

**EXECUTIVE SUMMARY**  
**OF THE**  
**DOMINICAN REPUBLIC**  
**EDUCATION SECTOR ASSESSMENT**  
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## INTRODUCTION

In the late Summer of 1977, a team of educators from the Secretariat of Education began the preparation of a comprehensive analysis (diagnóstico) of the entire educational system of the Dominican Republic.

With financial support from USAID/DR, this work continued through the month of November. The Dominican group was further assisted by a series of educational consultants provided by the Academy for Educational Development and funded by AID.

These concentrated efforts resulted in a publication - in Spanish titled: Diagnóstico del Sector Educativo en la República Dominicana, a voluminous document with exhaustive sets of tables, charts and other graphic materials. The following paper is an Executive Summary - in English - of the Diagnóstico. In general, it follows the outline of the original text, but in certain cases, related materials have been consolidated from various areas in the original document.

The summary is preceded by a translation of the original preface to the Diagnóstico, an annotated version of its Table of Contents, and a list of all tables and graphics appearing in either the text or the Appendices.

## OVERVIEW AND CONCLUSIONS

The material which follows has been abstracted from various sections of the Executive Summary and from the final chapter of the Diagnóstico itself. It sets forth critical factors and trends, socio-economic, demographic and educational, which are the essence of the Spanish document and briefly discusses those priorities which the Diagnóstico treats in a greater detail.

### I. Critical Factors

#### A. Socio-economic and demographic

With a population of approximately 5 million people in a land area of 48,442 square kilometers, the Dominican Republic can be considered relatively densely populated. The population, however, is very unevenly distributed, with nearly one half living in or near its two major cities and the rest scattered over often rugged and remote rural areas.

The rural-urban dichotomy lies at the heart of Dominican problems. Almost every aspect of life can be seen to relate to it. Rural education is inferior, with lower per capita enrollments, poorer teachers, less satisfactory facilities and extraordinarily low rates of productivity. Rural incomes are lower, rural health and nutrition inferior and rural communications and transportation facilities are minimal. Only in unemployment rates do the urban areas show higher figures, and this is in large part the result of massive and continuing immigration from the countryside.

Nonetheless, by far the most significant economic sector is agriculture, which, with cattle raising occupies 61.4% of the total population. The national economy is heavily dependent on agricultural exports - chiefly coffee and sugar - yet the per capita productivity of the agricultural work force is quite low.

#### B. Educational

The formal educational system is centralized, highly structured and managed from the offices of the Secretariat of Education in Santo Domingo. With almost non-existent kindergarten (pre-primary) system, it begins with the legally obligatory primary grades, (1-6) designed for students aged 7-14. This is followed by two years of "intermediate" education (7th and 8th) which in turn are followed by a variety of secondary education programs. Choices include Normal School - for the preparation of primary school teachers - vocational/technical schools - sub-professional and technical programs - or the traditional secondary school program leading to the universities.

The actual distribution of educational opportunities in the rural areas, however, is much more limited. There are many primary schools with fewer than six grades, some with only two or three. There are very few secondary schools of any kind, although a newly launched effort to establish schools through at least the 8th grade is now under way. These schools of which there are now about 400, are at the center of a group of smaller ones and they are termed

núcleos, designed to provide guidance and leadership to the associate satellite schools and some of the "incomplete" schools mentioned above.

The standard curriculum of Dominican schools has, until recently, been very traditional and academic. The poor performances registered by contemporary students - especially in the rural areas - has prompted a series of changes in the primary schools curriculum, all designed to enhance the relevance of the student's studies to the actual life he leads. Course loads have been reduced, materials have been added which tend to relate to present day environments, and methodological changes have been introduced to increase the vitality of the classroom.

A similar effort has been launched at the secondary level, still only minimally put into practice, but designed to provide the urban secondary students with more useful and meaningful educational experiences in order better to prepare them for useful work.

Higher Education, the universities and technical institutes, are not under the authority of the Secretariat of Education, although they do receive Government financial support in the form of annual transfers from the Education budget.

A private school system co-exists at all levels with the public system. It is to a very minor extent controlled or supervised by the Government and its recent phenomenal growth is a matter of grave concern.

Educational administration is heavily concentrated in Santo Domingo, highly structured and, in general, poorly organized.

Communications, both internal and external, are sketchy and both supervision and management controls almost totally lacking. Among the most severe shortcomings are the weakness of educational planning, the nearly total lack of reliable educational data and a resulting absence of useful research on the educational problems of the country.

Educational facilities are over-crowded and, for the most part, in poor condition. They have traditionally been designed and built by agencies other than the Secretariat of Education and with minimal regard to educational needs and requirements. Maintenance has been the responsibility of the central administration, which has a generally poor record of performance. As a result, there are severe shortage of adequate school facilities, again especially in the rural areas, a condition which worsens annually in the face of an increasing school age population and generally rising percentages of these children attempting to register in the schools.

As might be predicted, these various adverse conditions have resulted in extremely low performance, with high dropout and repetition rates, much absenteeism and slow overall rates of progression through the system. This situation is particularly acute in some rural areas where, records show, it may require an average of over nine years of schooling to produce one fourth-grade finisher. Both the educational and financial implications of such data are of major concern.

The situation is still further aggravated by the currently low quality of teaching and teacher preparation. There are, for example,

rural areas where nearly 90% of all teachers are technically unqualified, in that they do not have formal teaching credentials. This results, in part, from a low level of morale among teachers, who perceive teacher personnel policies as inadequate, uneven and prejudicial to their interests. Consequently, even fully certified, normal school graduates frequently never enter the teaching profession or, if they do, they strongly resist assignment to rural areas where amenities are limited and incomes are restricted by their inability to work double shifts for increased pay, as they can in the urban areas.

The external efficiency of the school system is difficult to quantify, but certain factors can be pointed out. It is known that agricultural workers with more than a third grade education on the average are measurably more productive than those who have not completed grade three. It is also clear that manpower supply and demand indicators show shortages in many occupations which require higher levels of education, while the high unemployment figures reflect the inability of the labor market to absorb those with low levels of skill or education. Only recently has the government begun to make a close association between education and national development, but the current long range development plan does take note of it in a very positive way.

Once again, however, the actual performance records are disappointing. Although the total amounts spent for public education increased from \$19.3 million to \$45.2 million over the 1966-1976

decade, the actual percentage of the total national budget dedicated to education declined from 15% to 10%. In the face of a growing population with increasing needs for education, this is hard to explain, particularly when the national economy itself has shown strong growth over this same period, with an average annual increase of about 6%<sup>1/</sup>

II. Critical trends

A. Socio-economic and demographic

Overall population rate of growth is estimated to be approximately 3%, a high but not overwhelming figure in the Latin American area. But internal population shifts are in a way more significant, with the rural areas showing an annual net loss while the cities continue to grow. In a country where labor-intensive agriculture is vital, these figures are disturbing. At the same time, there does not seem to be any improvement in the productivity of the remaining agricultural work force, a fact which is to some extent attributable to the continuing low educational levels of the rural populace.

Another significant though quantitatively relatively small trend is the emmigration of highly trained professionals from the country. Combined with heavy immigration by poorly educated Haitians, the two trends tend still further to compound the educational and economic problems of the Republic.

B. Educational

A "reform" trend is strongly prevalent in the field of Education. The results of this activity are not yet evident and, indeed, there

<sup>1/</sup> No reliable figures on nation-wide comparable inflation rates are available but estimates for the major urban areas suggest that they are higher than the growth in the GDP.

is widespread evidence of confusion, frustration and pessimism. Nonetheless, there are a great many changes being begun, others being advocated and still others being resisted.

If one had to select a key word for one class of changes, it would be "relevance". Curriculum changes are being proposed and introduced into the schools based on this argument. It has been noted that the traditional curriculum, with its reliance on rote memory and relatively abstract concepts, has proved a poor vehicle for contemporary schools. Consequently programs are being revamped, new elements - such as practical experience - are being woven into the schools' programs and teachers are being encouraged to conduct lively and participatory classes, where the once passive student will become "involved" in the learning process.

At higher levels, a similar trend is evident, with a reformed intermediate educational program which stresses skill training, the capability to learn (as well as the acquisition of information) and more emphasis on the vocational objectives of education. Alternative programs of specialization (at the high school level) are being introduced in areas such as health, agriculture, and industrial arts and classrooms are beginning to include practical training in laboratory or workshop settings.

Recognition of the needs of the rural areas has led to another trend, that of strengthening every aspect of rural education, even at the expense of the urban areas. The chief indicator is the emphasis on the importance of the nucleos as mechanisms to accomplish this task.

Simultaneously there is a growing concern about planning, the need for it and the admittedly poor planning which has been going on. The very strengths of the trends mentioned above have underlined this need, because it has been recognized that much of what is happening is isolated, incomplete accidental and there exist no profound studies and no solid data on which to base them. Planning, therefore is in an active stage, still handicapped by poor communications and unreliable or dated information, but nonetheless of major concern.

There is a growing tendency to relate education and development in a cause-and-effect kind of way. Although this is not new, the emphasis on it is, and the evidence seems to indicate that economic factors, such as low productivity and high unemployment, can eventually be mitigated by improved education.

