychological Testing Service. With authorization from the Ministry of Education, the CER administers the DAT to students in Guatemala City as well as many departments. The original intent of the program was simply to provide senior secondary students with information about their aptitudes to aid them in deciding what post-secondary education would be most appropriate for them to pursue. This counseling program was judged to be of importance because many Guatemalan secondary schools provide no academic guidance and since students must enter most career programs at Guatemalan universities without the benefit of general studies to further orient them. If a student discovers after a year or two that he has chosen incorrectly his field of study,

he either re-enrolls in another faculty as a freshman or withdraws. Thus, in Guatemala, as in many Latin American countries, it is necessary for students to designate their area of specialization prior to entering the university.¹⁶¹

When it became evident that talented youngsters from poor families were unable to attend universities, the Universidad del Valle began using the test scores to identify highly qualified poor students as part of a scholarship program designed to subsidize part of their studies at any university in Guatemala.

The testing program takes several weeks to complete. Prior to the test administration, the CER personnel are sent to many schools in Guatemala to talk to administrators and students about the program. Then, over a period of several Saturdays, students are transported to the University from other schools in Guatemala City to take the DAT. In addition, the CER staff visit the capitals of fourteen other departments in Guatemala to administer the DAT to senior secondary students there. Over 4,000 graduating secondary students take the tests each year, about 25 percent of all graduating students.¹⁶²

The tests are scored at the University Computer Center; the results and interpretative information are then sent to the students. The only cost to the students is 50 cents for postage and handling in mailing of the results.¹⁶³

c. Test development. In the area of test development, the CER has focused primarily on the training of regional personnel although it does continue to translate and standardize some test materials. In 1970, the Organization of American States (OAS) named the Universidad del Valle de Guatemala a Multinational Center for Evaluation and Educational Test Development. As such, the University offers periodic workshops and follow-up seminars on educational evaluation to in-service educators throughout the region. The CER is responsible for organizing and directing these Multinational Center activities. The workshops are usually a month long, are attended by approximately twenty-five people, and attempt to give the participants instruction in the following:

1. fundamentals of educational evaluation;
2. the nature, use, and purposes of measurement in education;
3. measurement theory;
4. systems of evaluation and measurement;
development of objective tests;
5. organization of test administration programs;
6. analysis of test results; and
7. preparation of scales and reports¹⁶⁴

The CER occasionally administers psychological tests to students in schools in the capital at the request of the school administrators. For public schools, there is no fee. For the private schools, there is a nominal fee to pay for the costs.

- d. Materials production. The CER has accomplished little in the area of materials production. School personnel from The American School of Guatemala continue to revise and develop teaching materials under the direction of the elementary principal who has been instrumental in the program since it began in the early 1950s.

2. Center for Studies in Population, Environment, and Natural Resources. The Center for Studies in Population, Environment, and Natural Resources (CEPARN) began operations in 1977. The following is a description of its activities to date.¹⁶⁵

- a. Annotated bibliography of population studies. The first accomplishment of the CEPARN is an annotated bibliography of research on population in Guatemala from 1960 through 1968. This compilation was prepared by Jorge Arias, Coordinator of the Institute of Research, under a grant by AID. The CEPARN published the bibliography and prepares annual supplements.
- b. Roster of people and institutions. This is a survey of people and institutions working in population and environment programs in Central America, financed by the Ford Foundation and prepared by Arias and his staff.
- c. Pine bark beetle study. A pine bark beetle (*Dendroctonus*) is destroying pine forests in many areas of Central America. In 1978, the CEPARN began a sixteen-month study to determine characteristics of the beetle and

to suggest ways for controlling or exterminating it. In addition, the study explores the possibility of developing pine trees resistant to the pine bark beetle. Personnel from CARE, the Peace Corps, and the National Forestry Institute of the Guatemalan Government (INAFOR) are cooperating with the CEPARN in carrying out the research. Dr. Michael Dix, a visiting faculty biologist-ecologist from Harvard University, coordinates the study with the assistance of students and professors of the Universidad del Valle. The study is subsidized by the University, CARE, the Peace Corps, the Bank of Guatemala, and the International Development Research Centre (IDRC) in Canada.

- d. Soil improvement study. The CEPARN has begun a project to develop a simple technology for soil improvement without the use of chemical fertilizer. The project is coordinated by Miguel Angel Canga-Arguelles, a chemical engineer with a long-time interest in this area. With the assistance of his students, he has made studies of soil humus and has devised techniques which can be used by small farmers throughout Guatemala. This work is being carried out in coordination with an experimental station near Quezaltenango supported by the Oxford University Worldwide Program Against Famine (OXFAM).

- e. Energy sources. The CEPARN recently began a study of simple technology for the use of solar and other energy sources. The goal is to develop techniques which will be used by small farmers. Dr. Jorge Antillón, Coordinator of the Faculty of Science and Humanities, is conducting the research with the assistance of his students.
- f. Small-farm study. Guatemala suffers from the effects of minifundia. A project to study the ways of increasing productivity of small farms and more readily deliver their produce to the cities has been planned and will soon begin operation. The research will require the efforts of geographers, economists, anthropologists, sociologists, and agriculturists.
- g. Study of Guatemalan family composition. This is an analysis using the 1973 census figures.

Other research. Some research conducted at the University takes place outside the Institute of Research. One such project is research on Onchocerciasis (River Blindness) and other vector-borne diseases. River blindness is a disease carried by insects which live on fast-moving bodies of water. They bore into the skin of human beings and deposit eggs which eventually cause blindness. The disease is fairly serious in the Guatemalan hinterland and a cure for it or the eradication of the insects will produce significant health benefits. The project is being carried out in collaboration with the Bureau of

Tropical Diseases, Center for Disease Control (U.S. Public Health Service), and the Guatemalan National Service for Malaria Eradication.¹⁶⁶

The University plans to open other centers within the Institute in energy, mathematics, applied science, and other areas when resources permit. In the meantime some research is conducted directly through the teaching faculties using the personnel and funds within the University. Many of the professors are conducting research in the natural and social sciences.

Dissemination of research. The dissemination of research is limited at the University. The Licenciatura and Master's degree theses are published but are limited to a few copies each and are not systematically sent to other institutions. Some of the research conducted by the professors is published in professional journals abroad. It was evident from the interviews of professors that there is little knowledge of what research is being conducted in other departments within the University.

At the completion of this study, the Institute of Research was preparing the first issue of an internal newsletter to communicate to students and faculty regarding the major activities taking place at the University in an effort to:

1. widen understanding of important University activities;
2. increase communication between persons with similar interests;
3. recognize the efforts of those engaged in research and innovative teaching;
4. provide a stimulus to those who have good ideas but who are hesitant to take action on them;
5. increase the number of people who identify with the University;

6. improve the understanding of the aims of the University;
and
7. give a better idea of the important contributions the University is making to the needs of individuals, the nation, and the region.¹⁶⁷

The first issue contained information about the library, transportation, and scholarships; an editorial about the importance of this new newsletter; a questionnaire concerning the newsletter; and a description of several current research projects being conducted by members of the staff. Future issues will contain a history of the University, its aims, and the ways in which they are being met.¹⁶⁸

Service

The Universidad del Valle de Guatemala provides a variety of services to Guatemala and the region. The following is a listing of those services, some of which were described earlier, others which are described for the first time.

Materials production. The materials production program which the University conducts in cooperation with the School has made available much low-cost reading materials to poor families throughout Guatemala.

Test development. The test development program has provided standardized intelligence, achievement, and interest tests in Spanish which are used by many institutions in Guatemala and the region for evaluation, diagnosis, and selection. The University has cooperated with other universities in Central America in the development of test programs and courses on measurement and evaluation. The University also offers seminars and short courses on measurement and evaluation to educators throughout the region.¹⁶⁹

Testing. The University administers two testing programs which are of service to schools and students in Guatemala. One is a program of intelligence and achievement testing in twenty urban and rural schools in Guatemala, which includes administering the tests, scoring them, preparing scales and individual profiles, and talks with students and teachers to interpret the results. The other is the vocational guidance program in which tests are administered to hundreds of graduating students each year with the results made available to their schools. This program is also used to select students for scholarships.¹⁷⁰

United Brands Foundation Scholarship Program. Since 1969, the University has administered a scholarship program for the United Brands Foundation. The Scholarships are for university study in engineering, mathematics, biological sciences, chemistry, and health; they are available to persons in any of the countries in which United Brands operates for study in those countries or, for a few students, study in the United States.

The University is in charge of the admissions testing in each of the countries, selecting the scholarship recipients, orienting the students, dispersing the funds, supervising the students' progress and acting as an intermediary between the scholarship students and United Brands Foundation. The University uses aptitude and general ability tests which it adopted to aid in the selection process.¹⁷¹

Education in Human Development. The first major project of the Universidad del Valle de Guatemala to address national needs, and the most extensive of its service activities, is the Education in Human Development Program initiated in 1968. It was the thinking of University officials that the fast increasing population in Guatemala, and all the problems that accompany such a phenomenon, required some kind of educational program on a national level to prepare Guatemalans in such matters as sexual behavior, family responsibility, demographic growth, and human ecology. Accordingly an extensive program was planned to accomplish the following purposes:

1. train elementary and secondary teachers to give instruction in the field of human development;
2. develop a curriculum, based on research and experimentation, for use in the nation's schools; and
3. prepare teaching materials to be used in the training of teachers and by them in their classrooms.¹⁷²

The Education in Human Development Program has evolved in two phases which are described briefly below.

1. Phase one. Phase one of the Education in Human Development Program, which ran from 1968 to 1975, was a tripartite project, financed by AID and the Ministry of Education, with the Universidad del Valle de Guatemala providing personnel, installations, and materials. Phase one included three components: teacher training, development of curriculum, and preparation of teaching materials.¹⁷³

From 1968 to 1975, the University offered several kinds of training activities in human development to about 4,000 educators throughout Guatemala. Several courses offered at the University were given to about 200 school administrators, guidance counselors,

supervisors, and secondary teachers to prepare them as leaders in the area of human development education. A series of one-month courses was given to about 3,000 teachers throughout the country to train them for working directly in the classroom in the field of human development.¹⁷⁴

A novel training project was a series of one-week courses given in nearly all of the departments of Guatemala to train teachers, students, and parents in a variety of human development subjects. University personnel moved into a community for a week, working about twelve hours a day with students, teachers, and parents. In the morning, the personnel worked with the students in the classrooms while their teachers observed. In the afternoon, the personnel trained the teachers in education in human development techniques, using the morning's experience for examples. In the evening the personnel gave lectures to the parents with some students and teachers in attendance. This approach to training had many advantages. It permitted the expert University personnel to have direct access to students and their parents to give them instruction related to their daily lives, answer questions, and correct misconceptions. It enhanced the instruction of the teachers since they could see correct teaching techniques being used in the classroom with their students. It also made the important point that a good educational program should involve the participation of teachers, students, and parents. Although exact figures were not kept, it is estimated that 800 teachers, 8,000 parents, and 18,000 primary and secondary students received training through this part of the Education in Human Development Program.¹⁷⁵

By the end of the first phase of the Program, it is estimated that at least one teacher in each of 222 of the 226 Municipalities in Guatemala had received one of its training courses.¹⁷⁶

University personnel developed a complete set of curriculum guides for use in kindergarten through secondary schools. Although the Ministry of Education has not adopted them officially for required use in the national schools, they are recommended as a teaching resource in the official guides the Ministry provides to the schools and are used by many teachers.¹⁷⁷

University personnel have developed a variety of materials for use as classroom teaching aides. Eleven resource guides were prepared to accompany the curriculum guides mentioned above. The resource guides contain models of flannelgraphs, posters, diagrams, graphs, charts, worksheets, and information sheets on a variety of topics such as ecology and natural resources; descriptions of educational games, manual and art projects; and instructions concerning teaching methods and techniques.¹⁷⁸

Several pamphlets, written in simple language, were prepared describing sexual growth and development of pre-adolescents and adolescents. Other pamphlets on mental health and general health were prepared. In addition, a statistical description of Guatemala entitled Population of Guatemala Today and Tomorrow was prepared for use by secondary and university students and teachers.¹⁷⁹

A series of posters and other kinds of audio-visual teaching aids have been prepared for use in the teaching of human development. Much of the material produced has been published in quantity for

widespread use in Guatemala. Other materials are kept at the University and lent to schools and individuals.¹⁸⁰

2. Phase two. The second, and present, phase of the Education in Human Development Program is financed by Development Associates. There has been a shift of emphasis in the second phase of the Program away from the training of classroom teachers, students, and parents in Guatemala toward the training of educational leaders throughout the region. Since 1976, the Education in Human Development Program has given seven major regional workshops to medical doctors, psychologists, social workers, teachers, guidance counselors, and ministry of education personnel from twelve Latin American countries. To date, 160 educational leaders have participated in these month-long regional workshops.¹⁸¹

In the second phase, the major emphasis of the training has been on matters related to family planning and sex education. Given this emphasis, the Regional Committee for Sex Education in Latin America and the Caribbean (CRESALC) has given some financial support to the program to help fund two of the regional workshops, one in El Salvador and one in Honduras.¹⁸²

In addition to the month-long regional workshops, the Education in Human Development Program conducts a variety of follow-up activities with the workshop participants, sending them recent information and materials and asking them for descriptions of the work they are carrying out in their countries. Often ex-participants will send the University their plans for human development projects for consultation.

Program personnel also offer follow-up materials, information, and workshops for the Guatemalan teachers in phase one. Program personnel have prepared sex education programs for several schools in Guatemala and lend materials from the University's growing human development library.¹⁸³

CHAPTER 4--NOTES

¹Frank H. Bowles, "Stages of Educational Development," Higher Education and Social Change, Vol. II, op. cit., p. 448.

²Statement by Dr. Robert B. MacVean, Executive Secretary, Fundación de la Universidad del Valle de Guatemala, personal interview, Guatemala, August 17, 1979.

³Colegio Americano de Guatemala, Escuela de Ensayo, Informe Anual 1972 (Guatemala: Colegio Americano de Guatemala, 1972), pp. 3, 5.

⁴Statement by Dr. Robert B. MacVean, loc. cit.

⁵"Guatemalan Scholarship Association" (Guatemala: Guatemalan Scholarship Association, January 1979), p. 1. (Mimeographed.)

⁶Ibid.