A final notable trend is the movement towards decentralization in education, the strengthening of the regional offices and the tendency as yet very limited - to delegate authority and assign resources to decentralized units.

### III. Critical priorities in Education

#### A. Educational planning

In this dynamic system no single element by itself will bring about the improvements which are needed. But the capacity to plan for the future comes the closest to being an absolute pre-condition for constructive change. Professionalism in the planning of programs, the determination of goals and the means of reaching them and the assignment of priorities . the utilization of always scarce

resources is absolutely necessary. The planning function implies research, and there is much that is not known about the Dominican educational system and its potential for the development of the country. Research in turn depends on data, facts, statistics, maps, documents, and on the research skills of the persons involved in it. There is scarcely a page in this Diagnóstico which does not, directly or indirectly, reflect the absence of thoroughly researched and factually supported planning.

#### B. Curriculum Revision and Implementation

It is only a little more than ten years since the Dominican Republic emerged from what can at best be called a paternalistic and traditional society into a modern representative democracy. When one considers that school systems are notoriously resistant to change, it is no wonder that the schools of the country are still strongly locked into an archaic and often meaningless curriculum, one which was originally inherited from Spain and which was designed for the relative few who were fortunate enough to be able to receive an education.

Today, demand for education is virtually universal; the population has grown and its expectations from the schools have grown even more; and the society has modernized, has moved, has changed its life styles and its concepts of the quality of life. There is therefore a serious need for a sequence of educational experiences which relate to these major changes in society, which are realistically interwoven with the actual lives of students, whether they be in the city or in the rural areas. Careful attention - based on

sound research and accurate data - needs to be paid to the relationship between content and student performance, between teaching methods and dropout and repetition rates, between learning by rote without proper texts or materials, and learning by participation with meaningful texts and relevant materials. Revision of any major element of the schools' programs will require time, training and expense, and it will necessitate constant monitoring and almost permanent up-dating. It will also require the re-education of some teachers and administrators who are themselves, after all, products of the traditional system. They will need to know more about alternative approaches, about the possible advantages of educational technology and non-formal education models, and they will have to recognize that curriculum change is not a detail in the process of education but a reflection of national goals, national needs and national pride.

### C. Teacher Training

Improved planning and curriculum revision are both activities which usually are carried out far from the classroom itself. The classroom contains teacher and students, together with varying quantities of books, materials and equipment. It is here that the proof must be shown of the validity of the planning and the effectiveness of the curriculum.

For this basic reason, teacher training is a vital link in the educational system. The teacher, as the ultimate delivery system, must know how to respond to change, how to relate life and learning, and how to maximize the benefits students receive from their educa-

tion. When radical changes are introduced, it is on the teacher that the greatest burden falls, because change by its nature is threatening and doubts or insecurity are not good ingredients of good teaching. It therefore results that every effort made to recruit, train, retrain or up-grade the classroom teacher will have a pay-off far in excess of its cost.

Included in the concept of "teacher training" are such elements as motivation, incentives, esprit de corps, dignity and self respect. These in turn involve not only a sense of professional competence but also a feeling of professional status. They imply a personnel policy which is fair and equitable, which rewards superior performance and sustained participation in the teaching ranks. It suggests orderly and predictable procedures for selection, promotion, retention, dismissal and retirement. Together with these benefits, however, teacher training must provide skills, must teach methods and must truly prepare the teacher for a rewarding and exciting vocation, one which is vital to the future of the country.

#### D. Rural primary education

Every available fact about Dominica's education points out the weaknesses in rural education and the potentially positive results which could result from improvement. Agricultural productivity remains low in part because ill educated farmers cannot adequately benefit from materials provided to them by their government. Urban unemployment is exacerbated by the arrival of poorly educated people from the rural areas. Rural population growth rates reflect the low levels of education of rural women...The list is endless.

Possibly of still greater importance is the lack of equity in a system which delivers an inferior educational product to its rural population. Social unrest, political instability and economic stagnation are all predictable outcomes of such a situation, when over 60% of the country's potential students are located in areas where they have the poorest schools, the least well-trained teachers and the fewest learning materials.

E. Administration, management and organization

The educational system of the Dominican Republic has reached the point where it can no longer be administered by non-professionals, lacking basic management tools and skills and organized in outmoded hierarchies. There are increasing numbers of technical tasks to be done, increasing numbers of people and projects to supervise and increasing numbers of students and teachers to educate, evaluate, monitor and control.

For these reasons, there must be a new approach to professionalizing the Secretariat of Education. Structure needs to follow function in logical and well communicated groupings of Secretariat personnel. Authority must be delegated and then accountability required. Personnel policies such as those now in force which have resulted in insecurity and low morale must be replaced with clear-cut rules and regulations, which must then be enforced. And specialists and technicians must be trained, before employment or on-the-job, to perform the complex jobs required by a major educational venture.

Whether these tasks can be accomplished through the establishment of a Higher Institute of Education, by the Universities in

their graduate Faculties of Education or by a special Task Force on Training within the Secretariat - or by a combination of these strategies - is not yet evident. Possibly some sound research and planning are needed to reach that answer. But no doubt exists that the efficiency of the bureaucracy must be improved.

As noted above, one part of the solution may be accelerated decentralization, with an increasing number of administrative and management functions delegated to the regional and district offices, where smaller work loads and closer familiarity with the people and projects involved could yield better results.

#### F. Educational Facilities and Equipment

There is little doubt that more schools and classrooms are needed and that still more will be required as enrollments swell and demand for education increases. Classes are already too large, averaging as high as 67 in urban schools and 55 in the rural areas. School maintenance, directed and carried out by personnel in Santo Domingo, has long been underfunded and poorly done, and large numbers of pre-1966 schools are in various stages of disrepair as a result of poor construction and poor materials.

What is less clear, however, is what kinds of schools are needed, where they are needed and what will go on in them when they are built. Once again, little research or planning has gone into this matter, very few reliable data exist about the numbers of usable classrooms and virtually nothing is known about the appropriateness of the existing plant to the new curricula:

There is obviously a need to improve school maintenance. Reason suggests that this function should be one of the first to be region-

alized, in order to avoid delays, assure emergency repairs and to relate construction and repair operations realistically to local needs and resources.

With respect to new buildings - whether they be full schools or added classrooms - the first step should be an analysis of the educational functions to be provided and some relating of that analysis with design, construction and location, areas of action in which the Secretariat of Education has been only marginally involved. Schools, like books and teachers, are educational resources, not merely spaces in which classes happen to be held. This has already become evident in the planning of the nucleos, where new and special facilities were included in order that they might more aptly serve the local community. The evidence seems to point to the needs, first, for an accurate planning effort to determine the answers to some of these questions and second to the launching of a program of building which results in functional buildings, designed for simple maintenance and flexible uses. It is premature at this time even to venture a guess as to numbers, locations or types of schools which are needed.

#### G. Educational Finance

There are few if any public school systems which have all the resources they need to accomplish their goals. The officially adopted long-range development plan of the Dominican Government, however, has formally proclaimed its belief that public education is one of its mayor missions. That being the case, it is fair to consider the possibility that increased resources might be put to good advantage

as investments in future human capital.

There exist no doubts about the needs. They have been catalogued throughout this document. Indications have also been given of the most urgent priorities where additional funding could produce the most valuable contributions to the system. For the record, however, the message conveyed in this Diagnóstico is that the Nation's educational system needs and merits stronger financial support and that increased resources would clearly result in greater economic and social benefits to its people.

Finally, it must be emphasized once again that an educational system is an integrated and interdependent organism, and that efforts to improve a system will necessarily have to take this basic fact into consideration. While more and better schools - like more and better teachers, administrators, researchers or planners - will obviously help, maximum benefits are more likely to be derived through plans of action which impact on every element of the system, even in cases where it may be impossible to meet all of its needs.

PREFACE TO THE DIAGNOSTICO DEL SECTOR EDUCATIVO  
(Translation)

This study has as its objective an analysis of the ills which for different reasons confront Dominican education. Merely by beginning to recognize what our real problems are we will be able to find better alternative and solutions to them.

This working document, which the executives and technicians of the educational system will have to refine and approve, tries to point out concrete difficulties which exist in today's education and possible solutions which, when they are seriously considered, might put an end to these evils. To define possible solutions to priority problems which the educational sector of the country seems to suffer is a task of all the official components involved in education and not just of a small group of individuals. Only thus can one guarantee the legitimacy of decisions to be taken.

Having defined the basic problems and possible paths which might lead to their solution, this study will have to serve as a reference to activities which in the future will be implemented by the Secretariat of Education, as well as by international organizations which have as a part of their purpose the financing of actions and activities in various areas of our national education.

The working group on innumerable occasions has received assistance and stimulation from individuals whom they have had an opportunity to get to know and who have become familiar with this study. Nonetheless, we feel that we must make the following statement:

In spite of a supreme effort to maintain the maximum amount of uniformity in the information used, the reader is surely going to encounter contradictions, a product of the poor system of collection and organization of data with which the Secretariat of Education has always had to contend.