⁷Colegio Americano de Guatemala, Escuela de Ensayo, Informe Anual 1972, op. cit., pp. 81-82.

⁸Statement by Dr. Robert B. MacVean, loc. cit.

⁹Clair J. Butterfield, Stephen M. Corey and Kenneth J. Rehage, "An Appraisal of the Laboratory School Activities of the American School of Guatemala" (Guatemala: The American School of Guatemala, August 28, 1954), p. 5. (Mimeographed.)

¹⁰Ibid., p. 5.

¹¹Herbert G. Vaughan, "The American School of Guatemala and Its Relation to Guatemalan Education: A Descriptive Case Study" (unpublished Ph.D. dissertation, Michigan State University, 1968), p. 205.

¹²Colegio Americano de Guatemala, Escuela de Ensayo, Informe Anual 1972, op. cit., pp. 47-53.

¹³Statement by Dr. Robert B. MacVean, loc. cit.

¹⁴"Biannual Report for the Inter-American Schools Service of the American Council on Education, Washington, D.C." (Guatemala, American School of Guatemala, 1955), pp. 30-31. (Mimeographed.)

¹⁵"Biannual Report for the Inter-American Schools Service of the American Council on Education, Washington, D.C., Final Report 1956" (Guatemala, American School of Guatemala, 1956), p. 10. (Mimeographed.)

¹⁶Herbert G. Vaughan, op. cit., pp. 201-202.

¹⁷Ibid., pp. 202-203.

¹⁸Ibid., p. 204.

¹⁹Statement by Licenciado Francisco Nieves, Coordinator of the University College, Universidad del Valle de Guatemala, personal interview, Guatemala, July 18, 1979.

²⁰Statement by Dr. Robert B. MacVean, loc. cit.

²¹Statement by Dr. Olga Marina Garcia Salas, Assistant Principal Elementary School, The American School of Guatemala, personal interview, Guatemala, March 18, 1979.

²²Ibid.

²³"Cooperative Program in In-Service Training and Curriculum Development" (Guatemala: Ministry of Education, Servicio Cooperativo Interamericano de Educación, The American School of Guatemala, 1957), p. 10. (Mimeographed.)

²⁴Herbert G. Vaughan, op. cit., p. 221.

²⁵Statement by Dr. Olga Marina Garcia Salas, loc. cit.

²⁶"Description of the Universidad del Valle de Guatemala" (Guatemala: Universidad del Valle de Guatemala, January 1978), p. 2. (Mimeographed.)

²⁷Ibid., p. 3.

²⁸Ibid., pp. 3-6.

²⁹Ibid., p. 2.

³⁰Statement by Dr. Robert B. MacVean, loc. cit.

³¹Fundación de la Universidad del Valle de Guatemala,
Programa de Desarrollo (Guatemala: Universidad del Valle de
Guatemala, October 1976), p. 3.

³²Statement by Licenciado Daniel Contreras, Secretary of
the Universidad del Valle de Guatemala, personal interview, Guatemala,
September 13, 1979.

³³"Estatutos" (Guatemala: Fundación de la Universidad del
Valle de Guatemala, 1977), p. 3. (Mimeographed.)

³⁴Ibid., p. 2.

³⁵Ibid., p. 4.

³⁶Ibid., p. 5.

³⁷Ibid., pp. 5-6.

³⁸Ibid., p. 7.

³⁹Statement by Dr. Robert B. MacVean, loc. cit.

⁴⁰"Guía para Estudiantes" (Guatemala: Universidad del Valle
de Guatemala, February 1977), p. 4. (Mimeographed.)

⁴¹"Informe del Consejo Directivo de la Universidad del Valle
de Guatemala al Consejo de Fiduciarios de la Fundación de la Uni-
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Guatemala, September 1979), p. iii. (Mimeographed.)

⁴²"Description of the Universidad del Valle de Guatemala,"
op. cit., p. 23.

⁴³Interview Schedule Number 4.

⁴⁴"Reglamento Académico de la Universidad del Valle de Guatemala" (Guatemala: Universidad del Valle de Guatemala, March 1979), p. 1. (Mimeographed.)

⁴⁵Statement by Dr. Robert B. MacVean, loc. cit.

⁴⁶Statement by Licenciada Gloria Aguilar, Coordinator, Faculty of Education, Universidad del Valle de Guatemala, personal interview, Guatemala, September 10, 1979.

⁴⁷Statement by Dr. Robert B. MacVean, loc. cit.

⁴⁸Ibid.

⁴⁹Statement by Licenciada Beatriz Molina S., Director, Department of Psychology, Universidad del Valle de Guatemala, personal interview, Guatemala, September 13, 1979.

⁵⁰Ibid.

⁵¹Statement by Dr. Robert B. MacVean, loc. cit.

⁵²"Universidad del Valle de Guatemala" (Guatemala: Universidad del Valle de Guatemala, January 1978), p. 3. (Mimeographed.)

⁵³"Guía para Estudiantes," op. cit., p. 7.

⁵⁴"Reglamento Académico de la Universidad del Valle de Guatemala," op. cit., p. 4.

⁵⁵Statement by Dr. Robert B. MacVean, loc. cit.

⁵⁶Jonathan Kandell, "Universities of Latin American in Political and Academic Decline," The New York Times (Tuesday, November 30, 1976), pp. 1, 14.

⁵⁷Statement by Licenciado Francisco Nieves, loc. cit.

⁵⁸Statement by Licenciado Daniel Contreras, loc. cit.

⁵⁹"Reglamento Académico de la Universidad del Valle de Guatemala," loc. cit.

⁶⁰Statement by Licenciado Daniel Contreras, loc. cit.

⁶¹Ibid.

⁶²Statement by Dr. Robert B. MacVean, loc. cit.

⁶³Ibid.

⁶⁴Statement by Ingeniero Julio del Pinal, director of Computer Science Program, Universidad del Valle de Guatemala, personal interview, September 9, 1979.

⁶⁵Ibid.

⁶⁶Ibid.

⁶⁷Statement by Gertrude Hunt, Head Librarian, Universidad del Valle de Guatemala, personal interview, Guatemala, September 6, 1979.

⁶⁸"Brief Overview of Resources Which Support the Academic Programs and the Institute of Research" (Guatemala: Universidad del Valle de Guatemala, January 1978), p. 1. (Mimeographed.)

⁶⁹Statement by Gertrude Hunt, loc. cit.

⁷⁰Ibid.

⁷¹Ibid.

⁷²Ibid.

⁷³"Brief Overview of Resources Which Support the Academic Programs and the Institute of Research," loc. cit.

⁷⁴"Preserve Land Tracts to Serve as Research-Conservation-Demonstration Areas" (Guatemala: Universidad del Valle de Guatemala, 1978). (Mimeographed.)

⁷⁵Statement by Dr. Robert B. MacVean, loc. cit.

⁷⁶Statement by Licenciado Daniel Contreras, loc. cit.

⁷⁷Ibid.

⁷⁸Ibid.

⁷⁹Statement by Dr. Robert B. MacVean, loc. cit.

⁸⁰"History and Development of The American School of Guatemala and The Universidad del Valle de Guatemala" (Guatemala: Fundacion de la Universidad del Valle de Guatemala, August 1975), p. 17. (Mimeographed.)

⁸¹Statement by Dr. Robert B. MacVean, loc. cit.

⁸²Ibid.

⁸³"History and Development of The American School of Guatemala and The Universidad del Valle de Guatemala," loc. cit.

⁸⁴"Guía para Estudiantes," op. cit., p. 5.

⁸⁵"History and Development of The American School of Guatemala and The Universidad del Valle de Guatemala," op. cit., p. 7.

⁸⁶"Guía para Estudiantes," op. cit., p. 6.

⁸⁷"Informe No. 9 al 31 de Diciembre de 1978, Preparado Para el Banco Interamericano de Desarrollo" (Guatemala: Universidad del Valle de Guatemala, March 19, 1979), Chart E-5. (Mimeographed.)

⁸⁸Ibid., Chart E-IV.

⁸⁹Statement by Licenciado Daniel Contreras, loc. cit.

⁹⁰Ibid.

⁹¹Ibid.

⁹²Richard G. King and others, The Provincial Universities of Mexico: An Analysis of Growth and Development (New York: Praeger Publishers, 1971), p. 58.

⁹³"Informe del Consejo Directivo de la Universidad del Valle de Guatemala al Consejo de Fiduciarios de la Fundación de la Universidad del Valle de Guatemala" (Guatemala: Universidad del Valle de Guatemala, September 1978), pp. 23-25. (Mimeographed.)

⁹⁴Statement by Licenciado Francisco Nieves, loc. cit.

⁹⁵"Guía para Estudiantes," loc. cit.

⁹⁶Statement by Licenciado Francisco Nieves, loc. cit.

⁹⁷"Proyecto de Reglamento Académico" (Guatemala: Universidad del Valle de Guatemala, March 16, 1979), p. 1. (Mimeographed.)

⁹⁸"Description of the Universidad del Valle de Guatemala," op. cit., p. 5.

⁹⁹Ibid., p. 9.

¹⁰⁰Statement by Licenciado Francisco Nieves, loc. cit.

¹⁰¹Ibid.

¹⁰²Ibid.

¹⁰³Statement by Dr. Robert B. MacVean, loc. cit.

¹⁰⁴"Informe del Consejo Directivo de la Universidad del Valle de Guatemala al Consejo de Fiduciarios de la Fundación de la Universidad del Valle de Guatemala" (Guatemala: Universidad del Valle de Guatemala, September 1979), p. 5. (Mimeographed.)

¹⁰⁵Statement by Licenciado Francisco Nieves, loc. cit.

¹⁰⁶Statement by Licenciada Gloria Aguilar, loc. cit.

¹⁰⁷"Facultad de Educación" (Guatemala: Universidad del Valle de Guatemala, July 1979). (Mimeographed.)

¹⁰⁸Ibid.

¹⁰⁹Ibid.

¹¹⁰Ibid.

¹¹¹Statement by Licenciada Gloria Aguilar, loc. cit.

¹¹²Ibid.

¹¹³"Informe del Consejo Directivo de la Universidad del Valle de Guatemala al Consejo de Fiduciarios de la Fundación de la Universidad del Valle de Guatemala," op. cit., p. 9.

¹¹⁴Ibid.

¹¹⁵Statement by Licenciada Gloria Aguilar, loc. cit.

¹¹⁶Ibid.

¹¹⁷Ibid.

¹¹⁸Statement by Licenciado Daniel Contreras, loc. cit.

¹¹⁹Statement by Dr. Otto Gilbert, Director of Master's Program in Educational Measurement, Universidad del Valle de Guatemala, personal interview, Guatemala, September 15, 1979.

¹²⁰"Programa Regional, Maestría en Medición, Evaluación e Investigación Educativa (Guatemala: Universidad del Valle de Guatemala, February-November 1979). (Mimeographed.)

¹²¹Statement by Licenciada Gloria Aguilar, loc. cit.

¹²²Ibid.

¹²³Ibid.

¹²⁴"Guía para Estudiantes," op. cit., p. 11.

¹²⁵Ibid.

¹²⁶Ibid., pp. 11-12.

¹²⁷Statement by Dr. Jorge Antillon, Coordinator, Faculty of Science and Humanities, Universidad del Valle de Guatemala, personal interview, Guatemala, August 28, 1979.

¹²⁸Ibid.

¹²⁹Ibid.

¹³⁰Ibid.

¹³¹"Licenciatura in Agricultural Science" (Guatemala: Universidad del Valle de Guatemala, January 1979), p. 1. (Mimeographed.)

¹³²Ibid., pp. 2-3.

¹³³"Program in Agriculture" (Guatemala: Universidad del Valle de Guatemala, January 1976), p. 2. (Mimeographed draft.)

¹³⁴"Scholarships for Post-Technical Agricultural Science Program" (Guatemala: Universidad del Valle de Guatemala, January 1979), p. 1. (Mimeographed.)

¹³⁵Ibid., pp. 1-2.

¹³⁶Ibid., pp. 1-3.

¹³⁷"Licenciatura in Food Science and Technology" (Guatemala: Universidad del Valle de Guatemala, January 1979), p. 1. (Mimeographed.)

¹³⁸Ibid., pp. 1-2.

¹³⁹"Informe del Consejo Directivo de la Universidad del Valle de Guatemala al Consejo de Fiduciarios de la Fundación de la Universidad del Valle de Guatemala" (Guatemala: Universidad del Valle de Guatemala, January 1979), p. 3. (Mimeographed.)

¹⁴⁰Statement by Dr. Robert B. MacVean, loc. cit.

¹⁴¹Statement by Licenciado Daniel Cantre ras, loc. cit.

¹⁴²Medical Entomology Research and Training Unit/Guatemala, "Program Description" (Washington, D.C.: Bureau of Tropical Diseases, Center for Disease Control, U.S. Public Health Service, Department of Health, Education and Welfare, 1979). (Mimeographed.)

¹⁴³Ibid.

¹⁴⁴Ibid.

¹⁴⁵"Guia para Estudiantes," op. cit., p. 23.

¹⁴⁶"Facultad de Ciencias Sociales" (Guatemala: Universidad del Valle de Guatemala, October 1974), p. 1. (Mimeographed.)

¹⁴⁷"Guía para Estudiantes," loc. cit.

¹⁴⁸"Facultad de Ciencias Sociales," op. cit., pp. 2-3.

¹⁴⁹Statement by Dr. Alfredo Mendez, Coordinator of Faculty of Social Science, Universidad del Valle de Guatemala, personal interview, Guatemala, September 12, 1979.

¹⁵⁰"Field Research in the Undergraduate Social Science Program" (Guatemala: Universidad del Valle de Guatemala, March 1977), p. 1. (Mimeographed.)

¹⁵¹Ibid., pp. 1-2.

¹⁵²Ibid., pp. 2-4.

¹⁵³Ibid., pp. 2-3.

¹⁵⁴Ibid., p. 3.

¹⁵⁵Ibid., p. 4.

¹⁵⁶Ibid.

¹⁵⁷Statement by Ingeniero Jorgeo Arias, Former Rector, Universidad de San Carlos, personal interview, Guatemala, October 17, 1979.

¹⁵⁸"Description of the Universidad del Valle de Guatemala," op. cit., p. 15.

¹⁵⁹Statement by Licenciada Beatriz Molina S., loc. cit.

¹⁶⁰"Socio-Cultural Correlates of Cognitive and Physical Development in Urban Pre-School Guatemalan Children; a Summary of a Proposal" (Guatemala: Universidad del Valle de Guatemala, January 1979), p. 2. (Mimeographed.)

¹⁶¹"Proposal to Improve the Guidance and Scholarship Program for Higher Education" (Guatemala: Universidad del Valle de Guatemala, January 1979), pp. 1-5. (Mimeographed.)

¹⁶²Statement by Licenciada Beatriz Molina S., loc. cit.

¹⁶³Ibid.

¹⁶⁴Proyecto Multinacional Organización de los Estados Americanos, Adiestramiento en Desarrollo de Pruebas Educativas (Guatemala: Universidad del Valle de Guatemala, March 1978).

¹⁶⁵"Description of the Universidad del Valle de Guatemala," op. cit., pp. 18-21.

¹⁶⁶"Request to the World Health Organization to Support Research and Training in Onchocerciasis (River Blindness) and other Vector-Borne Diseases" (Guatemala: Universidad del Valle de Guatemala, January 1979), p. 1. (Mimeographed.)

¹⁶⁷Statement by Dr. Freeman Clark, Professor, Universidad del Valle de Guatemala, personal interview, Guatemala, October 8, 1979.

¹⁶⁸Ibid.

¹⁶⁹"Status of Projects and Requests" (Guatemala: Universidad del Valle de Guatemala, May 1977), pp. 47-51. (Mimeographed.)

¹⁷⁰Statement by Licenciado Daniel Contreras, loc. cit.

¹⁷¹"Programa de Ayuda Educacional" (Guatemala: Fundación United Brands, Compañía Bananera de Costa Rica, 1976). (Mimeographed.)

¹⁷²Gloria J. Aguilar P., "Informe Final del Trabajo Realizado por el Programa de Educación para el Desarrollo Humano desde sus Inicios el 1 de Agosto de 1968 Hasta su Clausura el 31 de Diciembre de 1976" (Guatemala: Universidad del Valle de Guatemala, 1977), p. 2. (Mimeographed.)

¹⁷³Statement by Licenciada Gloria Aguilar, loc. cit.

¹⁷⁴Gloria J. Aguilar P., op. cit., p. 117.

¹⁷⁵Statement by Licenciada Gloria Aguilar, loc. cit.

¹⁷⁶Ibid.

¹⁷⁷Gloria J. Aguilar P., loc. cit.

¹⁷⁸Ibid., p. 118.

¹⁷⁹Statement by Licenciada Gloria Aguilar, loc. cit.

¹⁸⁰Ibid.

¹⁸¹Statement by Licenciada Eugenia de Monterroso, Director, Education in Human Development Program, Universidad del Valle de Guatemala, personal interview, Guatemala, September 5, 1979.

¹⁸²Ibid.

¹⁸³Ibid.

Chapter 5

SURVEY METHODOLOGY AND RESULTS

METHODOLOGY

Objectives

The writer used survey research techniques to gather facts and opinions from Guatemalan educational leaders and personnel at the Universidad del Valle de Guatemala. Guatemalan educational leaders were surveyed in order to bring to this study the views of local experts concerning the country's problems and role of its universities in contributing to their solution. Students, teachers, administrators, and trustees of the Universidad del Valle de Guatemala were surveyed not only to gather information to describe the institution, but also to obtain opinions and perceptions of various groups of persons associated with the University concerning its aims, programs, organization, and role as a contributor to national development.

Selecting the Instruments

Two kinds of instruments were employed: a closed-form questionnaire and a semi-structured interview. A closed-form questionnaire, administered to the students at the Universidad del Valle de Guatemala, was used because it is an effective way to gather

substantial amounts of information from a large number of respondents. In addition, the writer had access to a computer facility which made the processing of a questionnaire feasible.

A semi-structured interview, administered to professors, administrators, and trustees at the Universidad del Valle de Guatemala and leaders in Guatemalan education, was used because (1) a give-and-take, open-ended survey technique is advisable when attempting to explore as fully as possible the judgment of experts;¹ (2) research indicates that a higher rate of response is obtained from personal interviews than from questionnaires, a matter of importance considering the relatively small sample size and resulting need for a high rate of response;² and (3) the limited number of respondents made such a technique feasible.

Selecting the Sample

The questionnaire was administered to all the students presently enrolled in the Universidad del Valle de Guatemala. All of the University administrators and two trustees were interviewed. Professors were selected at random using a table of random numbers. The writer obtained 100 percent response from the selected sample.

To select the educational leaders, the writer requested five educators respected in Guatemala and knowledgeable about educational matters at the national level to prepare a list of leaders in education in Guatemala. They were instructed to choose the names on the basis of prominence, not on the basis of personal acquaintance, political point of view, or other criteria which might bias the sample. The writer chose the fifteen names most often mentioned by

his five informants and was able to obtain interviews with thirteen. Those interviewed represent a spectrum of political, economic, and educational views.

Preparing the Survey Instruments

The questionnaire was written in several stages. Drafts were prepared and reviewed by two persons with doctoral degrees in education. The completed draft was translated into Spanish and then pretested on five Universidad del Valle de Guatemala students. After the pretest, the students were interviewed regarding their reactions to the questionnaire. On the basis of a careful analysis of their responses, several questions were omitted, others modified, and some added. At this point, the questionnaire was reviewed by Dr. Richard L. Featherstone, Professor in the Department of Higher Education at Michigan State University. His recommendations were incorporated in the instrument; then the questionnaire was pre-tested and modified a final time.

The interview instruments were prepared in much the same way as the questionnaire: (1) several drafts were written using the same readers for advice, (2) a pretest was conducted followed by analysis of responses and modifications, (3) Dr. Featherstone reviewed the instrument and made suggestions, (4) a second pretest was given, and (5) final modifications were made. Copies of the interview instruments are in the appendices.

Administering the Survey Instruments

The writer obtained the voluntary help of personnel from the American School of Guatemala to administer the questionnaire.

Several days before the questionnaires were to be administered, the volunteers met with the writer to take the questionnaire themselves and receive instructions on test administration. The following week, the volunteers went to the classrooms at pre-arranged times; explained the purpose of the questionnaire to the students; distributed the instruments, computer answer cards, and pencils; gave instructions; answered questions; and collected the materials at the end of the session. The average length of each session was forty-five minutes.

The writer conducted all of the interviews because of his knowledge of the subject matter and the need for him to interact with each respondent. A long-time resident of Guatemala, the writer speaks Spanish fluently and is familiar with local customs and amenities, factors which contribute to effective interviews.

The interviews were arranged by intermediaries (known both by the writer and the respondent) who gave each respondent information about the writer's position in Guatemala and his reason for requesting an interview. The intermediaries were asked to assure the respondents that the writer would handle the interview information with appropriate confidentiality.

RESULTS OF THE INTERVIEWS OF GUATEMALAN EDUCATIONAL LEADERS

The writer interviewed thirteen leaders of education in Guatemala as follows:

1. Former Rector of the Universidad de San Carlos,
2. Rector of the Universidad Francisco Marroquín,

3. Rector of the Universidad Mariano Galvez,
4. Rector of the Universidad Rafael Landivar,
5. Rector of the Universidad del Valle de Guatemala,
6. Vice-Minister of Education,
7. Former Minister of Education,
8. Former Vice-Minister of Education,
9. Acting Director of the Planning and Research Office of
the Ministry of Education,
10. Director of the Nutritional Institute for Central America
and Panama,
11. Director of the Central American Institute for Industrial
Research and Technology,
12. Secretary General of the Federation of Private Universities
in Central America and Panama,
13. Assistant to the Director of the Organization of American
States in Guatemala

The sample includes representatives of public and private university education, national and international organizations, political and technical positions; all are directly involved in education as it relates to development. The people interviewed represent a spectrum of political beliefs. The writer was surprised by the enthusiasm of the leaders for the interviews, a phenomenon which manifested itself in the amount of time the respondents gave him. Although the writer requested a half hour, the shortest interview lasted over an hour. Several lasted about two hours, and one

had to be terminated after nearly four hours in order for the writer to meet an appointment with another respondent.

The following is a summary of the responses to each of the interview questions. For ease in reading, the questions are placed prior to each of the summaries.

Interview Question 1

What modifications, if any, would you made in the definition of national development which I have just given you?

The process by which a nation maximizes its physical power and productive capacities, making the most of available natural and human resources, in order to increase the level of living for its people in general, not just a few, and to free the potential of its people to share in the determination of the goals of their society.

Several leaders thought it important to define "the level of living" as including social, cultural, economic, biological, and political aspects. One respondent indicated that expanding the decision-making power of the people might not result in the best political decisions with regard to the most efficient use of resources. In general, however, the respondents expressed agreement with the definition.

Interview Question 2

From your point of view, what are the major problems which Guatemala confronts in its attempt to develop?

There was general agreement among the respondents on the basic development problems which exist in Guatemala. Indeed, most of the problems given by the respondents are similar to those found in most of the developing world.

Insufficient and inappropriate education. All respondents talked of the need to improve education in Guatemala. The general reasoning was that development depends to a great degree on the presence of trained human resources. Thus, the low levels of enrollment in elementary, secondary, and tertiary education were seen as serious problems toward which a major remedial effort should be directed. Most argued, however, that simply increasing the percentage of enrollment in educational institutions is not sufficient, for much of the education presently offered in Guatemala is not suitable to the nation's development needs. Many respondents pointed out that (1) whereas most of the population live in rural areas, the national curriculum is aimed primarily at urban people, and (2) instruction still tends to require rote memory rather than critical thinking and understanding. Several leaders criticized the inappropriateness of much university education in Guatemala, especially the emphasis on traditional careers and the humanities.

All of the respondents also indicated that illiteracy is an educational problem in Guatemala. The problem is particularly acute in Guatemala since about half the population are non-native speakers of Spanish. Several respondents indicated a need to prepare curricula appropriate for literacy progress in rural areas.

Poor health. Ten of the leaders pointed to poor health as a major obstacle to development. They saw longer life spans, freedom from pain and disease, and physical well-being as conditions desirable in themselves. They also saw good health as a means to an end in that healthy people are more productive. Five respondents cited

figures showing low caloric and protein intake of much of the population and stressed the need to better feed the nation.

Lack of technology. Eight respondents mentioned the lack of technology as a major obstacle to Guatemalan development. They pointed out the need to prepare people not only to develop basic technology but to adapt the technology developed elsewhere to Guatemala's needs.

Low productivity. Eight leaders cited the low productivity in agriculture and industry as a serious obstacle to national development. There were differences of opinion as to whether the emphasis should be put on increasing productivity in the agricultural sector or the industrial sector. The consensus of opinion, however, was that attention must be given to both. Several pointed out that Guatemala is an agricultural country capable of feeding itself as well as most of Central America but that it is still importing food. They argued that major increases in food production would not only improve the nutrition and health of the nation but also provide a solid economic base for industrial production.

Poor distribution of wealth. It was generally recognized that most of the country's wealth is controlled by a small part of the population, while the majority of the population lives in mild to extreme poverty. The political persuasion of the respondent seemed unrelated to his conviction that a better distribution of wealth is important to the development process.

Related to poor distribution of wealth is unemployment and under-employment. Several respondents mentioned the need to develop

ways to provide work for those who want to and are able to work and to match work to capabilities.

Lack of democracy. Six respondents pointed out that the political and economic decisions in Guatemala are made by a small group of people.

Inadequate infrastructure. Five leaders said that the nation lacks sufficient and adequate roads, power plants, water supply, sewerage, and housing. The inadequacy of the infrastructure makes economic progress difficult and contributes to the squalor in which many Guatemalans live.

Lack of social integration. Four leaders said that they thought that one of the greatest obstacles to development in Guatemala is the lack of social integration, i.e., the cultural split between Ladinos and Indians. It was pointed out that there must be some kind of social integration so that the nation unites on attacking development problems and so that the fruits of development are spread more evenly. At the moment, the Indians are almost universally on the margin of modern society in Guatemala.

Interrelatedness of Guatemala's problems. Several leaders pointed out that it is impossible to discuss Guatemala's development problems as separate matters. Good health, for example, contributes to improved attendance at schools. Conversely, increased education will contribute to better health.

Interview Question 3

What are Guatemalan universities doing to contribute to national development?

Most of the respondents said that universities are not doing as much as they should to contribute to Guatemala's development. They were critical of the tendency of universities to offer programs in areas such as law, which are already over-supplied, while making little or no attempt to offer programs in areas of great national need. The following programs were mentioned as helpful in national development:

1. secondary school teacher certification programs offered by several universities;
2. intermediate courses in such areas as tourism, social promotion, medical visitation of the kind offered by Rafael Landivar and Mariano Galvez;
3. Licenciaturas in sciences and the social sciences offered by the Universidad del Valle de Guatemala;
4. community service requirements by San Carlos; and
5. social and scientific research carried out at the Universidad del Valle de Guatemala.

Interview Question 4

What more, if anything, should Guatemalan universities do to enhance their contribution to national development?

Six respondents recommended the addition of degree programs in agriculture, biology, physics, mathematics, chemistry, and the social sciences. Four indicated that universities should offer

more intermediate programs in technical fields. Several suggested that universities give more emphasis to community service, although most recognized that it is not easy to carry out feasible programs.

Many of the respondents said that the most important addition universities should make in their programs is that of research, particularly social and scientific research as opposed to technological research. As a rector of one of the universities put it,

We do not have the sophisticated equipment or the highly trained personnel to make much impact on technology. It is better to train people to adapt technology already available from developed nations and place our research emphasis on the social problems peculiar to our country and on biological and agricultural research to address the health, nutrition, and food production needs of Guatemala.³

The following are research topics suggested by the respondents as appropriate for universities and which would contribute to national development:

1. descriptions of the social, economic, and educational reality of Guatemala;
2. manpower studies to determine which kinds of training will be needed and how many people need to be trained in each area;
3. raw materials studies;
4. sociological studies to determine how to integrate the Indians into the mainstream without destroying their culture;
5. agricultural research and development to increase food production;

6. medical research to overcome common diseases;
7. research and development on low-cost energy technologies;
- and
8. research on methods of reducing deforestation.

Interview Question 5

What role should a general studies program play, or not play, in a university which aims to prepare people capable of helping in the development of a nation?