This explains the reason why it is strongly recommended that a department of statistics be put into operation just as soon as possible, because the system and circumstances require it so urgently.

Other limitations on the working group during the development of this study can be summarized as follows:

- The unavailability of physical facilities which were adequate for doing the job efficiently and also of needed materials.
- The limited number of people who were responsible for the work on the part of the Secretariat during the research, editing, correction and production phases of the report.
- The inefficiency of our bureaucratic structures themselves.
- The very brief period of time allowed for getting the various sections of this job together.

These difficulties must be taken into account in reading and studying this present document. We must also make clear moreover that regardless of the amount of energy which may be expended, it is impossible to reach a point in a study which is as broad as this one where it can be said that it is finished. There will always be some disagreements, some things left out and other things remaining to be completed and to be improved. Surely, the executives and the technicians of the Secretariat of Education who read it will understand these realities and will relate their own contributions to them.

This work has been set up in eight sections. The last two are the results of the first six. Section VII tries to interpret the strategy and the politics of the Dominican Government with relationship to education. Section VIII constitutes a summary of the problems and recommendations which appear in all the prior sections.

We cannot end this introduction without expressing our thanks to AID through its director in our country, Mr. Patrick Morris, and for the very helpful assistance which has been provided in financing a part of this investigation. Thanks to his efforts a number of U.S. specialists came to this country and assisted with enthusiasm in this work. Included were Dr. John Elmendorf, an educational administrator, and Dr. Donald Swanson, a specialist in non-formal education, from the staff of the Academy for Educational Development; Dr. Murray Simon, a curriculum specialist; Dr. Philip Blair, an educational economist; Dr. James Theroux, an educational technician; Mr. Steven Bender, an educational facilities specialist; Dr. Donald Winkler, educational economist; Dr. Francisco Swett, an educational planner, all provided through the Academy for Educational Development; and Dr. Claude Boyd, curriculum specialist. In addition, Mr. Alfred Ravello, the Director of the Education Office in our country of the Agency for International Development, and Mr. Art Dolio, Miss Charlotte Jones, Mr. Ken Martin, Mr. Henry Wellhouse, and Señora Olga Menéndez, all contributed valuable assistance.

We would like also to offer our thanks to the many personnel from AID, from the Secretariat of Education and from various institutions visited during the course of this study, whose names for reasons of space, we find it impossible to include.

This working group gathered together many more documents and sources of information than are actually presented in this report. Due to space limitations, it was thought that any report larger than this one already is might have resulted in being too clumsy and almost useless for the purposes for which it was intended.

Nonetheless, we consider that with this study a new research phase should be entered into in the educational sector, with rigorous criteria, scientifically presented, going to the roots of the problems and possible alternative solutions to them. The Secretariat of Education, as the focal point of the educational system of the country, should maintain an almost permanent study of the problems which affect the sector it represents and should present the results which they find so that they may serve as guides for teachers and students interested in the development and the maturation of national education.

TABLE OF CONTENTS OF THE DIAGNOSTICO  
(Annotated)

I. The Socio-economic Context of Dominican Education.

This is a very brief chapter divided into three parts. The first part has to do with the economic performance of the country and the sectoral structure of the gross national product. It also touches on the distribution of income in the country. The second section has to do with the participation in economic activity and with distribution of occupations by both age and sex. And the third section is a discussion of the general demography of the country and the rates of participation in the educational system. It includes special distribution factors by geographic regions, age and sex, the age structure of the population, the educational profile of the population, and rates of participation in the formal educational system.

II. The Structure of the Formal Education System.

This section begins with a general discussion of administrative aspects of the formal system, including the general responsibilities of the Secretariat of Education. It goes on to discuss the legal base on which the educational system is founded and then describes the specific functions which are carried out by the various offices in the Secretariat of Education. This section also includes a table of organization of the Secretariat as it was in 1977 and it discusses some of the changes which have been proposed and which are in fact underway. The section continues with a more detailed discussion of the organizational structure of the formal system, dividing it into two subsections, one relating to the central administration in Santo Domingo and the other to

the regional organization which is only just being put into effect in an effort by the government to decentralize some of the organizational functions of the Secretariat. There follows a rather lengthy discussion of administrative reforms which have been undertaken both in the central administration and in the regional organization of the Secretariat. This chapter then continues to discuss seven major problems which affect the educational system of the country. They are as follow:

1. The relationship of the National Council of Education to the system itself.
2. Private education and its relationship to the public system.
3. Internal and external communications within the educational system.
4. Statistical information and data gathering, analysis and evaluation.
5. The lack of continuity and the existence of arbitrary decision-making within the Ministry.
6. Personnel policies with respect to professionals in education.
7. The overall organizational climate and esprit de corps of the personnel in the Ministry.

The section concludes with a summary of the problems and some suggestions for their solution.

III. Pedagogical Aspects, Curriculum, Programs of Study and the Preparation of Teaching Personnel.

The section begins with a discussion of the role and importance of the curriculum in educational development. It then proceeds with a discussion of the elements of a curriculum in general and the principles which govern curriculum design in the Dominican Republic in particular. Part B of this section is a general analysis of the present curriculum in the

Dominican Republic. It is divided into seven subsections, as follows:

1. Some general remarks on educational quality and its importance to the system.
2. A discussion of the content, scope and sequence of studies in educational programs now in existence.
3. Curriculum planning and evaluation with some discussion of the implementation of the curriculum and how it is carried out.
4. A detailed discussion of the way the curriculum is implemented.
5. A discussion of the general question, "Education for What?". That is to say, what is the utility of the curriculum now being used?
6. Other considerations in education, particularly the answers to the question "Why?". The purpose and aims of education and whether or not they are truly reflected in the curriculum.
7. On the general subject of the training, preparation, and in-service training of teachers.

The next section is a discussion of what are considered priority problems in the curriculum for the public primary schools, pre-primary schools, and for special education. This is followed by another subsection which includes recommendations for the solution of these priority problems.

Section E (the next section) treats the same questions of priority but with relationship to the curriculum at the intermediate and secondary level. It is also followed by recommendations for the solution of those priority problems. This same process is repeated again in subsections G and H with relation to the education of adults, which includes

the first discussion in the text of non-formal education. The section concludes with general recommendations on the curriculum and rather detailed definitions of the terminology used in this section.

#### IV. Planning of the Physical Plant.

This chapter begins with an overall profile of the educational facilities available in the country including their distribution throughout the various regions.

This part of the report also includes some discussion of the accessibility of educational installations to the populace and a section on the planning of the physical plant and the new types of learning centers which are called nucleos.

The second part of this section is a discussion of the physical condition of the schools now in existence, looked at from both the historical perspective, from a point of view of maintenance and repair, and with respect to the equipment which is available in the school.

Part C of this section is a more detailed discussion of primary schools, the way they are constructed and the existing demand for schools by students in the first years of primary school. It concludes with a discussion of whether or not there are really too many or too few classrooms. Part D is a discussion of the overall problems which relate to physical facilities, and the final portion of the section is dedicated to some recommendations for change and improvement.

#### V. Economic Aspects: Finances, Cost, and Efficiency of the Formal Educational System.

This section begins with a discussion of the financing of the formal educational system, including an analysis of the relationship between the

percentage of investment in the educational sector as a factor of the total amount of expenses of the government. It is followed by a discussion of the budget.

The second part of this section has to do with the level and the distribution of the costs of education, including the unit cost for each level and the cost for private citizens and users of the educational system apart from that portion which is born directly by the government. Part C of this section includes some considerations of equity and internal efficiency. There is a considerable treatment of the question of equality of opportunity and access and, with respect to internal efficiency, there are detailed analyses of the flows of students through the system. The section concludes with a summary of the conclusions and recommendations with respect to the economic aspects of education.

#### VI. Adult Education, Non-Formal Education and the Use of Educational Technology.

The chapter begins with a discussion of adult education and some treatment of the various forms of non-school education which are being attempted in the Dominican Republic, including an extensive list of programs and organizations. It goes on in Part B to a specific discussion of non-formal education with some characteristics of various educational activities which are being carried on in the Dominican Republic, an analysis of their impact and conclusions and recommendations with respect to non-formal education. Part C is specifically focused on the use of educational technology. It includes a general presentation and some definitions in this area, and continues with a discussion of the national resources available in education technology and some analysis of the

utilization to which those resources are being put. It continues with a discussion of some of the possibilities which exist for applications of educational technology beyond the levels that they have now reached, and concludes with a resumé of overall conclusions and recommendations.

#### VII. Education and Development in the Dominican Republic: Principles and Reality.

This section begins with a discussion of the development strategy of the Dominican Republic, its overall objectives and the objectives as they relate to education. It discusses the general development objectives of the country, the steps in planning which are being taken and the relationship, once again in more detail, of education as an element in the overall development plan. The second part of this section is an analysis of the present educational realities in the Dominican Republic. It goes into some detail with respect to the external efficiency of the educational system and its apparent performance and continues to trace some policy developments which are pertinent to improvements of the external efficiency in the educational system.