General studies was thought to be an excellent concept in university education but not easy to effectuate. Seven respondents expressed the idea that development requires people with both specific training and a general educational base since development is a complex process. Four referred to the concept of an "hombre culto," a cultivated man, and the need for a balance between the sciences and humanities in the education of professionals. As one respondent stated, "It is impossible to be an authentic humanist and turn one's back on economic problems, or be an economist without understanding social behavior."⁴

It was pointed out that general studies had not survived at San Carlos because students and professors were against the program. Some professors did not support the general studies program because it reduced the power of the faculty system which, until the advent of general studies, was almost all powerful.

The only university in Guatemala with a general studies program is the Universidad del Valle. The rectors of the other private universities described some attempt to include requirements

of a general studies nature throughout the students' university studies but with each faculty in charge of offering the courses.

Interview Question 6

Is the political activity of students on campus a help or a hindrance to the national development function of a university?

The replies to question six ranged from absolute rejection of to qualified support for the idea of student political activity on campus. Support was nearly always accompanied by the caveat that manipulation of students by outside political groups, as is often the case at national universities, is unacceptable. The respondents objected to the use of strikes, violence, and other kinds of obstruction of the university functions. However, most expressed the belief that the training of responsible citizens entails a recognition and analysis of social problems and some skill in solving them through the political process. All agreed that there should be academic freedom on campus and the opportunity to study various ideologies and points of view without harassment or indoctrination. Two respondents cited indoctrination as an inappropriate and unfortunate phenomenon on the two campuses of San Carlos and Francisco Marroquín.

Three respondents remarked that only a minority of students at San Carlos actively participate in politics. As a case in point, a recent student government election was cited in which less than 5 percent of the students voted. Two persons suggested that most of the students at San Carlos consent to strikes and other disruptive activity out of fear or apathy rather than deep conviction. Two

respondents ventured a guess that one of the reasons the private universities have become so successful is that many students are repelled by the politics, indoctrination, and general obstruction to the educational process that is rife at San Carlos.

Interview Question 7

To what extent should students participate in university affairs?

One respondent argued that students should have an active role on decision-making councils and voting in the election of university officials. The majority, however, expressed a belief that students should be listened to but should have no vote in decision making. Several respondents deplored the influence of students at the national university and thought that, generally speaking, major decisions at a university should be made by the administrators and to a lesser extent the professors. Several persons did recommend that students participate in planning research and community service projects.

Interview Question 8

To what extent should professors participate in university affairs?

The answers to question eight varied; the general reaction was that professors should have some say in academic decisions but little in administrative decisions. Two people pointed out that given the system of part-time professors who spend only enough time at the university to give their classes, decision making by the professors is not recommended since they have little knowledge about the affairs of the university.

Interview Question 9

Should elementary teachers be trained at the universities, normal schools, or both?

Most respondents believed that Guatemala has reached a point in its development at which it is feasible to begin to train elementary teachers at the universities. Several respondents pointed out that all of Guatemala's urban elementary school teachers hold a normal school diploma and that there are now many more trained elementary teachers than there are positions in urban schools.

The major obstacle to mass education of elementary school teachers in universities is lack of an economic incentive. Several respondents noted that secondary school teachers' salaries are much higher than those for elementary school teachers. Thus, those people who study education at universities are likely to be attracted to the secondary school teacher certification program. Most respondents believed that changes in the salary system will be required to make university-level elementary school teacher certification programs successful on a large scale. One respondent pointed out, however, that it is not a simple matter to equalize salaries. First, since the vast majority of teachers teach in elementary schools, an equalization of salaries would mean a large budget increase, something which Guatemala probably cannot afford. Second, and interestingly, the elementary teachers themselves have tended to oppose having the matter come before Congress out of fear that the entire salary schedule might be changed to their disadvantage. Thus, it appears that for the time being, the salary difference between elementary

and secondary will remain, dictating against the success of elementary teacher preparation programs at the university level.

Interview Question 10

What should teachers be taught?

Most stressed the need to train teachers in science and mathematics since these areas are not only important in development but have traditionally been weak in Guatemalan education. Others mentioned the need for training in social science as crucial to improving Guatemala's education vis-a-vis development. Several mentioned the need to train teachers in modern techniques of teaching with emphasis on problem solving and critical thinking rather than rote memory. Five mentioned the need to prepare teachers to teach effectively in the less than favorable conditions of the public schools, i.e., large classes with little equipment and materials. Four respondents pointed out the importance of attempting to inculcate positive attitudes related to development and to make national development a part of the curriculum.

Interview Question 11

What kinds of community service functions, if any, do you recommend for a university?

With the exception of one university rector, the respondents agreed that some kind of community service or extension is an appropriate and helpful function vis-a-vis the university and national development. Several suggested that agricultural research should be part of an agricultural extension program similar to that of the land grant colleges of the United States. Others recommended

student involvement in community projects, but on a selected basis depending on the individual's program, not as an automatic requirement that all students spend a certain period of time in the rural area, for example, as at San Carlos. One rector suggested establishing model schools in various communities as an effective means of extension. Others pointed out that universities should open centers in communities throughout Guatemala to teach courses needed in the area, somewhat on the idea of community colleges. Mariano Galvez, Landivar, and San Carlos already do some of this kind of extension. Another community program suggested was a law service offered by university students under the guidance of lawyer professors, such as is being done at San Carlos and Landivar.

Several indicated that community service is a good idea but must be carefully conceived, carried out, and integrated with research and teaching.

Interview Question 12

What relationship should exist between the university and the government?

Without exception, the respondents began by saying that the university must be free from government intervention. Several indicated that once the concept of autonomy is established, there should be some cooperation between government and the university on identifying and working together to solve national problems. All of the university rectors pointed out that a need exists for more communication between universities and the government.

Interview Question 13

What do you think about the employment of part-time and visiting professors at universities?

The rectors indicated a need to increase the number of full-time professors in order to establish a core of professionals, but they pointed out that there are limits to what can and should be done concerning full-time professors. First, the private universities are not large enough to be able to offer full-time positions to a majority of their professors. Second, university salaries are not high enough to attract full-time professors who would work exclusively for one institution. Third, there is an advantage in having some of the faculty come from the practicing professions to bring to the classroom methods being utilized in current practices, an element of the real world.

The respondents favored the hiring of professors from abroad as long as they fill a need that cannot be filled by local people and provided there is an attempt to train local people to eventually take over their positions.

RESULTS OF THE INTERVIEWS OF PROFESSORS AT THE UNIVERSIDAD DEL VALLE DE GUATEMALA

The writer interviewed twenty-five staff members of the Universidad del Valle de Guatemala. Each of the professors was given an interview and then asked to fill out a slightly modified version of the student questionnaire. The following is a summary of their replies.

Interview Question 1

What modifications, if any, would you make in the definition of national development that I have just given you?

The process by which a nation maximizes its physical power and productive capacities, making the most of available natural and human resources, in order to increase the level of living for its people in general, not just a few, and to free the potential in its people to share in the determination of the goals of their society.

The responses of the professors were similar to those of the educational leaders. They generally agreed with the definition; a few suggested expanding the term, "level of living," to include economic, social, cultural and political aspects.

Interview Question 2

What are the major problems which Guatemala confronts in its attempt to develop?

Here again, the answers were similar to those given by the educational leaders. The professors pointed to education, health (including nutrition), productivity, distribution of wealth, and social integration as areas in which improvements need to be made as part of Guatemala's development effort.

Interview Question 3

What are the aims of the Universidad del Valle de Guatemala?

Few respondents were able to give a firm answer to the question. Most responded by saying, "I do not know," or "I am not certain." When asked to make a guess based on observations, the most common answer was that the aims of the university are to provide a high-quality education to academically talented students

in areas that are not offered at other universities. A few thought that the aims are to prepare scientists and social scientists.

Interview Question 4

What is the Universidad del Valle de Guatemala doing to contribute to national development?

Most professors responded that the University's major contribution to development is the training of students in natural science, social sciences, and education. Many professors mentioned research projects (such as those on dendroctonos, Robles Disease; and small farms). Several professors mentioned services such as the orientation testing of secondary school students, the training of experts in educational evaluation through the Multinational Center, and the training in human development.

Interview Question 5

What more should the Universidad del Valle de Guatemala do to increase its impact on national development?

The most common response to this question was that the University should expand its research efforts. Several professors argued that the university must significantly expand its laboratories in order to permit increased and more sophisticated scientific research. Others argued that much more time must be spent in social research.

Three professors insisted that the University continue to expand its programs which prepare scientists in such areas as geophysics, seismology, and oceanography.

Five respondents mentioned the need to stress national development in the curriculum and teaching in a direct way. They thought that there is no established role of the university as a contributor to development.

Another issue mentioned by most of the respondents was the need for promoción. This is a term used to express the need for a campaign to communicate to prospective students and the community about the University. Because of the general lack of promoción, said several professors, many capable candidates for study at the Universidad del Valle do not know what courses are offered or what advantages there are in studying science or social sciences instead of the more traditional courses.

Interview Question 6

How is the Universidad del Valle de Guatemala substantially different from other universities in Guatemala?

It was the general opinion of the professors that the Universidad del Valle de Guatemala differs from San Carlos in that it (1) is nonpolitical in nature, (2) has a generally high-quality student body and teaching staff, (3) does not permit student or professor participation in decision making and selection of administrators, and (4) emphasizes courses in the natural and social sciences. Most respondents pointed out that all the private universities are centralized in structure but that the Universidad del Valle de Guatemala differs from the others in its attention to the natural and social sciences and research. Several respondents mentioned that they thought that the highest quality students attend

the Universidad del Valle de Guatemala. However, six professors indicated that the quality of students has diminished in the last few years and the University is no longer unusual in this respect.

Interview Question 7

What role should the students play in the affairs of the Universidad del Valle de Guatemala?

The general response of the professors was that the students should have little influence on the administrative and academic matters of the University. The professors were generally in favor of a student government which limited itself to student matters, and a few were in favor of students taking part on academic councils with a voice but no vote. All respondents emphatically opposed indoctrination of any kind, and most were against major political activity on campus. Several respondents pointed out that students should become concerned about the social and political situation of their country and should learn to take political action to influence change but not through disruptive political activity on campus.

Interview Question 8

What role should the professors play in the affairs of the Universidad del Valle de Guatemala?

This question drew the most emotion from the professors and the most criticism of the University. Almost all respondents agreed that professors should have a say in academic decisions only. Only one suggested that the teachers take an active part in administrative decisions. But most went on to say that at the Universidad del

Valle de Guatemala professors play little or no role in academic matters. Many criticized the University administrators for failing to seriously consider the ideas of the faculty. Several indicated that the purpose of the Academic Council was to communicate decisions to the faculty rather than have any meaningful faculty participation in the academic decision-making process. One professor, who was generally complimentary of the administration on this point, did say that it was unfortunate that the faculty is not more directly involved in decision making since people are more likely to support what they have a part in creating. Others were critical of the Directive Council for its "high handedness." Many respondents used the expression, "lack of communication," to describe the relationship between the Directive Council and the teachers. On further questioning, it became clear to the writer that "lack of communication" refers to the belief that professors have little voice in the University affairs and that, even when the professors are heard, little is done to carry out their recommendations.

Interview Question 9

Do you plan to continue your studies?

With the exception of those who hold Ph.D. degrees, all respondents indicated a desire to continue their studies. Many said they would like to study abroad, not only for the experience but also because advanced degrees in their areas of interest are not available in Guatemala. Several respondents expressed hope that they might receive financial assistance either directly through the University or indirectly through its sponsorship. Some of the

respondents had already received degrees with help through the University. It was generally thought that the Universidad del Valle de Guatemala has a good record of helping professors pursue advanced studies.

Interview Question 10

How have you attempted to improve your teaching?

Most respondents said that they try to improve teaching on their own through reading books, talking to other teachers, observing in other classes, or asking for student evaluation. Four said that they have taken one or more methodology courses in the Faculty of Education to help their teaching. There seemed to be a genuine interest on the part of the professors interviewed in giving good classes.

Interview Question 11

Where else do you work?

The majority reported that they teach at other universities or in secondary schools. A few practice professions. With the exception of two professors, all respondents are employed elsewhere.

Interview Question 12

What are the obstacles to working exclusively at the Universidad del Valle de Guatemala?

Almost all respondents said that low salaries is the major obstacle to working full time exclusively at the University. They pointed out that salaries for teaching at any university are not sufficient to permit one to work just at one institution. Thus,

even those professors who work full time at a university usually have extra work elsewhere. Several indicated that the Universidad del Valle de Guatemala is not big enough to offer many full-time positions.

Interview Question 13

What is your view of the general studies program at the Universidad del Valle de Guatemala?

The replies to this question were varied. The following are reasons given in favor of the general studies program at the University:

1. a first-year general studies program exposes the student to a variety of disciplines before he makes his career choice;
2. the extra year gives a student more time to think carefully before making a career choice;
3. a cultured person should have a general education;
4. training for a role in development requires knowledge of several disciplines; and
5. general education is a necessary first step at a university to prepare the students for advanced studies.

Although no one opposed the idea of offering some general studies work to students at the University, several professors objected to requiring all students to take the same courses all in the first year. This argument came mostly from professors in the sciences who stated their belief that the first year of general studies takes too much time away from the particular program in

which they teach. Some argued that a general studies program should give students the option of choosing courses in each of the major areas and not be rigid as is the present program at the University. Other respondents thought that forcing students to delay their entry into a profession for a year diminishes interest and drives them to other universities. One professor indicated that general studies is a good idea but should be designed to fit the particular program of studies of each student.

Interview Question 14

What role do you play in national development?

The usual answer to this question was "I teach." Several indicated that they are engaged in research which will help development in one way or another.

Interview Question 15

In what kinds of service projects should the Universidad del Valle de Guatemala engage?

Most professors thought that service is an important and necessary part of a university program. The most commonly suggested area of service were agricultural extension, nonformal education programs in both rural and urban areas, and applied social and scientific research. Many of the professors, although in favor of required student involvement in service projects, indicated that such programs are not easy to carry out. Several criticized the service program at San Carlos in which all graduates must work in a rural area for a certain length of time regardless of their area

of study, interests, or abilities. In addition, service programs at San Carlos are often manipulated for political purposes.

Four professors made the point that service should be coordinated with the teaching and research functions of the university.

Interview Question 16

If you teach in the Saturday program, do you think the program is appropriate to the educational needs of Guatemala?