#### VIII. Conclusions: Directions for An Educational Strategy

Section VIII, the final section of the report, is essentially a summary of the conclusions and recommendations and general policies presented during the course of the report. It is divided into three subsections. The first of these is on the formal system of education. It returns to the frame of reference introduced during the discussion of the reform of primary education and proceeds to outline the individual steps which have been taken and which still need to be taken in implementing the nucleos, in reforming the administration and educational planning

capacity and the legal base for education, in improving the student flow through the formal system and in making adjustments, changes and improvements in the preparation and in-service training of teaching personnel. There follows a recapitulation of the discussion of the qualitative aspects in Dominican education and its delivery systems, including the educational physical plant and its maintenance and planning. Finally, it goes into the matter of administration and educational planning with special reference to educational finance. There is a further subsection on education beyond the primary level. The second major part of Section VIII has to do with the para-educational system (education of adults) in the general category we would call non-formal education. The entire report concludes with one more restatement of the major problems as viewed in this report. These are considered to be as follows:

1. The preparation of teachers.
2. Organization and restructuring of the educational system.
3. Materials and equipment.
4. Construction and the equipping of schools.
5. The curriculum itself.

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## EXECUTIVE SUMMARY

## SECTION I

## GENERAL SOCIO-ECONOMIC CONTEXT

A. Geographic and Political

The Dominican Republic is located on the eastern half on the island of Hispaniola in the West Indies. With a population of approximately 5 million and a land area of 48,442 square kilometers, it is relatively intensely populated, although nearly one-half of the population lives in or close to one of the other of its two main cities: Santo Domingo, the capital, located on the southern coast, and Santiago, in the northwest plateau. The language of the country is Spanish. French-speaking Haiti, with approximately the same population in a smaller land area, occupies the western portion of the island.

The topography of the country is varied, ranging from low-lying and fertile lands along the coast to rugged mountain areas in the south and west, often so mountainous as to make productive agriculture difficult and to create serious problems of communications and access to urban amenities, including schools.

The climate is mild, with adequate rainfall during an annual summer rainy season in most of the country. Consequently, a wide variety of crops can be grown, both for home consumption and for export. Sugar and coffee are major export crops. There are also minerals, chiefly bauxite and nickel, in commercially feasible quantity and quality. Finally, the excellent climate, beaches and other recreational facilities, combined with easy access by air or sea from the United States, have facilitated

the development of a major tourist industry, still in an active growth phase.

The Dominican Republic is a democracy with active political participation at all levels of society. The government is, however, highly centralized, with major political power vested in an elected President and his cabinet. Regional government is in the hands of the governors of the 27 provinces, by far the majority of whom are currently women.

#### B. Demographic

The people of the Dominican Republic are descended from the original Spanish settlers of the 15th and 16th centuries, intermixed with the aboriginal (Quisqueyan) inhabitants and with African slaves brought in to work the early plantations. Consequently, there is a great deal of ethnic variety. No single racial group dominates the society, although immigrants from Europe and their descendants tend to form a somewhat privileged upper class.

The 1970 Census classified nearly 40 percent of the population as "urban" and the migration to the cities and towns is still underway, suggesting that possibly as many as half the population may now be so characterized. As a percentage of total population, urban population has increased from less than 25 percent in 1950 to nearly 50 percent today, a factor which has had broad repercussions in the economic, social and educational sectors. Slightly over 50 percent of the inhabitants are women and 75 percent are under the age of 15, resulting in an exceptionally high dependency ratio, currently estimated to be approximately 1.8 when adjusted for female labor participation. This means, in effect that everyone who works contributes on the average to the maintenance of three persons.

The educational level of the population varies greatly according to both age and area of residence. The older population, in general has less formal education than the younger members and the urban populace, particularly those born in the past 20 years, have had more schooling than the rural. This fact is dramatically underscored by noting literacy rates, which show that over 80 percent of the urban population is literate, contrasted with approximately 55 percent of the rural population. Female literacy is almost the same as for males in the urban areas, and is actually slightly higher in the rural areas.

### C. Economic

Since 1963 the economy of the Dominican Republic has demonstrated a healthy growth, with the exception of two brief periods of political unrest -1965 and 1968- followed, however, by strong and immediate economic upswing. The general strength of the economy can be seen in the growth rates of the GDP over the 12-year period from 1963 to 1975, which indicate an average annual increase of 6.5 percent until 1974, even including the two years of decrease (one of them of 13.9 percent) accompanying civil unrest. Since 1974, as a result of the dramatic increase in oil prices and other international market factors, the increase has been slower, but it is still averaging very close to 6 percent.

Income distribution is extremely uneven. In 1973, the last year in which these figures were analyzed, the poorest 50 percent of the population received 12.8 percent of all income, while the wealthiest 6.2 percent received 43 percent of total income. There is some evidence that this disequilibrium has continued and may even be worsening, as a result of inflation and general slowdown of the economy, which both tend to affect

the least affluent sectors proportionally more than the wealthy. In the rural areas, the pattern is somewhat less extreme, although even there 8 percent of the population earns 21 percent of the income, while the poorest 64 percent earns only 44 percent of total rural income.

By far the largest economic sector is agriculture which comprises 55.5 percent of the work force. The labor-intensive nature of Dominican agriculture can be seen clearly when it is contrasted, for example, with either mining or the service industry, where less than 1,000 persons employed in mining in 1970 produced goods valued at \$18.1 million pesos (1962 prices) while over half a million farmers produced only \$301.2 million. Similarly, the nearly 300,000 workers in the service industries accounted for over \$533 million in productivity.

By 1974, there were 1,202,500 persons considered to be economically active in the Dominican Republic, of whom 61.4 percent were engaged in either agriculture or cattle-raising. The figures, however, are distorted by the presence of a substantial percentage of agricultural workers whose activities are essentially dedicated to subsistence farming, with little or no impact on the GDP. Per capita agricultural productivity actually declined during the 1960-1976 period, while overall national per capita productivity rose by a solid percent. Furthermore, the rural areas, with approximately 70 percent of the total economically active population, had an overall rate of increase in productivity of only 2 percent, while the urban sector's productivity grew at 5.5 percent.

Unemployment-and to an even greater degree underemployment-has long been a problem. A 1973 study by the ILO indicated a 20 percent unemployment rate in the city of Santo Domingo, with 15 percent of males

unemployed and 30 percent of females. It was also reported that 60 percent of all workers in the capital city were underemployed, as contrasted with 40 percent in the rural areas. The high rates of in-migration to the city account for some of these phenomena, and more recently the economy has begun to absorb higher percentages for these new urban dwellers. Nonetheless, unemployment and underemployment remain high and the overall population growth rate of 3.12 percent, combined with a slightly contracting economy, suggests that they will continue to be problems in the foreseeable future.

## SECTION II

## THE FORMAL EDUCATIONAL SYSTEM

A. Administration

The formal educational system of the Dominican Republic has traditionally been a highly centralized national system, with most decision-making vested in personnel of the Secretariat of Education in Santo Domingo. Overall responsibility for the system is in the hands of an appointed Cabinet official, the Secretary of Education, Fine Arts and Worship (SEEBAC). He in turn delegates some of his responsibilities to Sub-secretaries and General Directors of the discrete operating offices of the Secretariat, whose officers perform the day-by-day tasks appropriate to their functions. However, the traditional and still prevalent way of assigning responsibility is highly personalized, jobs being delegated to individuals rather than to departments or other administrative units. This accounts for the fact that about 40 individuals report directly to the Secretary, even though, in many cases, they are theoretically officials of an administrative unit with its own chief executive.

The entire educational system has its legal base in a statute called the Organic Law of Education, enacted in 1951 and amended, supplemented or revised by a bewildering and often inconsistent series of subsequent legislation. It remains, however, the basic law, but there is considerable pressure for the design and enactment of a new legal instrument more in keeping with current realities.

The Secretariat has its main offices in Santo Domingo, where most decisions are made and where the bulk of the staff are employed. In the past few years there has been serious consideration of a decentralization

process, which would transfer some of these activities to the various Regional offices. These now number 13 and, tentatively, it is thought that they may be reduced to only 7. The Regions have not in fact had much power, particularly because they have not been funded to a level where they could commit resources to accomplish regional goals. Each regional Director, however, does have technical consultants in various areas of Education, and he (or she) is directly responsible to the Secretary of Education and thereby has a channel to the top decision-making level.

A curious feature of the administrative structure of the educational system is the existence of a body called the National Council of Education. This Council, which is presided over by the Secretary of Education, includes the Rectors of the Universities, high officials of the Secretariat designated by the Secretary, and a few selected staff members and/or public school teachers. It appears that the Council was originally intended to be a consultative group, one which could advise the Secretary on matters which related to individual members' areas of specialization, but in fact it has assumed an executive and policy-making role, to the extent that it can actually thwart plans or decisions made by the Secretary or members of his staff. It is widely felt that this conflict of authority is detrimental to the efficient functioning of the Secretariat.

#### B. The Public School System

Dominican public education comprises four levels: pre-primary (ages 5-7)<sup>1/</sup>, primary (7-13), intermediate (14-16) and secondary (17-19).

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<sup>1/</sup> Ages given are the "normal" expected age-in-grade. In practice, these figures vary greatly, with many students well above the norms and a very few below them.

The strongest priority in the Dominican Republic is on primary school education, grades one through six. Schooling through the primary grades is by law obligatory and free, although it is well recognized that many primary-school-age children do not attend school.

Public pre-primary schools are still in the evolving stage and there are very few of them, most of which are in the urban areas.<sup>2/</sup> Future planning calls for the gradual introduction of kindergarten as a "regular" part of the system, but financial and personnel constraints have so far limited that development.

Primary schools exist in both urban and rural areas, the latter frequently being limited to less than the full six-year program. In some parts of the country opportunities exist for those who attend "incomplete" schools to continue their studies in the complete satellite schools associated with larger central schools termed nucleos. One of the principal objectives of the educational leaders is to raise all primary schools to include at least the first four grades, the educational level which is considered adequate to ensure at least minimal permanent literacy.

At the intermediate level, there is a great diversity of programs, particularly following the 7th and 8th grades of basic studies. Perhaps highest in prestige is the traditional pre-university program (secondary school); alongside this program is the reformed secondary track, a four-year program (9th-12th grades) designed to be terminal<sup>1/</sup> and embracing a variety of specialities. There are also technical and professional

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<sup>2/</sup> The private sector does offer various kinds of pre-primary programs, mostly in the cities, but total attendance is still minimal.

<sup>1/</sup> It is possible for graduates of the reformed program to enter the universities, but this is not their primary goal.

schools which are also terminal programs but which are focused directly on the acquisition of skills of value in the labor market. Finally, there are the teacher-training institutions (normal schools), which prepare teachers for the primary system. All but the last of these are under the direction of the General Directorate of Intermediate Education. The normal schools are under a special Teacher-Training Directorate. There are very few intermediate-level schools in the rural areas, although they are beginning to be established in association with the nucleos, often with only the first three years of the six-year program available to students.

Higher education, both academic and technical, is offered in universities and institutes which are not in any way related to the Secretariat of Education. Most are autonomous, even though they receive financial support from the government. Their degree programs vary in length from four to seven years and the range of academic and scientific disciplines offered is quite broad.

### C. Curriculum

In general terms the curriculum of a given school or school system at a given level is a reflection of the economic, social, cultural and moral values of the society. In many countries, traditional curricula evolve and then become resistant to change. To some extent, this is true in the Dominican Republic, where long-accepted content and methods still persist, despite major changes in society itself. When, for example, one asks the questions: Education for what? or Education for whom?, the answers should be pertinent to the kinds of goals the society has

established and wishes to retain through a program of teaching/learning which is consonant with those answers.

During the past seven or eight years, the educators in the Dominican Republic have introduced various changes into the public school system, at various levels and in both rural and urban areas. They have recently stated as guidelines for these and future changes, the following principles:

- The establishment of an educational philosophy which is consistent with the goals and expectations of the country.

- Planning an educational program which is flexible enough to meet the diverse needs of the country and then providing the funds necessary of its implementation.

- Recognition of the fact that the costs of education are in fact investments, not merely expenses, and faith that their small country does have the capability to make those investments and reap the eventual rewards.

- The introduction of an improved system of incentives for both students and teachers as a means of raising their commitment to learning.

- The establishment of an adequate evaluation process which is both formative and summative in order better to measure the effectiveness of the system.

- The establishment of permanent and continuous training programs for teaching and administrative personnel as a means to upgrade and professionalize the academic community.

- Development of improved communications between the bureaucracy and the rest of the system, especially in the more remote rural areas

and small towns.

Many of these principles are being given increased attention by the educational authorities, who have themselves recognized some of the anomalies which have plagued the system: an increasingly wide gap between the realities of Dominican life and the way children are taught; the coexistence of double (or even quadruple) systems of teaching/learning in the post-primary years; the absence of a clear definition of the goals and objectives of intermediate education; the lack of financial support for in-service teacher training in the face of enormous need for more and better trained teachers; and the scarcity (or non-existence) of textbooks, teaching materials and school equipment. All of these factors impinge upon the quality of education, and they have prompted increased concern about ways in which they can be improved, including the assembling of the list of quality indicators which follows.

- Well trained teachers
- Adequate supplies of teaching materials and good textbooks
- Attractively decorated and maintained classrooms
- An adequate basic library
- A low rate of repetition
- An increase in the overall graduation rate
- In-service training courses for teachers
- School visits and constructive supervision
- A heightened interest in student growth and development

As one step towards achieving some of these goals, a new primary curriculum is gradually replacing the traditional one, which consisted

of five subjects every day as follows:

Spanish language  
Mathematics

Social Studies  
Natural Sciences

Art

Each subject was offered five days a week for an hour, resulting in a 25 hour program. Under the new curriculum, already in effect in the first and second grades and being introduced each year to successively higher grades, the total load is reduced to 20 <sup>1/</sup> hours per week and includes the following subjects:

Language and communication  
Mathematics  
Social Studies

Nature and its manifestations  
Manual and expressive arts  
Physical education

Increased emphasis (7 hours per week) is given to language studies, mathematics remains at 5 hours weekly, and the balance of the subjects are reduced to 1-1/2, 2 or 3 hours per week. The concept is that of finding a balance between capability and mere familiarity or experiential learning. Literacy and numeracy are believed to be the basic skills required by modern Dominican society, so they are emphasized.

The post-primary curricula are in a real state of flux, with some continuing the traditional (and to some extent elitist) emphasis on academic subject matter. Others are more oriented toward manual arts and skill acquisitions for vocational purposes, while still others are technological and/or scientific in their design. Active and intense discussions are continuing and a probable outcome will be some combination which will still allow preparation for the university but will also have prevocational content sufficient to prepare non-university candidates for useful and productive roles in society.

1/ This decrease in the length of the school day has made it easier to schedule double sessions (morning and afternoon) in the already overcrowded urban schools.

There are six normal schools in the Dominican Republic. In general, they are entered after the completion of the first three years of intermediate school and their programs are two (or sometimes three) more years in duration. Subject matter is fairly traditional and as yet varies little from school to school, although some efforts have been made to adapt the programs designed to prepare rural teachers so that they may be more relevant to rural students. In 1975-76, there were 623 graduates from these six normal schools.

In addition to the normal school, the Secretariat organizes and manages a number of in-service training programs for teachers. At present, more than one-half of all primary teachers do not have formal and permanent teaching certificates and, although they are actually teaching in the classrooms, they need further instruction. Consequently, it is made available to them in various ways. There are summer vacation programs, short seminars on weekends and at other convenient times, and recently a plan was made to carry out a massive program using radio, correspondence school techniques and a variety of other media to reach an estimated 24,873 teachers between 1977 and 1981. Special attention is to be given to preparing these teachers for the new (reform) primary curriculum. There have been some delays both in the implementation and in the financing of this project, which presents a great many logistic problems, but with the broad support it enjoys, it will very probably be carried out.

A special training need has been posed by the introduction of the nucleos and regionalization process. At least one training course has already been held (in July-August 1977) and others are planned, with

the objective of familiarizing the Directors of the nucleos with both their academic and their administrative responsibilities. There were 126 Directors in attendance, with instruction provided by a group of Venezuelan educators who have had long experience in this type of rural educational development.

It should be noted that the preparation of teachers for all types of post-primary education is carried out by the universities and institutes, with little or no liaison with the Secretariat of Education. The separation of these functions--teacher preparation and actual teaching has provoked a number of problems and efforts continue to create mechanisms for coordination and improved cooperation.

The many curricular, philosophical and operational problems at the various levels of instruction can be best summarized in a tabular form which also includes suggestions or recommendations for changes designed to solve or ameliorate these problems. The tables which follow, therefore, provide brief statements of the problems at the pre-primary/primary level, at the intermediate level, and at the adult education level, together with some general academic problems not limited to any particular grade level.

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**Problem**

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1. The need for a clear definition and understanding of the fundamental aims of Dominican education.
2. The need for alternative solutions to educational processes, capable of being broadly disseminated and effectively implemented.
3. The few and constantly delayed or thwarted changes which can be introduced as a result of insufficient financing, poorly trained and motivated personnel, limited vision, poor communications, etc.
4. A lack of a consistent and rational evaluation process.
5. A crippling shortage (or lack) of adequate teaching materials, texts, equipment and supplies.
6. Failure of the bureaucracy to respect or to implement educational programs which have in fact been officially adopted and approved.
7. Total absence of any system of incentives or awards for outstanding performance and commitment to education.
8. Lack of an effective system of program and progress evaluation, including promotion and graduation criteria.
9. Educational results which are not up to the standards which should prevail.
10. Schools and classrooms which are not conducive to learning/teaching, particularly because students of very different ages must all use the same facilities.
11. School calendars which do not reflect the actual work rhythms of the society.
12. Inadequate provisions for pre-primary education.
13. Insufficient attention to special education.
14. Severe shortcomings in handling over-age non-school attenders, particularly in the urban areas.