Eight of the professors interviewed teach in the Saturday program. Their judgment was that the quality of the program is fairly good. The writer asked if the program emphasized national development or taught methodology appropriate to teaching large groups of students with a modicum of teaching materials. To this question, all eight responded that there is little stress placed on the relationship between education and development. The course content, they said, is aimed primarily at preparing urban school teachers. They did indicate that methodology courses stress teaching for understanding as opposed to rote memory.

Interview Question 17

Brief description of answers to questions 26-65 of the questionnaire given to students.

Questions 26-65 of the student questionnaire deal with opinions about the students, teachers, and programs at the Universidad del Valle de Guatemala. The writer asked the respondents to fill out that portion of the questionnaire in order to compare the perceptions of the professors with those of the students. The perceptions of both groups were strikingly similar.

Opinions about the facilities and programs at the University. The vast majority of professors thought that the academic level is high and the curriculum good. Over half thought that the quality of the books and services in the library is good to excellent. The majority thought that the laboratories and classroom facilities are good to excellent.

Only about half the professors who took the questionnaire gave an opinion about research and service programs at the University. A majority of those who responded indicate that they thought the service programs and the work of the Institute of Research are good to excellent.

Sixteen of the respondents rated the general studies program good to excellent. Seven rated it average, and two rated it poor. Seventeen respondents were in favor of the general studies program being a prerequisite to entering a faculty. Eight, however, opposed the idea.

Responses to the question concerning the emphasis placed on national development at the University ranged rather evenly from excellent to poor.

Twenty-three of the respondents thought that academic freedom at the University is good to excellent.

About half the professors thought that the guidance program for students is good; the other half thought that it is average.

Opinions about the quality of the professors at the University. The vast majority of professors thought that the quality of teaching at the University is good to excellent. They were mildly critical of

their colleagues with regard to punctuality and regularity of attendance and dedication to national development.

Opinions about the quality of the students. The professors indicated a fairly high regard for the students. They considered the students at the University to be generally well prepared, of a serious nature, generally punctual and regular in attendance, and respectful of others. The majority thought that the students are average to poor in their concern for helping the nation develop.

Opinions about the relationship between students and the Universidad del Valle de Guatemala. The vast majority of the respondents were in favor of permitting students to take part in the evaluation of professors and in the planning of curriculum. They were also generally in favor of students engaging in some kind of community service project as a requirement for graduation.

Most respondents were in favor of the students making suggestions to the administration, and about half were willing to permit students to have a representative on the Academic Council. Only three thought it appropriate for students to have a vote in the election of university officials or the hiring and firing of teachers. Twenty-three professors opposed the idea of student strikes on campus, confirming the information given the writer during the interviews.

Opinions about the Universidad del Valle and national development. Most professors thought that little attention is given at the University to instructing students in the need for and ways to play a

role in national development. Most admitted that they spent little or no time on any kind of matter related to national development. However, the majority indicated that they would be willing to spend time on projects related to national development.

RESULTS OF THE QUESTIONNAIRE ON STUDENT OPINION AT THE UNIVERSIDAD DEL VALLE DE GUATEMALA

Information Section

The questionnaire was divided into two parts, (1) an information section, and (2) an opinion section. The responses to the information section were incorporated into the description of the Universidad del Valle de Guatemala in Chapter 4.

Opinion Section

The following is a summary of the students' responses to the questions concerning their opinions about the organization and functions of the Universidad del Valle de Guatemala.

Opinions about facilities, programs, and services. Eighty percent of the students thought that the academic level of the University is high to very high and that the curriculum is good to excellent in appropriateness to meet their needs. Ninety percent thought that the orientation given students, the library books and services, and the laboratories and classroom facilities are average to excellent.

Only 20 percent of the students responded to the questions concerning community service and the Institute of Research, indicating a general lack of knowledge about these programs at the Universidad

del Valle de Guatemala. Of the people who answered, the majority said they thought that both programs are good to excellent.

Only about half the respondents answered the questions concerning the quality of the teacher training programs and practice teaching. A computer check indicated that 95 percent of those who answered are enrolled in the college of education. Of those who responded, more than 80 percent rated the teacher training programs good to excellent.

Ninety-one percent of the students thought that the quality of the general studies program at the University is good to excellent. Seventy percent said that they favored the requirement that first-year students enroll in the general studies program.

More than half of the respondents thought that the emphasis on national development at the University is fair to poor.

Sixty-six percent of the students thought that academic freedom at the University is good to excellent.

Opinions about the quality of the professors. On questions concerning professors' knowledge of material, ability to communicate that knowledge to the students, impartiality in correction, and punctuality and regularity of the attendance, over 80 percent of the respondents rated their professors good to excellent.

On the questions concerning the ability of the professors to stimulate thought and creativity, about 60 percent rated their professors as good to excellent.

The question which drew the largest negative response was the one on the dedication of the professors to national development.

Half rated their teachers good, but the other half rated them average to very poor.

Opinions about the quality of the students. The students rated their classmates fairly high on most of the categories. On the questions concerning academic preparation, seriousness, punctuality and regularity of attendance, and respect for others, at least 75 percent of the students gave ratings of good or excellent. The students were most critical of each other on the matter of student interest in contributing to national development. Over 40 percent indicated that their classmates rated from average to very poor on this point.

Opinions about the role of the students. Eighty-nine percent thought that students should participate in the evaluation of professors and take part in the planning of curriculum and programs. The majority indicated that the means of participation should be limited to making suggestions to the administration and having a representative on the Academic Council. Fifteen percent thought that students should have a vote in the elections of the University officials, and 8 percent thought students should take part in the hiring and firing of the faculty.

Seventy-eight percent believed that students should take part in a student government, but only 6 percent were in favor of student strikes on campus.

Seventy percent of the students were in favor of participating (ad honorum) in a community service program as a requirement

for graduation. Of those who were in favor of required participation in community service programs, there was an even spread of responses on the question of how long the program should last, with about 20 percent in favor of each of the five categories ranging from one month or less to five months or more. The students were generally in favor of such a program running from one to four hours a day. Only 10 percent thought that a community service program should require full-time participation of students.

Eighty-five percent thought that students should participate in research projects aimed at national development.

Opinions about the university and national development. The responses to this set of questions indicate that the students believe that there is limited emphasis in the classroom on national development. Thirty-seven percent thought that some of the instruction had this purpose, while 40 percent indicated that there was little or no effort to teach students how to effect change. Nearly 60 percent replied that their professors rarely or never discuss national development needs in the class or carry out activities related to solution of national development problems.

Ninety-five percent indicated a willingness to give at least some of their time to cooperate with teachers and administrators on national improvement activities each month. One-third were in favor of spending eight hours or more each month on this kind of activity.

In sum, the students had a generally high opinion of the University programs, personnel, and facilities. They showed some interest in participating in the affairs of the University at least

in making suggestions but were against student involvement in strikes or the determination of University staff. They indicated willingness to participate in research and community service projects. They did not think that there is much emphasis on national development at the University.

RESULTS OF THE INTERVIEWS OF LEADERS AT THE UNIVERSIDAD DEL VALLE DE GUATEMALA

The writer interviewed seven individuals in this category, the five members of the Directive Council, and two members of the Executive Committee of the Foundation of the Universidad del Valle de Guatemala. The following is a summary of their responses to the interview questions.

Interview Question 1

What modification, if any, would you make in the definition of national development which I have just given you?

The process by which a nation maximizes its physical power and productive capacities, making the most of available natural and human resources, in order to increase the level of living for its people in general, not just a few, and to free the potential in its people to share in the determination of the goals of their society.

The responses of the Trustees and administrators were similar to those of the Guatemalan educational leaders and the professors of the University. One suggested expanding the term, "level of living," to include economic, social, cultural, and political aspects. Another mentioned that there should be a just distribution of wealth.

Interview Question 2

What are the major problems which Guatemala confronts in its attempt to develop?

The responses to this question were similar to the responses of the Guatemalan educational leaders and professors at the Universidad del Valle de Guatemala. The problems mentioned include matters related to health, education, productivity, distribution of wealth, social integration, and transfer of technology.

Interview Question 3

What are the aims of the Universidad del Valle de Guatemala?

The answers to this question were complete and similar among the respondents. The administrators gave detailed answers closely paraphrasing the information published in the University literature. The Trustees were less precise but showed a clear knowledge of the objectives as stated in Chapter 1.

Interview Question 4

What is the Universidad del Valle de Guatemala doing to contribute to national development?

Here again, the respondents were fairly consistent in their answers, the members of the Directive Council being more explicit than the members of the Executive Committee. All mentioned emphasis on training in the natural and social sciences and education, efforts in research, and service in terms of the development of teaching materials, consulting, testing, and training in human development.

Interview Question 5

What more should the Universidad del Valle de Guatemala do to increase its impact on national development?

Most of the respondents mentioned the need to redouble research efforts. Two respondents suggested that the University needs to offer more short courses aimed at preparing individuals to act as technicians in areas of health and agriculture. Most said that they thought that the University must increase the number of programs in sciences, social sciences, and education.

Two administrators mentioned the need to increase the production of low cost educational materials, a program which was started by the School many years ago but which has not been expanded much in recent years.

Three administrators mentioned the need to expand the University's service function to include agricultural extension in such a way that the agricultural program could incorporate training, research, and service.

Interview Question 6

What role should the students play in the affairs of the Universidad del Valle de Guatemala?

The Trustees and administrators were nearly unanimous in responding that they thought the students should have no direct role in decision making at the University. Neither, they said, should students participate in political activities on campus or be permitted to strike. Most of the respondents did recognize the advisability of students' involvement in limited student government and of their ideas being heard periodically by the Directive Council.

Interview Question 7

What is the general quality of the students at the Universidad del Valle de Guatemala?

The respondents thought that the general quality of the students at the University is high in comparison with the Universidad de San Carlos, and better than average in comparison with the other private universities. When asked whether or not the quality of the students had diminished in the last few years, several pointed out that the increased number of students had brought an overall lowering of the quality insomuch as the first students were a highly select group. However, none believed that the quality of the programs had decreased; whereas there are more students of average ability, there is still a group, larger in number but smaller in percentage, which represents the brightest young minds in Guatemala.

Several respondents mentioned that the academic preparation of many of the incoming students is mediocre, but no one expressed major concern about the ability of the students to complete the University's program if they applied themselves.

Interview Question 8

Do you think the University is developing positive attitudes in the students concerning their potential in national development?

In general, the answer was that the act of offering programs which are important to national development stimulates positive attitudes, but that there is no overt attempt to encourage students to become interested in national development. Three administrators,

however, pointed out that the field research in which students take a direct part, and the presence of major research efforts to find solutions for serious national problems, such as the Pine Bark Beetle study and the program with the Center for Disease Control contribute to an atmosphere of national development that has its effect on the students.

Interview Question 9

What role should the professors play in the affairs of the Universidad del Valle de Guatemala?

Most of the respondents answered unequivocally that other than participation on the Academic Council, the professors should have no direct say in University matters. However, upon further questioning and reflection, the respondents did recognize the need for some participation because (1) good morale requires some staff involvement, and (2) people who participate in making decisions are more likely to play a positive role in implementing them. On the other hand, it was pointed out by several respondents, great power in the hands of the professors fragments the University's efforts and renders it unable to move ahead forcefully toward accomplishing major goals.

Interview Question 10

What is the general quality of the professors at the Universidad del Valle de Guatemala?

The respondents indicated that they thought that the quality of the professors at the University is generally high, although since the same professors tend to work at other universities, the

quality of professors at the Universidad del Valle de Guatemala is not much better than at other universities. They did indicate that the quality of supervision is better at the Universidad del Valle de Guatemala, so that regularity and punctuality of attendance and other matters such as testing and turning in of grades on time is better than at other universities. The administrators were emphatic in arguing that the quality of the professors had not gone down.

Interview Question 11

Should the Universidad del Valle de Guatemala play a role as a social critic?

All respondents thought that any kind of social criticism, no matter how legitimate, would serve only to create enemies and give the appearance of involvement in politics. To those respondents, social criticism not only goes against the University's long-standing policy and its statutes, it could cause the University much harm over the long run.

CHAPTER 5--NOTES

¹Walter R. Borg and Meredith D. Gall, Educational Research, An Introduction (New York: David McKay Company, Inc., 1974).

²Ibid.

³Interview Schedule Number 6.

⁴Interview Schedule Number 12.

Chapter 6

CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

FOR FURTHER STUDY

INTRODUCTION

Developing universities in their founding and early formative period . . . have many weaknesses with little in the way of counter-balancing strength. . . . Their problem is that too much is expected too soon in terms of national benefits of leadership and service from university graduates. . . . The new universities will in time come to fulfill their purpose, when they have lived long enough to have produced enough trained individuals to supply the nation's manpower requirements. When this has happened, after perhaps 20 to 30 years, the universities will begin to take their proper place on the national scene.¹

In this chapter, the writer will summarize findings of the study and present some conclusions concerning the appropriateness of the organization and programs of the Universidad del Valle de Guatemala for accomplishing its aims as a contributor to national development. In addition, the writer will make recommendations for enhancing the university's development role and present some implications for further research which have resulted from this study.

To accomplish the tasks required in this chapter, the writer has drawn on the contents of the previous chapters. The review of the literature in Chapter 2 provides the general criteria by which to judge a university as a change agent. The description of

Guatemala in Chapter 3 and the interviews of Guatemalan educational leaders in Chapter 5 provide the setting in which the Universidad del Valle de Guatemala operates and the thinking of local experts concerning the role local universities can play in contributing to Guatemala's development. For a description of the Universidad del Valle de Guatemala, the writer has drawn on Chapter 4 and the survey of students, professors, administrators, and trustees as discussed in Chapter 5.

The statement by Bowles at the beginning of this chapter is a reminder that it takes time for a university to mature sufficiently to have an effect on the area it serves. The Universidad del Valle de Guatemala is thirteen years old at the time of this writing, too young to have reached the stage of fulfillment of its purposes. Thus, the comments in this chapter will be tentative and focused on the appropriateness of the University's organization and programs for development rather than on its impact on Guatemala and the region.

SUMMARY AND CONCLUSIONS

On the following pages, the writer will summarize the findings of this study and state conclusions based on an analysis of the information presented in previous chapters. To facilitate the reading of this section, in addition to the sub headings, the conclusions have been underlined.