PRE-PRIMARYRecommendation

1. Further study, discussion and articulation of goals and an eventual agreement on them which can be put into operation.
2. Improved planning, designed to maximize the use of limited human and material resources.
3. The creation of a permanent Institute of Education, a training and research center where all kinds and levels of educational personnel could receive training, both in-service and pre-service, and where a unified educational policy could be designed, taught and implemented.
4. Strengthen evaluation services and programs and establish firm performance criteria for all levels of activity.
5. Provide sufficient funding to remedy these shortages.
6. Create a communications system, reaching all levels and using all media to enhance awareness of these problems and thus bring pressure on those responsible for action.
7. Institute some form of merit system and abolish the practice of paying secondary-school teachers higher salaries unless they actually have better preparation and experience.
8. Formalize standards and make them known throughout the system; then, enforce them by appropriate testing and supervision.
9. Implement the above suggestions. Also, take better advantage of the services offered by the school nutrition office.
10. Improve school building planning so as to produce functional and multi-purpose facilities adaptable to a variety of uses.
11. Create alternative calendars--such as those used in the coffee producing areas--adjusted to the prevailing work patterns
12. Improve teacher preparation and clarify the goals of pre-school education; then, make increased financial commitments to this level.
13. As above (12)
14. The establishment of "special centers" where drop-outs could be counselled and given an opportunity to re-enter the system and complete their basic education without penalties or prejudice.

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**Problems**

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1. Low quality of both learning and teaching, especially in the evening school programs.
2. Overemphasis on university preparation, at the expense of "practical" education, despite the overwhelming proportions of graduates who never go on to higher education.
3. Lack of evaluation standards which are consistent and equitable.
4. Obsolete and irrelevant programs of study.
5. Both pre-service and in-service training of teachers is of poor quality. The same is true of administrators, school directors and technical personnel.
6. There is no clear definition of the role and function of the first three years of post-primary education.
7. There is a shortage of equipment, materials and textbooks in every school in the country.
8. There are no effective operational mechanisms for actually putting into practice programs which are agreed upon. This includes planning, organization, coordination, execution and evaluation.
9. There is inadequate supervision at this level.
10. The co-existence of both traditional and reformed tracks is confusing and unfair to students.
11. Greater attention needs to be paid to vocational/technical education. There are currently few facilities shops, equipment and trained teaching and administrative personnel.
12. Normal school programs have not yet revised their programs to include the new primary curriculum, nor are placement policies or incentives for normal school graduates well established.

## MEDIATE

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Recommendations

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1. An in-depth comprehensive study of this level of education is badly needed. It should be carried out by thoroughly qualified educators, assisted by special consultants. Teacher training should be a priority item.
2. Increase the options available to students.
3. Set up a single system of student evaluation and maintain it.
4. Modernize the curriculum and set up a system of continuing revision so that it will remain current and appropriate.
5. An educational institute (Academy) should be created to provide all types of training, with first priority assigned to the improvement of classroom teaching.
6. As in No. 1 (above) a comprehensive study of this problem should be undertaken, adequately funded and carried out by competent educators.
7. Increase the budgetary allocations for these items, including funds for their distribution and maintenance. This is urgent and should become a permanent policy, not a one-time effort.
8. Introduce in the Curriculum Department a section specifically dedicated to improving and monitoring these operational aspects.
9. A special training program for supervisors is needed, backed up by appropriations sufficient to allow them to perform their work.
10. Set up a single system having sufficient flexibility to accommodate both the academically inclined and those who cannot, or do not wish to, continue their studies beyond this level.
11. The manual training component of the reformed primary school curriculum should be strengthened, followed by the establishment of additional vocational schools to provide more students with that educational option.
12. The curriculum should be revised immediately. Transportation for practice teachers should be provided, so that they can effectively learn "teaching-by-doing". An efficient placement service should be set up to assure quicker and more appropriate assignment to teaching jobs in the public school system.

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**Problems**

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1. Current adult education programs are not really designed for older persons who lack basic preparation.
  
2. Only a small fraction of those whose lives would be improved by further education are able to be accommodated by existing programs.
  
3. Class schedules for adults are varied and confusing, thereby cutting down on attendance and performance.
  
4. There is a shortage of teachers trained to work with adults effectively.
  
5. There is discrimination in salary levels of those who teach adults rather than children.
  
6. There are no standards established for the evaluation of adult education.

1/ Adult and non-formal education are

Recommendations

1. A working group, including some experienced adult education specialists, needs to be established to design appropriate educational programs for adults in accord with their needs and abilities. Their task should include consideration of the best methodologies and media.
2. The proven success of the agricultural centers for adult men and the rural women's training centers clearly demonstrates the need for a much larger network of similar adult education facilities to permit greater numbers of Dominicans to reach educational levels which will increase their contributions to national development.
3. Standardization of class schedules and duration should be introduced in all adult education programs.
4. The Secretariat should establish special training programs for teachers in adult education. It is also possible that the universities could introduce courses in this field, thus adding their contribution to a pressing national problem.
5. Salary levels should be adjusted to correspond to those of "regular" teachers with the same academic preparation, experience and performance records.
6. The working group proposed above (No. 1) should also concern itself with this problem. It is unrealistic to evaluate adult learning with the same instruments used for children, since both prior experience and the future needs of adult learners are so completely different from those of school-age youngsters.

treated more fully in Section V.

**COMPREHENSIVE CURRICULAR AND PROGRAMMATIC RECOMMENDATIONS**

1. The need for a clear-cut philosophy and theory of education is an overriding priority.
2. Educational technology, especially in relationship to the out-of-school learner, must be better understood and more effectively used. This requires technical training of personnel at all levels.
3. It is time to introduce modern methods of teaching and learning, including such concepts as those of student's active participation--rather than passive receptivity--in classroom procedures, internships and practical training programs, with a view to encouraging the development of the capacity to learn rather than simply accumulate information.
4. The government and the public must be taught to regard education as an investment, not merely an expense.
5. Student counselling--both educational and vocational--should be given greater emphasis and larger numbers of counsellors should be trained and assigned to work in the schools.
6. Educational research on almost every facet of learning, teaching and administering is sorely needed. Greater resources should be made available for this purpose as well as for the application of the results.
7. Teacher training and upgrading--at all levels--need strengthening and support. It is no longer tolerable to make use of untrained teaching personnel, and every strategy possible, including improved salaries and other incentives, should be used to create and maintain a professionally competent teaching staff.
8. The planning, design, location and construction of school buildings must be more closely linked to the Secretariat of Education and to the educators and curriculum planners responsible for their operation. At the very least, continuous consultation should be introduced to coordinate pedagogical goals and processes with those responsible for school building in the Office of the Presidency.
9. School, classroom and program supervision is inadequate and must be strengthened by the addition of a corps of supervisors, specially trained for such responsibilities.
10. Academic record-keeping of all kinds must be more strictly controlled and standardized by the establishment of systematic data collection, analysis and dissemination, so that accurate and timely information can at all times be available to Directors of schools, Secretariat officials and others concerned with the planning and financing of Dominican education.

## SECTION III

### PLANNING THE PHYSICAL PLANT

#### A. Overview of school population and educational coverage

In 1975 just over 500,000 students were enrolled in rural schools, out of a total rural population of 2,568,232, which in turn represented approximately 55% of the total national population. Of these enrolled students, 92% were between the ages of 7 and 14 (the age for obligatory primary education). A maximum of 8%, therefore, could have been enrolled in post-primary schools.

In that same year, there were 4,155 public primary schools in the rural areas, an average of 1.6 schools for every 1,000 inhabitants, and an average of 127 students per school. Since there were only 9,102 classrooms in these schools, average class size was 55.

In the urban areas, there were 7,635 classrooms in 1,221 schools, with an average class size of 67 students.

These figures mean that there was an average of one rural school for each 12 Km<sup>2</sup>, but there was also great variation in school density since some parts of the country - notably the northern areas - were far more densely covered than were the southern and southwestern rural areas.

As for teachers, approximately 7,770 primary school teachers were employed in the rural schools, giving an average of 1.9 teachers per school and 64.5 students per teacher.

In general, therefore, it can be said that the school population has reasonable access to some kind of educational facility, though distances and travelling conditions in remote rural and mountain areas are by no means ideal. Current planning relating to the further expansion of the nucleos

will tend to improve the access situation, while raising the grade levels available to rural students.

#### B. School Facilities

It is one thing to count schools and classrooms. It is quite another matter to assess their condition, their suitability for the purposes to which they are being put, and their probable "life expectancy". School maintenance has been notoriously poor in the Dominican Republic, even though no reliable inventory of facilities (qualitative as well as quantitative) is available. In general, it can be noted that facilities built since 1966 - only 13% of all schools and 21% of all classrooms - are in reasonably good condition and, as a result of the use of good materials and construction, they can be maintained relatively easily and inexpensively.

Most of the rest - 77% of the schools and 69% of the classrooms - are considered to be in need of major repairs or outright replacement. Furthermore, due to inferior materials and construction standards, they are difficult and expensive to maintain.

In addition to the above facilities, another 10% are either rented or in such poor repair that they are virtually unusable. All of this, in the face of rapidly increasing enrollments.