Aims

The Universidad del Valle de Guatemala was conceived and established on the idea that a university should serve the development of the nation and region in which it is located. This philosophy is not only stated in its statutes and descriptive literature but is firmly espoused by those charged with making policy for and administering the University. It is in keeping with the criteria from Chapter 2 and opinions of Guatemalan leaders that a development-oriented university attempt to prepare leaders in natural sciences, social sciences, and education, with an emphasis on training in research. According to these standards, the aims of the Universidad del Valle de Guatemala are suitable for a university which would contribute to the improvement of the level of living of the people in the region it serves.

The writer found, however, that there is little effort made to communicate the University's aims to the students and professors. The professors were generally unable to tell the writer what the University's aims are, and students indicated through responses on the questionnaire that little effort is made by the professors to relate instruction to national development. It is a weakness of the University that the professors, those who are entrusted with carrying out the programs, and the students, future leaders of Guatemala and the region, have so little understanding of the University's purposes.

Leadership

As noted in Chapter 4, the members of the Directive Council and the coordinators of the academic units are respected and capable educators. The members of the Executive Committee have played a guiding role for both the American School and the Universidad del Valle de Guatemala for years. Their long-term interest in both institutions as agents of change is notable.

The writer finds that the members of the Directive Council are capable leaders, articulate in their espousal of the University's aims and expert at developing and carrying out programs to meet those aims. In addition, given the heavy work load they carry and their relatively low salaries, the members of the Directive Council embody the philosophy of "work and sacrifice" which Habte indicates is important to successful leadership in a development-oriented university.² Clearly leadership is one of the outstanding characteristics at the University.

Institutional Structure

The institutional structure at the Universidad del Valle de Guatemala represents a departure from the Napoleonic pattern of loosely federated independent professional schools which is the model for most universities in Latin America.

Centralization. All policy decisions for the University are made by the Executive Committee of the Foundation. The execution of that policy is the exclusive province of the Directive Council. Staff members and students may be heard but have no vote in administrative decision making.

It is the writer's opinion that the centralized structure is one of the strengths of the University as a contributor to development. An independent faculty structure in which professors and students are involved in administrative decision making tends to atomize the institution and render it unable to move forward in a concerted and coherent way toward specific objectives. A classic case in point is general studies. Although the authorities are almost unanimous in recommending general studies programs for development-oriented universities, few universities in Latin America in which professors and students are influential in decision making have general studies programs. At the Universidad del Valle de Guatemala, the general studies program was opposed at the outset and probably would have been defeated had it been put to a vote of the professors. Today, however, the program is functioning well.

Efficiency is an important concept in development. Poor countries are attempting to accomplish much in a short period of time with limited resources. For a university to effectively achieve its development aims, it must have a structure which permits its leaders to move the institution forward in a concerted way. It is the writer's opinion, then, that the trustees of the Foundation of the Universidad del Valle de Guatemala acted correctly in establishing a centralized institutional structure and choosing capable and strong leaders to implement the University's development aims.

The centralized structure has been the cause of some discontent on the part of the staff as was described in Chapter 5. Complaints by professors about lack of influence in University

affairs should be viewed in the perspective of similar institutions of higher education. These opinions are not unique to the Universidad del Valle de Guatemala. A limited role in the decision-making process, and resultant complaining, is the rule at the other private universities as well. In spite of the criticism, however, there has never been an exodus of professors from the University because of its centralized structure.

Students. The University has addressed itself well to the issue of student access by combining the practices of careful selection, a search system to identify outstanding students, and a scholarship program to support the studies of those who could not otherwise afford to enroll. It is laudable that about half the regular students at the University receive financial aid.

The lack of an active recruitment program has been a weakness at the University. However, in 1979, University officials moved to overcome the weakness by approving several recruiting activities, including advertising in newspapers and conducting open houses for secondary school seniors. The writer believes that a vigorous program to inform secondary students throughout Guatemala of the University's aims and programs is a critical function of its role as a contributor to national development. Such a program should increase enrollment, making possible the addition of courses and programs and, subsequently, the hiring of more full-time professors. In addition, by encouraging capable young people to enroll in development-related programs, the University will enhance its role as a contributor to national development.

Several professors indicated that the quality of the students has declined in the past few years. In the early days of the University, a handful of highly motivated students enrolled in the faculties of Science and Humanities and Social Sciences to pursue their interests in basic science and research. As the University has grown, programs in more popular applied sciences have been offered in such areas as computer science, psychology, engineering, and medicine. These programs have attracted a less capable student, by comparison, with the initial group of select students. The writer views this process as natural and necessary not only for economic survival but also as a means of increasing the efficiency of the University program. At issue here is not whether the quality of all students is equal to the original group but whether the University is able to continue to offer and expand programs which are important to national development and attract capable students to those programs. It should be noted that a good case can be made for the need for leaders in computer sciences, psychology, medicine, and engineering, as well as in the basic sciences.

Co-government does not exist at the Universidad del Valle de Guatemala. The students have no voice in the administration of the University except for minor matters related to student affairs. The rules are strict, and little misconduct is tolerated.

The responses to the student questionnaire show that the students, as a group, do not care to be directly involved in managing the University. Their primary goal is to acquire a good education in a field which interests them. Although they would like to

participate in the planning of curriculum and in the evaluation of professors, they are almost unanimously opposed to strikes and generally opposed to student involvement in choosing University staff and administration.

The limited student involvement in administrative decision making, the practice of close supervision of students, and the absence of political activities on campus are all consistent with the recommendations of development experts. It is the opinion of the writer that these characteristics not only contribute to more effective administration of the University but also attract to it the more serious students.

Autonomy. The University's willingness to cooperate with the government on development projects while maintaining its independence is consistent with the criteria on university autonomy in Chapter 2. The question of autonomy is not so much determined by a university as it is by the government. In most Latin American countries, governments intervene when the university's actions are seen as harmful to the interests of the government. The fact that the Universidad del Valle de Guatemala maintains political neutrality and does not permit the harboring of politicians or their manipulation of students on campus reduces the possibility that the Guatemalan Government would invade the University's autonomy.

Interdisciplinary activity. The Universidad del Valle de Guatemala engages in the interdisciplinary training of its students primarily through its program of general studies and some work in the Faculty

of Social Sciences. However, there is little attempt to teach students techniques of combining various disciplines to form a concerted attack on development problems. Given the complex and multi-faceted nature of development, the writer believes this general lack of training in an interdisciplinary approach to problem solving to be a deficiency in the University program.

Interinstitutional and international involvement. The Universidad del Valle de Guatemala cooperates with many local and foreign institutions on projects related to development. That it does not belong to any regional organization of universities is understandable. It would appear, then, that the Universidad del Valle de Guatemala's many interinstitutional and international contacts provide a firm base on which to build as the institution grows.

Institute. The Institute of Research of the Universidad del Valle de Guatemala is an integral part of the University. It has an active research agenda and is directed by a researcher known and respected in the region. The writer will present his conclusions about the University's research efforts later in this chapter.

Support facilities. Generally speaking, the University's support facilities are ample and of good quality. The library facilities, when the American School's library is added, are quite extensive. In addition, the University has a trained and experienced librarian, unusual in Latin American universities. The laboratories are excellent as teaching facilities, although their research capabilities are deficient. The computer center serves well the

administrative, teaching, research, and service needs of the University. The preserve land tract is a good beginning, although much more land will be needed to carry out extensive experimental and extension projects. Finally, the print shop provides the University with an excellent facility for publishing research results and other kinds of internal and external communication.

It is noted, however, that many of the facilities are nearing the limit of their capacity for effective service of the institution, and it will be necessary to continue to expand them. Fortunately, there are signs that in the next few years the facilities will be expanded as a result of grants from ASHA and other donors.

Planning

One of the more serious deficiencies at the University has been the lack of systematic long-range planning. The rapid increase in student enrollment in the last few years has been matched by growth in the number of programs and faculty. Unfortunately, there is no indication that the growth of the University was accompanied by systematic long-range planning. It is the writer's opinion that the recent establishment of the Future Plans Committee is an important and overdue step toward improving the planning function of the University. The Committee, which involves members of all units of the University, should not only help give direction to the University's development, but serve as a vehicle to inform the staff as a whole of the aims and accomplishments of the institution.

Evaluation

To date, there has been little formal or systematic evaluation at the Universidad del Valle de Guatemala. Program evaluation has been practically nonexistent except on an informal basis. Evaluation of teachers is better, especially with the initiation this year of the use of evaluation forms filled out by students and reviewed the administration. It is the writer's opinion that the evaluation process at the University is deficient, thus reducing the effectiveness of its programs and making planning more difficult.

Financing

Financing is particularly difficult since the University provides many scholarships, stresses science, and conducts much research: activities which are important to Guatemala's development but which require outside funds. To date, the income from student fees is not sufficient to pay for the teaching program. However, the rapid increase of students in the regular program is moving the University toward self-sufficiency in its teaching function. The data in Table 10 (page 201) show that the University has always been able to attract money from outside sources to finance its programs. Well over half of its total income from 1966 to date has come from sources other than fees. It is particularly encouraging to note the sizable increase in income from outside sources in the last few years. The growing contacts with funding agencies in Canada and the United States, the recent establishment in Delaware of the Foundation of the University of the Valley of Guatemala, and the \$675,000 grant the Foundation was able to obtain from the American

Schools and Hospitals Abroad branch of USAID are positive signs that the University has the potential for obtaining the funds it will need in the future to carry out extensive development programs of teaching, research and service.

It should be noted that the obtainment of funds from major donors is not only indicative of the ability of a university to maintain itself but is also a measure of the appropriateness of its programs for national development. The Ford Foundation, Tinker Foundation, OAS, USAID, and the Inter-American Bank have experts on their staffs who make careful appraisals of recipient institutions in order to determine their potential for contributing to development. That the Universidad del Valle de Guatemala has received millions of dollars from these institutions is, the writer believes, a good indication that development experts on the international level have found the Universidad del Valle de Guatemala to be effectively involved in development.

New Institutions

The Universidad del Valle de Guatemala has a decided advantage over older universities because as a new institution it is free from the obstacles of tradition and established empires which tend to prevent many Latin American universities from being effective as contributors to development. Newness does not guarantee, of course, that a university will have the organization and programs appropriate for development, but it does make it more probable.

Instruction

The major function of the Universidad del Valle de Guatemala is instruction. The majority of staff and budget are allocated to teaching. The responses of the professors, trustees, administrators, and students to the surveys indicate a consensus of opinion among the groups that the general quality of the instruction is good.

Staff. The University attempts to improve its staff by helping them acquire advanced education and hires visiting professors to take positions for which there are no qualified Guatemalans. These efforts to develop local personnel and hire specialized staff from abroad are appropriate for a development-oriented university.

Although much has been done to further the education of staff members in their academic specialization, little effort has been made to help them improve their teaching techniques. In November 1979, the Faculty of Education offered a workshop in teaching to the University professors. Given the importance of good teaching, this workshop for professors represents an important step forward in the area of staff development.

The need for full-time and half-time professors at the Universidad del Valle de Guatemala is particularly great since it hopes to combine teaching with research. The University has increased the number of full-time and half-time professors recently. However, given its small size, it is not yet feasible to have many full-time staff members. At present there are not enough courses offered in a given area to permit having a full-time professor to teach in that area alone. In addition, one-third of the professors

work in the teacher certification program. These people cannot be offered full-time work insomuch as the program is offered on Saturdays only. In the regular program, the percentage of full-time professors is fairly high: 28 percent.

Low salaries is a problem at the University and is the cause of complaints by the professors. Unfortunately, the University's salaries have remained static for several years during a time of inflation and increasing salaries at other universities. The writer believes that a continued failure to raise salaries in the face of the increasing cost of living and higher salaries at other universities could result in increased difficulty in attracting and retaining good teachers.

The writer does not pretend, however, that increased salaries will eliminate the practice of working at several universities. The tendency of people to want to improve their living standards is likely to induce professors to continue working at several places even if better salaries were to be offered at the University.

Curriculum. The University's insistence on requiring its students to take a year of general studies is in agreement with the criteria presented in Chapter 2. The Universidad del Valle de Guatemala is one of the few universities in the developing nations with such a solid first-year general studies program. The general studies program, then, is an important curricular accomplishment and should indicate that such programs can succeed in other Latin American universities.

The curriculum is not as effectively geared as it could be to producing agents of change. Little attention is given to teaching students how the disciplines they are studying can be applied directly to solving national problems. Almost no attempt is made to train students in multidisciplinary approaches to problem solving. There are few courses which examine or even point out national and regional problems. Summing up the curricular approach of the university, the emphasis is on giving students the course work which will prepare them in areas important to national development, but little is done to promote discussion of national development in the classrooms.

Training of educators. The Universidad del Valle de Guatemala is contributing to educational development in Guatemala by training both elementary and secondary teachers as well as leaders in educational administration, supervision, and measurement. The teacher certification program not only attracts hundreds of students a year but has been imitated by other universities in Guatemala. The training of elementary teachers in special education has broken new ground in the preparation of teachers in an important and previously neglected area of Guatemalan education. In addition to the training of large numbers of teachers in the certification program, the University has rigorous Licenciatura and Master's degree programs for the training of selected students for leadership positions in Guatemala and the region. There are many courses common to both the elementary and secondary certification programs, demonstrating the articulation between elementary and secondary teacher education which is called for by Butts.³ The responses to the questionnaires

indicate that the students in the Faculty of Education believe that the quality of the programs is high. Generally speaking, then, the writer believes that the programs of the Faculty of Education are in keeping with the views of development experts.

The writer does note, however, that there are several weaknesses in the program. Although general studies has become an integral part of the Licenciatura degree programs at the University, there is no general studies requirement in the teacher certification program. The writer could find little evidence that there is any attempt to prepare teachers to handle large groups of students or teach with inadequate teaching materials. Finally, the University has made no attempt to prepare teachers for rural schools or to develop teaching methodologies and curriculum for rural areas.

It is evident from the responses to the questionnaire that many of the students in the teacher certification program are elementary teachers who wish to become secondary teachers, probably to increase their income. An unfortunate result of the secondary teacher certification program is that good teachers leave elementary school teaching in order to earn a higher salary. It is the writer's opinion, however, that this loss of good elementary teachers is outweighed by the need to greatly increase the numbers of trained secondary school teachers.