Appropriations for school maintenance and repair are minimal, averaging \$133.00 per year for each school actually required. Procedures for obtaining funds - even for emergency repairs - are highly centralized, complex and time-consuming. No records are kept of school repair, nor are periodic inspections or inventories of maintenance or repair needs systematically undertaken. Technical personnel, even carpenters, painters and electricians are employed by the Secretariat in Santo Domingo. As a result, much of the

small amount of repair or maintenance which is done must be contracted out to local workmen with minimal control and supervision.

With respect to building materials and equipment, they are limited to desks, benches and blackboards, supplemented occasionally by storage cupboards or bookcases provided by members of the community. As in the case of the schools themselves, these items are provided through the Office of the Presidency, not the Secretariat of Education.

The planning, locating and construction of primary schools, especially rural schools, is to a large extent accomplished with minimal reference to the Secretariat of Education. The larger, more modern and multi-level (often through grade 8) schools are usually designed, located and built by the Technical Office of the Presidency, while smaller, less expensive and lower-level schools are provided by an independent agency, the Office of Community Development. In neither case does the Secretariat control design, appropriateness to the pedagogical goals, exact location or construction standards. Obviously, this lack of control is a serious constraint on change and innovation, since classroom design tends to restrict the flexibility of school programs.

There is something of a paradox in the relationship between the need for classrooms and the financial steps required to meet them. Estimates based on admittedly unreliable data suggest that a substantial (but not overwhelming) increase in repair, maintenance and replacement budgets would in fact come very close to meeting classroom requirements. On the other hand, if these classrooms (or schools) considered already "lost" to the system are simply abandoned and if maintenance and repair budgets stay at their present low levels, school building requirements will indeed be costly. From 1973 to 1977, for example, it was estimated that 71,700 new students

would enter the rural schools system alone, resulting in an aggregate need for 3,118 new (or replacement) schoolrooms under the present policies for maintenance and repair. This represents a minimum capital investment of nearly \$10 million (using OCD techniques) and a maximum of over \$30 million, using the higher standards of the Technical Office of the Presidency. Relatively modest sums--but still major increases over present allocations - spent on maintenance and repair, would over time greatly reduce these capital investment requirements.

In summary, then, one can identify seven major problems and suggestions for their solution.

PROBLEMS	RECOMMENDATIONS
1. Lack of accurate information on the current conditions and needs of the schools.	1. Carry out a systematic survey, based on consistent criteria, of <u>all</u> schools and classrooms.
2. Over-centralization of repair and maintenance supervision and operations.	2. Assign greater responsibilities and resources for these functions to the <u>regional</u> offices of the Secretariat.
3. Too little attention is paid to community educational needs in the location, design and construction of schools.	3. The Secretariat has the best information in this area and should therefore have a higher level of involvement and responsibility for it.
4. Coordination between the Secretariat and other official agencies involved in school construction is weak and insufficient.	4. Since it seems difficult at this time to transfer school building responsibility to the Secretariat although that should be the long-term goal - improved liaison and consultation should be introduced.
5. Existing school design is not consistent with current educational needs of the country.	5. The Secretariat should undertake a study and then prepare a handbook outlining the actual kinds and sizes, of classrooms required by current educational policies and practices.

**PROBLEMS****RECOMMENDATIONS**

6. With nearly 200,000 children of school age not enrolled in schools, there is an urgent need to increase schoolroom construction - including repair, replacement and maintenance of existing facilities.

7. Unit building costs are too high when done by the Technical Office of the Presidency.

6. Every avenue of potential resources for a school building program should be explored by the government, including international agencies, business and industry, and its own allocations of funds should be increased.

7. Given the socio-economic realities of the Dominican Republic, it seems more desirable to build more simple, functional and appropriate schools than to continue building expensive shoe pieces which are not necessarily educationally superior.

## SECTION IV

## EDUCATIONAL FINANCE

A. Financing the Formal System

There is a great dispersion of the resources which are applied to formal education in the Dominican Republic. Not only must one consider the National Government's budgetary allotments, but also those of the regions and the communities within them. In addition, the private sector, both through its direct support of the private system of education and through direct and indirect payments made to defray the costs of books, materials, uniforms, transportation and other items incidental to schooling, provides an important amount of financial support. Finally, and to a lesser extent, business and industry make minor contributions.

It is difficult to access the total of all these in-puts--including the foregone income of the students themselves--with any accuracy, but experience in similar societies suggests that they combine to yield roughly twice as much as the basic budget appropriations of the National Government.

An examination of the education budget over the period 1966-1976 gives some idea of the absolute growth of the total educational budget, which rose from \$36.5 million to \$96.1 million in that period. In contrast, the funds actually available to the Secretariat of Education for primary, pre-primary and secondary education rose from \$19.3 million to \$45.2 million, since increasing proportions of the "Education" budget were allocated to universities, athletic and sports programs and to other related Government supported activities.

From another point of view, however, the picture is less positive. As a percentage of the total national budget, the amounts assigned to the Secretariat of Education declined from 15% to under 10%, as did the percentage of funds budgeted for education as compared with the amounts actually expended, in that case from 72.3% to 58.6%.

These facts are indicative of a number of simultaneous changes in Dominican society. With a rapidly growing population (estimated at 3% per year) and increasing participation in the formal educational system, it is understandable that total expenditures should have to rise. But increasing urbanization, economic and social sophistication and increasing demands for competing social benefits such as health and housing have also been factors which have had to be considered. Added to these predictable and demographic pressures has been the persistence of the view of education as a necessary and unavoidable public expense, with little evidence that it has been looked at as an investment in the future development of the country.

There has been an additional phenomenon which has eroded the funds available for public education. This is the Government's policy of providing, from the Secretariat's budget, financial subsidies for schools designated as "semi-official," basically private school which have solicited and received Government support on the grounds that they are teaching poor children who would otherwise have to be in public schools, but providing school and instruction for them at minimal cost to Government. While this is to a certain extent true, the policy remains little more than a palliative, and in absolute terms it drains funds from the public schools which might have enabled them to perform their missions sufficiently well so that the "semi-official" category would be superfluous.

The disposition of available educational funds is enlightening. At the primary level, 74% goes to teachers' salaries, while 16% is spent on the administration of the Secretariat. In contrast, 98% of secondary education funds are spent on teachers' salaries and only slightly more than 1% on central administration. One can well understand the shortages of materials for teaching when it is realized that only .3% of the primary budget goes for this purpose and a very slightly higher .6% of the secondary budget; amounts allocated to student equipment are even lower.

Teachers' salaries being the largest expenditure by far, it is noteworthy that they remain low in absolute terms and marginal relative to society at large. Rural teachers who have their full teaching credentials receive \$135 per month as do urban teachers who teach only a single shift. Many of the latter, however, teach in both morning and afternoon (or evening) sessions, thereby increasing their earnings to \$210 per month. (They also are thus obliged to teach very long hours, a matter which, it is observed, can decrease their levels of performance.) In the rural areas, there are few if any double sessions, leaving rural teachers with de facto lower salaries. This situation is further worsened by the presence of higher percentages of non-accredited teachers--at \$90 per month--in the rural schools.

The absence of reliable and detailed data make it almost impossible to calculate unit costs in any but the roughest fashion. By dividing the totals of relevant budgetary allocations by the numbers of students in the respective categories, one can arrive at a series of figures which are at least comparable, even though they fail to take into account a multiplicity of non-calculated but significant variables.

For 1976, this process indicates that annual costs per urban primary student were \$35.12, compared with \$23.72 for rural students. For the higher grades, the urban-rural distinction cannot be determined from available data, but costs per general secondary school students appear to be \$61.99, contrasted with \$256.09 for those in the technical/professional schools and \$586.59 per year for each normal school student.

These variations in cost result from a number of factors, chief amongst which is the student/teacher ratio. In the primary system, for example, there are 52 students for every teacher, with the ratios going down in the other categories, reaching only 13/1 in the normal schools. Other factors include the need for more complicated equipment and supplies, the higher salaries of teachers at the more advanced levels, etc.

Private contributions to educational financing, as noted above, are significant. Even in the public school system, parents are called on for the purchase of books and supplies, for transportation costs and for a variety of minor but recurring expenses. In the rural areas in particular, they must forego the earnings--or the farm-related labor--which their children might have provided. In the cities it is the phenomenal growth of private schools which absorbs the majority of funds expended on education from other than Government sources.

The net result of these--and other--variations in the resources available to different groups of students in the Dominican Republic is a clearcut example of inequity of educational opportunity. Given that greater resources (in general) result in better educational performance, it is obvious that rural children are suffering from fewer resources, less well-trained teachers, poorer physical plants and reduced availability of related cultural stimuli,

as contrasted with urban children. Similarly, students enrolled in private or semi-official schools--on the average--are receiving the benefits of larger financial in-puts, both private and public, and can be expected to perform better.

That these generalizations are indeed true is documented by data on percentages of school--finishers in the various categories. The percentage of students completing the fourth grade in the rural coffee-raising areas, for example, is only 21%, as compared with 110% in private urban schools. (The "over 100%" figure is explained by enrollments prior to the fourth grade of additional students from the public school system.) Similar figures show corresponding graduation rates of successively higher levels, although they are not anywhere nearly as dramatic since most of the upper level schools are in the urban zones.