That the Universidad del Valle de Guatemala offers the only University-level training program for elementary school teachers is notable. That it has about thirty students enrolled is a sign that the university-level training of elementary school teachers is now

feasible in Guatemala. The Universidad del Valle de Guatemala is in the forefront of elementary and secondary teacher training at the University level in Guatemala.

Training in the natural and social sciences. The Universidad del Valle de Guatemala is a recognized leader in the teaching of the natural and social sciences in Guatemala. It was the first Guatemalan university to offer Licenciatura degrees in the basic sciences. Given many of the peculiarities of Guatemala--an agricultural country with good fisheries and forests, high death rates from disease, a rapidly increasing birth rate, fledgling light industry--people trained in biology, chemistry, or physics are needed.

It is interesting to note that the University recently began to offer programs in the applied sciences which use the basic sciences for a foundation. Computer science and civil engineering are based on mathematics and physics. Agronomy, food technology, and medicine are based on biology and chemistry.

Training in the social sciences is also important. Social scientists are needed to research and help provide solutions for many social problems including the "social dualism" which exists in Guatemala. Social scientists are needed to study ways to modify attitudes and values in order to enhance development. In addition, social science research is needed to help facilitate the advent of technology.

The students in the natural and social sciences at the Universidad del Valle de Guatemala participate in a comprehensive research program. All students must write a sophisticated research

thesis for graduation, and the students in the social sciences must spend two summers in field research. Few universities require as much field research of their students as does the Faculty of Social Sciences at the Universidad del Valle de Guatemala. As a case in point, the Coordinator of the Faculty, who holds a Ph.D. degree in Anthropology from the University of Chicago, was not required to do field research during his graduate studies. In addition to the required research, the existence of major research projects on campus, in which some students take part, further enhances the quality of the training in the natural and social sciences.

In sum, then, the University programs in both basic and applied sciences, with a strong emphasis on research and general education, are designed to prepare creative professionals who are able to solve problems and expand the frontiers of knowledge in their areas of specialization. By the standards of development experts, the University's programs in the natural and social sciences are appropriate for preparing leaders who will contribute to national development.

Research

The Universidad del Valle de Guatemala has a fairly extensive research program for a young university and by comparison with other universities in Latin America. Clearly the University has a solid research infrastructure and experience in both conducting and acquiring funds for research related to national development.

The emphasis on research as a part of the curriculum is also in accord with the thinking of development authorities. The

University does meet its aim of preparing researchers by requiring all students in the Licenciatura and Master's degree programs to produce a high-quality research thesis as a graduation requirement. As mentioned above, the preparation in research required by the Faculty of Social Sciences is exceptional.

The dissemination of research results by the University is deficient. The lack of a systematic and careful communication of the research findings throughout the region is a weakness in the University research program which requires the attention of the staff and administration. The recent establishment of an internal newsletter by the Institute of Research represents a positive first step toward more effective dissemination of research results.

Service

Consulting by the School and University, development of instructional materials and tests, the administration of tests to students throughout Guatemala and the region, the administration of scholarship programs, and the education in human development programs provide a reasonably strong service base at the University. To date, staff have carried out the service work; that students do not participate in any of the service activities is a weakness of the University program.

The Universidad del Valle de Guatemala vis-a-vis the other universities in Guatemala

A University must be evaluated in the context of the setting in which it functions, which includes other institutions of higher education. The appropriateness of the role of a given university

in contributing to development depends to some extent on what programs the other universities in the area offer. It is theoretically possible, for example, that if the other universities offer programs in the natural and social sciences and emphasize research, a new university might make its most important contribution to development by offering a program in law in order to avoid needless duplication.

In Guatemala, the traditional professional degree programs are offered by the universities of San Carlos, Rafael Landívar, Francisco Marroquín, and Mariano Gálvez. The Universidad del Valle de Guatemala offers few professional degrees but complements the other university offerings with its emphasis on natural and social sciences. Whereas the universities of San Carlos, Rafael Landívar, and Mariano Gálvez offer extension teacher certification programs exclusively, the Universidad del Valle de Guatemala and Francisco Marroquín offer teacher certification programs only in the capital city. The Universidad del Valle de Guatemala is the only university to offer certification of elementary teachers. It does not offer any courses to prepare paraprofessionals and middle-level technicians, since several other universities do.

Whereas the Universities of San Carlos and Francisco Marroquín have some political leanings and the Universities of Rafael Landívar and Mariano Gálvez were established by religious orders, the Universidad del Valle de Guatemala is nonreligious and nonpolitical. The private universities are selective and the public university practices open admission. At San Carlos students participate in university governance and are active in national politics. By

contrast, students in the private universities play a small role in institutional decision making and do not participate except in a marginal way in national politics on campus.

Even though the numbers of secondary teachers trained in the natural sciences is low at the Universidad del Valle de Guatemala, it should be noted that San Carlos offers a special teacher training program in natural sciences with large numbers of scholarships for the students. In light of the many teachers trained in natural sciences at San Carlos, the limited number of graduates in this area at the Universidad del Valle de Guatemala does not necessarily indicate a weakness in the University's program.

Considering the above, it is the writer's opinion that the Universidad del Valle de Guatemala complements rather well the programs offered at the other institutions of higher education in Guatemala and that, in general, when the total offerings of university programs are considered, it is apparent that there is a wide range of educational opportunity in Guatemala.

RECOMMENDATIONS

Upon completion of the study and a review of the findings and conclusions, the writer offers the following general recommendations.

1. To more fully meet its aims as a contributor to development, it is important that professors, students, and certain segments of the region it serves understand the University's aims and be aware of its programs. This will require the intensification of

both internal and external communication efforts. The following are some suggestions to be considered:

- (a) Attention should be given to making the new newsletter a permanent and useful fixture of the institution.
- (b) Periodic seminars should be held for administrators, professors, students, and guests to discuss the University's aims and programs and their relationship to national development.
- (c) The open houses should be expanded as a means of informing prospective students about the University.
- (d) Consideration should be given to preparing programs for radio and television and articles for periodicals which describe the work being carried out at the University.

It is the writer's opinion that a carefully prepared, dignified, multi-faceted effort to communicate information about the programs and aims of the University will have many positive benefits such as increasing the numbers of students, improving the image of the University, stimulating national and regional interest in the University and the role of higher education in development, and putting useful information into the hands of people interested in development.

2. The recent involvement of staff in the planning process should be carried over to and combined with institution-wide evaluation. Planning and evaluation are closely related; indeed, effective planning usually begins with an evaluation of programs to date. The involvement of many staff members from various units of the

University should enhance faculty understanding of and support for the University's aims and programs. Planning and evaluation on a system-wide basis should tend to force the staff to look beyond their individual and departmental bailiwicks to the functioning of the University as a whole. Properly carried out, the kind of planning and evaluation program the writer recommends should provide the institution with a systematic, continuous assessment of its programs, involve the staff in an on-going process of examining its aims and its attempts to meet those aims, and tend to unify the various elements of the University.

3. Modification should be made of the present curriculum so that courses address development needs and demonstrate the relationship between course materials and development goals. Specifically, the writer recommends that courses be offered which (1) review the development needs of Guatemala, (2) treat development theory, and (3) show how students can apply the disciplines they are studying to the solution of national problems. In addition, students should be required to take at least one course which demonstrates the multidisciplinary approach to problem solving.

4. Although the writer does not recommend that students be given more decision-making power at the University, he does suggest that some formal mechanism be devised through which students may be heard. Consideration should be given to holding periodic meetings of students and members of the Directive Council for the purpose of discussing a wide range of matters of importance to the students.

5. Consideration should be given to making the following modifications in the teacher certification program:

- (a) Specially designed courses in the social sciences, natural sciences, and humanities could be required of all students: courses which provide the student with a basic understanding of those areas of study and emphasize critical thinking and the application of the scientific method to problem solving. As an integral part of these courses, national problems should be defined and the students instructed in ways that they as educators can contribute to their solution.
- (b) Attention should be given to training the students in teaching techniques suitable for the difficult situations in which many Guatemalan teachers work. The growing number of students per teacher makes it imperative that teachers be prepared to work effectively with large groups of students. In addition, given the general lack of teaching materials, teachers should be taught how to prepare their own materials from common, inexpensive items and to teach effectively without textbooks.
- (c) Ties should be established with elementary and secondary schools, including at least one normal school. Such relationships could be helpful in promoting experimentation with new teaching techniques, methodology, and instructional materials. A relationship with a normal school would permit the University to experiment with new ways to prepare teachers and permit it to extend its influence over teacher training in Guatemala.

6. The University should continue to expand its research activities. Highly sophisticated technological research is not yet feasible for Guatemala, but research in simple technology directly related to Guatemala's needs is. Accordingly, the University should expand such programs as the utilization of solar energy on small farms and fertilizer production, and other similar research should be designed. In addition, the University should continue to expand its program of research in the social sciences, giving emphasis to development-related themes.

7. The Center for Educational Research must expand its research and development activities to more fully address some of the educational needs of Guatemala. The One Teacher School and the Flexible School programs developed at the Universidad de Antioquia in Columbia provide good models of the kind of applied research programs the writer recommends. These programs combine research with teaching and service in accord with the thinking of development authorities. Specifically, the Center for Educational Research should (1) develop materials and teaching methods for teaching large groups of students and teaching in rural areas and (2) explore ways nonformal education can be employed as a means of attending to a variety of community needs.

8. Wider dissemination of research results is needed. The writer recommends that this be accomplished through (1) establishing a journal in which research from the University del Valle de Guatemala as well as other universities in the region is published, (2) hosting seminars and conferences to review research conducted

at the University and elsewhere, and (3) offering instruction to the staff in methods of publishing research in journals throughout the Americas.

9. The University should continue its present service activities and explore ways to expand them. Along these lines, special attention should be given to involving students in the planning and implementation of service projects as an integral part of training for leadership in national development. As pointed out in Chapter 2, involvement in service projects can stimulate students' interest in helping others while at the same time making their classroom experience more meaningful by giving students practical experience in applying their knowledge to real life situations.

It appears from the responses to the questionnaire that many of the students are willing to take part in service activities even as a requirement for graduation. Given this predisposition of the students, the writer believes that there is reasonable ground to expect that student service programs at the University could be successful if carefully designed to integrate with teaching and research, if carefully tailored to each student's area of study and if meted out in small doses rather than in a single long period in the last year.

10. The University should explore ways to combine teaching, research, and service in a multidisciplinary approach to solving development-related problems. As an example, faculty and students of the departments of Chemistry and Agricultural Science could conduct research in ways to make low-cost fertilizers on small farms.

Members of the Faculty of Social Science could conduct social research aimed at determining ways to induce poor farmers to use the fertilizer. Members of the Faculty of Education should cooperate with the other members of the activity to devise simple methods of instruction to show farmers how to use the fertilizer technology effectively. Students from the departments of Chemistry and Agricultural Sciences would then be instructed in how to make the fertilizer and how to teach its manufacture and use to farmers. The students would spend short service periods in rural communities helping farmers prepare and apply the fertilizer. Finally, the University would publish and disseminate descriptions of the entire activity.

IMPLICATIONS FOR FURTHER STUDY

As mentioned in Chapter 3, there is a paucity of research related to universities as contributors to national development. This study was limited to matching the thinking of development authorities with the description of a single university and its environment in order to determine the appropriateness of its organization and programs for contributing to national development. The study was empirical, with no experimental attempt to prove cause and effect relationships. Out of this research have come several implications for further study, the most significant of which are listed below.

1. In order to better estimate the impact of the Universidad del Valle de Guatemala on development, it would be desirable to

conduct continuing follow-up studies on graduates of the University to determine what kinds of employment they obtain, their own interests in national growth, the leadership roles they take in national development, and their views on the appropriateness of their university preparation for contribution to national development.

2. As the writer reviewed the literature on important development programs at other universities around the world, he wondered whether the programs still existed and what their long-term effects were. Many programs which begin with much promise end shortly or have results much less effective than originally hoped. An investigation of the programs mentioned in this study would be helpful to understanding the role of universities in development. Special attention could be given to identifying those development-related elements in university programs and organization which appear to be successful and enduring and those which tend to fail.

3. There is little in the literature showing that a cause and effect relationship exists between university programs and national development. Although such research is difficult, attempts should be made to conduct controlled experiments to determine the effects of particular programs on development.

4. Studies similar to this one should be undertaken on universities dedicated to national development in order to contribute to the literature on the evaluation of universities and their relationship to development.

5. A subject of importance in development, but not addressed in this study, is the role of nonformal education in national development. There is much research which can be carried out related to the ways universities can participate in nonformal educational programs and thus extend their influence on national development.

CHAPTER 6--NOTES

¹Frank H. Bowles, "Stages of Educational Development," Higher Education and Social Change, Vol. II, op. cit., pp. 451-52.

²Akilu Habte, "Higher Education in Ethiopia in the 1970's and Beyond: A Survey of Some Issues and Responses," Education and Development Reconsidered, ed. F. Champion Ward (New York: Praeger Publishers, 1974), p. 228.

³R. Freeman Butts, "Latin American Universities and Teacher Education," Education for National Development Focus: Latin America (Washington: American Association of Colleges for Teacher Education, 1964), p. 32.

APPENDICES

APPENDIX A

INTERVIEW QUESTIONS FOR SELECTED GUATEMALAN
EDUCATIONAL LEADERS

APPENDIX A

INTERVIEW QUESTIONS FOR SELECTED GUATEMALAN EDUCATIONAL LEADERS

1. What modifications, if any, would you make in the definition of national development which I have just given you?
The process by which a nation maximizes its physical power and productive capacities, making the most of available natural and human resources, in order to increase the level of living for its people in general, not just a few, and to free the potential of its people to share in the determination of the goals of their society.
2. From your point of view, what are the major problems which Guatemala confronts in its attempt to develop?
3. What are Guatemalan universities doing to contribute to national development?
4. What more, if anything, should Guatemalan universities do to enhance their contribution to national development?
5. What role should a general studies program play, or not play, in a university which aims to prepare people capable of helping in the development of a nation?
6. Is the political activity of students on campus a help or a hindrance to the national development function of a university?
7. To what extent should students participate in university affairs?
8. To what extent should professors participate in university affairs?
9. Should elementary teachers be trained at the universities, normal schools, or both?

10. What should teachers be taught?
11. What kinds of community service functions, if any, do you recommend for a university?
12. What relationship should exist between the university and the government?
13. What do you think about the employment of part-time and visiting professors at universities?

APPENDIX B

INTERVIEW OF PROFESSORS AT THE UNIVERSIDAD
DEL VALLE DE GUATEMALA

APPENDIX B

INTERVIEW OF PROFESSORS AT THE UNIVERSIDAD

DEL VALLE DE GUATEMALA

1. What modifications, if any, would you make in the definition of national development which I have just given you?

The process by which a nation maximizes its physical power and productive capacities, making the most of available natural and human resources, in order to increase the level of living for its people in general, not just a few, and to free the potential of its people to share in the determination of the goals of their society.
2. What are the major problems which Guatemala confronts?
3. What are the aims of the Universidad del Valle de Guatemala?
4. What is the Universidad del Valle de Guatemala doing to contribute to national development?
5. What more should the Universidad del Valle de Guatemala do to increase its impact on national development?
6. How is the Universidad del Valle de Guatemala substantially different from other universities in Guatemala?
7. What role should the students play in the affairs of the Universidad del Valle de Guatemala?
8. What role should the professors play in the affairs of the Universidad del Valle de Guatemala?
9. Do you plan to continue your studies?
10. How have you attempted to improve your teaching?
11. Where else do you work?

12. What are the obstacles to working exclusively at the Universidad del Valle de Guatemala?
13. What is your view of the general studies program at the Universidad del Valle de Guatemala?
14. What role do you play in national development?
15. In what kinds of service projects should the Universidad del Valle de Guatemala engage?
16. If you teach in the Saturday program, do you think the program is appropriate to the educational needs of Guatemala?

APPENDIX C

QUESTIONNAIRE FOR STUDENTS OF THE UNIVERSIDAD
DEL VALLE DE GUATEMALA

APPENDIX C

QUESTIONNAIRE FOR STUDENTS OF THE UNIVERSIDAD

DEL VALLE DE GUATEMALA

Instructions

The purpose of this questionnaire is to gather information for a doctoral dissertation describing the Universidad del Valle de Guatemala. Because of the importance of your answers to the success of this study, you are asked to read the questions carefully and give frank answers.

You may mark more than one response to an item if necessary to give an accurate reply. If you are unable to reply to a question for any reason, make no response and proceed to the next question. Please be sure that the number of the question corresponds to the number of the response you mark.

If you have any questions, please raise your hand, and I will go to your desk to help you.

Information

1. What is your sex?
 - A. Masculine
 - B. Feminine
2. What is your age?
 - A. 51 or over
 - B. 41 - 50
 - C. 31 - 40
 - D. 22 - 30
 - E. 16 - 21
3. What is your nationality?
 - A. Guatemalan
 - B. From another country in Central America
 - C. From a country in Latin America
 - D. From a country in the Caribbean
 - E. Mexican

4. What is the average of your grades in your university work?
 - A. 91 - 100
 - B. 81 - 90
 - C. 71 - 80
 - D. 61 - 70
 - E. 51 - 60
5. Do you receive financial aid to help pay for your studies at the Universidad del Valle?
 - A. No
 - B. Partial
 - C. Complete
6. If you receive financial aid, what is the source?
 - A. Universidad del Valle de Guatemala
 - B. Colegio Americano de Guatemala
 - C. Government of your country
 - D. International institution
 - E. Private benefactor
7. In which of the following universities have you studied previously?
 - A. Universidad de San Carlos
 - B. Universidad Rafael Landívar
 - C. Universidad Mariano Gálvez
 - D. Universidad Francisco Marroquín
 - E. University in another country
8. If you studied at another university, how many courses did you complete there?
 - A. 41 or more
 - B. 31 - 40
 - C. 21 - 30
 - D. 11 - 20
 - E. 0 - 10
9. If you studied in another university, in what area(s)?
 - A. Education
 - B. Social Sciences
 - C. Science and Humanities
 - D. Professional
 - E. Other
10. What university degree(s) do you have?
 - A. Masters
 - B. Licenciatura
 - C. Bachelors
 - D. Secondary teaching
 - E. Other

11. How many courses have you completed at the Universidad del Valle de Guatemala?
 - A. 41 or more
 - B. 31 - 40
 - C. 21 - 30
 - D. 11 - 20
 - E. 0 - 10
12. In what area are you enrolled at the Universidad del Valle de Guatemala?
 - A. Education
 - B. Science and Humanities
 - C. Social Science
 - D. Medicine
 - E. General studies
13. In what program are you enrolled at the Universidad del Valle de Guatemala?
 - A. Masters
 - B. Licenciatura
 - C. Secondary teaching
 - D. Elementary teaching
 - E. Seminar, workshop or other short courses
14. Why did you choose the Universidad del Valle for your studies?
 - A. The institution is free from political pressures.
 - B. Students receive a better education.
 - C. One does not lose time here.
 - D. There is emphasis on national development.
 - E. The program I want is here.
15. Are you satisfied with your experiences at the Universidad del Valle de Guatemala?
 - A. Completely
 - B. Mostly
 - C. More or less
 - D. Not very
 - E. Not at all
16. Before studying at the Universidad del Valle de Guatemala, had you received some service or participated in some program organized by the University?
 - A. No
 - B. Yes, a course in human development
 - C. Yes, workshops or seminars
 - D. Yes, observation at The American School
 - E. Yes, POES

17. In how many years do you estimate you will finish the degree program in which you are enrolled at the Universidad del Valle de Guatemala?

- A. 7 or more
- B. 5 or 6
- C. 3 or 4
- D. 1 or 2
- E. I do not plan to finish the program at the Universidad del Valle de Guatemala.

18. Are you presently employed?

- A. No
- B. Part time
- C. Full time

19. If you are employed, in what kind of work?

- A. Education
- B. Other

IF YOU ARE EMPLOYED IN EDUCATION, PLEASE ANSWER QUESTIONS 20 TO 23

20. At what level?

- A. Pre-primary
- B. Elementary
- C. Secondary
- D. University
- E. Special education

21. In what kind of institution?

- A. Public urban school
- B. Public rural school
- C. Private urban school
- D. Private rural school
- E. Ministry of Education

22. In what kind of work?

- A. Teaching
- B. Administration
- C. Supervision
- D. Planning
- E. Research

23. If you are a secondary school teacher, in what area(s) do you teach?

- A. Commercial
- B. Technical
- C. Bachillerato
- D. Normal school
- E. Other

IF YOU ARE EMPLOYED IN SOME OTHER AREA, PLEASE ANSWER QUESTIONS 24 AND 25

24. In what area(s)?
- A. Commerce/Industry
 - B. Government
 - C. Health service
 - D. Agriculture
 - E. Other
25. In what kind(s) of work?
- A. Secretary
 - B. Accountant
 - C. Administrator
 - D. Advisor
 - E. Other

Opinions

WHAT IS YOUR OPINION ABOUT THE FOLLOWING CHARACTERISTICS OF THE UNIVERSIDAD DEL VALLE DE GUATEMALA?

26. Academic level
- A. High
 - B. Above average
 - C. Average
 - D. Below average
 - E. Low
27. Appropriateness of the curriculum for meeting your purposes
- A. Excellent
 - B. Good
 - C. Adequate
 - D. Poor
 - E. Very Poor
28. Student guidance
- A. Excellent
 - B. Good
 - C. Average
 - D. Poor
 - E. Very poor
29. Library: books
- A. Excellent
 - B. Good
 - C. Adequate
 - D. Poor
 - E. Very poor

30. Library: services

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

31. Laboratories

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

32. Classrooms

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

33. Community services

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

34. Research Institute

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

35. Teacher-training program

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

36. Supervised practice teaching

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

37. General studies program

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

38. Are you in accord with the requirement of general studies prior to a degree program?

- A. Strongly agree
- B. Agree
- C. No opinion
- D. Disagree
- E. Strongly disagree

39. Emphasis on national development

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

40. Academic freedom (atmosphere in which freedom of expression is permitted without indoctrination)

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

IN GENERAL, WHAT IS THE QUALITY OF THE PROFESSORS AT THE UNIVERSIDAD DEL VALLE DE GUATEMALA?

41. Knowledge of material

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very Poor

42. Ability to communicate what they know to the students

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

43. Ability to stimulate critical thinking on the part of the students

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

44. Ability to stimulate creativity on the part of the students

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

45. Fairness in grading

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

46. Punctuality and regularity in class attendance

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

47. Concern for national development

- A. Excellent
- B. Good
- C. Adequate
- D. Poor
- E. Very poor

IN GENERAL, WHAT IS THE QUALITY OF STUDENTS AT THE UNIVERSIDAD
DEL VALLE DE GUATEMALA?

48. Level of academic preparation

- A. Excellent
- B. Above average
- C. Average
- D. Poor
- E. Very poor

49. Seriousness

- A. Excellent
- B. Above average
- C. Average
- D. Poor
- E. Very poor

50. Punctuality and regularity in class attendance

- A. Excellent
- B. Above average
- C. Average
- D. Poor
- E. Very poor

51. Respect for others

- A. Excellent
- B. Above average
- C. Average
- D. Poor
- E. Very poor

52. Desire to help the country develop?

- A. Excellent
- B. Above average
- C. Average
- D. Poor
- E. Very poor

WHAT ARE YOUR OPINIONS CONCERNING THE ROLE OF STUDENTS AT THE
UNIVERSIDAD DEL VALLE DE GUATEMALA?

53. Students should participate in the evaluation of the
professors.

- A. Strongly agree
- B. Agree
- C. No opinion
- D. Disagree
- E. Strongly disagree

54. Students should participate in planning the curriculum and
programs.

- A. Strongly agree
- B. Agree
- C. No opinion
- D. Disagree
- E. Strongly disagree

55. Students should be required to participate in community service programs in their area of studies as a prerequisite for graduation.
- A. Strongly agree
 - B. Agree
 - C. No opinion
 - D. Disagree
 - E. Strongly disagree
56. If you agree with number 55, how long should the program be?
- A. One month of less
 - B. Two months
 - C. Three months
 - D. Four months
 - E. Five or more months
57. If you agree with number 69, what should be the student's daily schedule for such a community service program?
- A. 1 to 2 hours
 - B. 3 to 4 hours
 - C. 4 to 8 hours
 - D. 6 to 8 hours
 - E. Full time
58. As a requirement for graduation, students should take part in a research project aimed at solving a national problem.
- A. Strongly agree
 - B. Agree
 - C. No opinion
 - D. Disagree
 - E. Strongly disagree
59. Students should participate in student government.
- A. Strongly agree
 - B. Agree
 - C. No opinion
 - D. Disagree
 - E. Strongly disagree
60. In what ways should students participate in decision making at Universidad del Valle de Guatemala?
- A. Students should not participate in decision making at Universidad del Valle de Guatemala
 - B. Make suggestions to University officials.
 - C. Have a representative on the Academic Council.
 - D. Have a vote in the election of University officials.
 - E. Take part in the hiring and firing of professors.

61. Students should have the right to organize strikes on campus.

- A. Strongly agree
- B. Agree
- C. No opinion
- D. Disagree
- E. Strongly disagree

PLEASE ANSWER THE FOLLOWING QUESTIONS CONCERNING THE EMPHASIS ON NATIONAL DEVELOPMENT AT THE UNIVERSIDAD DEL VALLE DE GUATEMALA

62. How much of the instruction is aimed at teaching students how to effect change?

- A. A lot
- B. Some
- C. Little
- D. Very little
- E. None

63. How often do teachers discuss national development needs in the classroom?

- A. Constantly
- B. Frequently
- C. Occasionally
- D. Rarely
- E. Never

64. How often are class activities related to solving national problems?

- A. Constantly
- B. Frequently
- C. Occasionally
- D. Rarely
- E. Never

65. How much time would you be willing to spend on committees with other students, faculty or administration planning activities related to national development ?

- A. 8 hours per month or more
- B. 4 hours per month
- C. 2 hours per month
- D. 1 hour per month
- E. None

IN YOU PLAN TO WORK IN EDUCATION AFTER COMPLETING YOUR UNIVERSITY STUDIES, PLEASE ANSWER THE FOLLOWING QUESTIONS

66. At what level?

- A. Pre-primary
- B. Elementary
- C. Secondary
- D. University
- E. Special Education

67. In what kind of institution?

- A. Public urban school
- B. Public rural school
- C. Private urban school
- D. Private rural school
- E. Ministry of Education

68. In what kind of work?

- A. Teaching
- B. Administration
- C. Supervision
- D. Planning
- E. Research

69. If you plan to work as a secondary teacher, in what area?

- A. Commercial
- B. Technical
- C. Bachillerato
- D. Normal school
- E. Other

IF YOU PLAN TO WORK IN AN AREA OTHER THAN EDUCATION AFTER COMPLETING OF YOUR STUDIES? PLEASE ANSWER THE FOLLOWING QUESTIONS

70. In what area?

- A. Commercial/Industry
- B. Government
- C. Health services
- D. Agriculture
- E. Other

71. What kind of work?

- A. Administration
- B. Professional
- C. Planning
- D. Research
- E. Other

APPENDIX D

INTERVIEW QUESTIONS FOR TRUSTEES AND ADMINISTRATORS
AT THE UNIVERSIDAD DEL VALLE DE GUATEMALA

APPENDIX D

INTERVIEW QUESTIONS FOR TRUSTEES AND ADMINISTRATORS

AT THE UNIVERSIDAD DEL VALLE DE GUATEMALA

1. What modifications, if any, would you make in the definition of national development which I have just given you?

The process by which a nation maximizes its physical power and productive capacities, making the most of available natural and human resources, in order to increase the level of living for its people in general, not just a few, and to free the potential of its people to share in the determination of the goals of their society.

2. What are the major problems which Guatemala confronts in its attempt to develop?
3. What are the aims of the Universidad del Valle de Guatemala?
4. What is the Universidad del Valle de Guatemala doing to contribute to national development?
5. What more should the Universidad del Valle de Guatemala do to increase its impact on national development?
6. What role should the students play in the affairs of the Universidad del Valle de Guatemala?
7. What is the general quality of the students at the Universidad del Valle de Guatemala?
8. Do you think the University is developing positive attitudes in students concerning their potential role in national development?
9. What role should the professors play in the affairs of the Universidad del Valle de Guatemala?

10. What is the general quality of the professors at the Universidad del Valle de Guatemala?
11. Should the Universidad del Valle de Guatemala play a role as a social critic?

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