These divergencies immediately suggest another avenue of approach, that of the analysis of internal efficiency. Such studies are in many ways artificial and in some ways misleading, for they tend to be based at best on accurate quantifiable relationships between entering and finishing cohorts of students. They seldom reflect qualitative achievements and, of and by themselves, are of use mainly in calculating the social costs of repetition, dropouts and re-enrollment factors. When, for example, school enrollments are large but dropouts and repeaters are numerous, the society is paying an unduly high price per student graduated. In the Dominican Republic, rough analysis of student flows through the system, both private and public have been carried out. Despite some rather questionable methodological procedures, the results are indicative of extreme variations in the rates of completion at various kinds of institutions.

As an illustration, one can examine the average number of student/years required to "produce" one fourth-grade finisher in various kinds of schools and locations. One finds that the average for all public schools and all locations is 7.28 years; for Santo Domingo, it is only 4.97 years; in the rural coffee-growing areas it reaches 9.42 years. In contrast, the overall average for the semi-official schools is 4.28 and for all private schools, 4.51. It is clear that the "internal efficiency" of the rural school system is a severe drain on national educational resources. Figures for the sixth grade, similar to those above, still further confirm this fact.

When these student/year figures are transposed to actual monetary costs, the evidence is overwhelming. It costs, it will be recalled, only \$23.72 per year per student in rural areas and \$35.12 in the urban area. But, the cost of a fourth-grade finisher in the rural area is \$204.47, while the urban equivalent is \$178.06. At the sixth grade level, the differences are between \$524.69 per rural student and only \$195.01 for his urban counterpart.

These are the kinds of facts which are hard to deal with, since they are subject to multiple interpretations and even more varied justifications. It is clear that they do not all result from deficiencies in the school system itself. Cultural and social factors of urban and rural life vary immensely, as do working and living conditions, standards of health and nutrition, communications and many other possible determinants. No one really knows the full answers and extensive research has not yet identified, partly because every society differs from every other and it even differs internally from area to area and from one time to another.

What can be said with some certainty is that larger financial commitment to quality in rural education could, in the long run, diminish repetition and drop out rates, improve the percentages of enrollees to finishers and reduce the per-graduate costs of rural education. This will require a number of separate but related actions summarized on the following pages.

## PROBLEMS

## RECOMMENDATIONS

1. The most basic data needed to document and comprehend the educational system are almost totally lacking.

2. The lack of research on educational finance has resulted in insufficient knowledge about educational resource utilization and its effects.

3. A similar lack exists with respect to private education, thus complicating the problem of determining equitable policies on finance.

4. Technical capabilities of Secretariat technicians in this field are woefully lacking.

5. The computer center is still not adequately staffed and software in particular is badly needed.

1. Reorganize and extend the data collection and analysis unit of the Secretariat and staff it with trained personnel.

2. Proceed with educational finance studies of sufficient depth and breadth to permit the Secretariat to make rational decisions about resource allocations.

3. As above.

4. New personnel in planning, statistics and educational economics must either be added to the staff or trained while in service for these responsibilities.

5. It is necessary to increase the capabilities of the Secretariat in information processing and utilization. Additional inputs of software will also be required.

## SECTION V

## ADULT EDUCATION AND EDUCATIONAL TECHNOLOGY

A. General Remarks

Adult education is defined as the education of persons over 14 years of age who for one reason or another have either never entered the formal school system or who have dropped out of it before completing primary education (or in some cases even the 4th grade). Despite overall increases in primary school enrollments - at a 5% annual rate in the urban areas - the rural areas continue to reflect dwindling enrollments, in part because of immigration to the cities and in part because of the inadequacies of rural primary education and other related factors.

The Dominican Government's main effort in adult education has been in what are termed Centers of Popular Culture, which are basically evening primary-level schools, taught by poorly trained teachers - in 1975-76 only 11% of them has appropriate qualifications - in school facilities and with materials and methods designed for the 7-14 year old age group.

Two other programs round out this effort, both of them small in numbers of students served but both enthusiastically welcomed in the few areas in which they have been established. One is the Community Farm school, of which only one is in operation, which provides basic education plus instruction in agriculture to rural children, mostly boys. The second are the Centers for Female Training, of which nine are in operation, where, in addition to basic skills, women are taught vocational courses which can contribute to their employability.

The fundamental role of the adult education program is to assist in absorbing "overage" students. To the extent that it utilizes the techniques,

materials and physical facilities of the regular primary schools, it can be considered a "sub-system". Adult education centers remain concentrated in the cities, chiefly in Santo Domingo, and the outreach to the rural areas is minimal.

Certain features of the adult education program should be emphasized. In the first place, neither pedagogical materials nor educational psychologies are attuned to the needs of adults, nor are the teachers specially trained in adult education. This means that the relevance of the program to the real life problems of its students is minimal. To be sure, fairly large numbers of them have acquired the basic skills of literacy and numeracy - with total adult enrollments in 1976 of over 50,000, it would be surprising if this were not so - but there is considerable concern about the opportunities being missed for a truly significant impact on national education by the absence of what is termed a "para-system," a coordinated and planned program designed to meet the real needs of older students and not locked into the primary school curriculum.

#### B. Special Adult education programs

1) Illiteracy is still a serious problem in the Dominican Republic, with nearly one-third of the population so classified. In 1971 the government mounted a massive plan of literacy education by radio - supplementary to various other adult education programs - in which 112,000 people, both urban and rural, were enrolled. Some 16,243 of these enrollees actually succeeding in meeting literacy standards. The radio lessons were further supported by over 22,000 "teacher/guides," mostly university students or secondary graduates.

Subsequently, another government effort, again using radio, was focused on the border areas, where population density is low and illiteracy is high. Nearly one-half of the 16,200 who participated were reported to have reached literacy levels. Students, churches, the armed forces and other volunteers all united assist in these programs, which were planned and executed by the General Directorate of Adult Education. They were, however, isolated efforts, not part of a systematized long-term program.

2) It is a private educational operation, Radio Santa María, which has had the greatest impact on adult education by radio. Originally located in La Vega, with coverage principally in the northern and north-central areas of the country, it has recently expanded to reach all the way to the capital. The program embraces the full primary school curriculum<sup>1/</sup> augmented by practical instruction in such areas as health, nutrition and agriculture and it has proved to be very effective, both quantitatively and qualitatively. In 1975, for example, over one-half of all students enrolled were promoted to the next higher grade. Recent comparative studies have established that Radio Santa María graduates perform as well as - or even better than - public school graduates on standardized tests. It should be noted that graduation certificates from R.S.M. are officially recognized and that the government provides modest financial support to the program, although all the evidence points to the fact that costs - per-graduate are extremely modest.

3) Another private phenomenon is the correspondence school program of APEC (Asociación Pro Educación y Cultura), an independent organization fostering what is known as "distance-learning". This is basically at the secondary

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<sup>1/</sup> Recently the 7th and 8th grades of intermediate school have been added.

or even Junior College level, and uses correspondence school techniques in part but also gradually moving in the direction of radio (or television) instruction and some face-to-face teaching as well.

### B. Non-formal education

This rubric is used to describe the many forms of teaching and learning which, although unrelated to the formal educational system, contribute to the personal, social or economic development of individuals or groups within the society. It covers a wide range of activities, including apprenticeship, on-the-job training, literacy training, agricultural education, etc.

The techniques of non-formal education are as varied as the subject matters and the sponsorship. They include lectures, group dynamics, work groups, audio-visual, seminars and discussion groups, workshops and studios.

There follows a brief summary of some of the problems (or constraints) in non-formal education and some recommendations for meeting them.

#### Problems

1. The lack of adequate community organization.
2. A lack of knowledge about non-formal education on the part of government officials at all levels.
3. The obscure or inadequacy of in-service training programs both in government and in the private sector.

#### Recommendations

1. Strengthen the already improving efforts of communities to organize to meet their own non-formal educational needs by supporting positive and creative moves.
2. Greater efforts should be made to promote the advantage of non-formal education and to interpret the ways in which it could benefit the country.
3. In the interest of national development and improved productivity such training should be encouraged and intensified.

4. The media-radio, T.V., film and newspapers, have not really contributed much to national learning needs, in spite of their potential to do so.

5. There is no central national coordinating agency to monitor, advise, promote and assist in non-formal education programming.

4. Government policies should support such activities, encourage new ventures in non-formal education through the media, and assist wherever possible in developing them.

5. A national organization should be created for this purpose. One of its first functions could be an inventory and a handbook of all existing non-formal educational activities.

### C. The uses of technology in education

Educational technology, in its broadest definition, refers to the utilization of techniques, objects and media as a means of strengthening the teaching/learning process. In narrower terms, however, it tends to be limited to the use of supplementary media of instruction, including radio, television, film and other audio-visual aids.

Of the major media, radio is by far the most widespread in the Dominican Republic. With an estimated 1.5 million radios for a population near 5 million, it can safely be argued that almost everyone has access to radio. Television, on the other hand, is much more limited in its coverage, although it is probable that most residents of the National District area do have access to it.

Newspaper circulation remains low, with an estimated coverage of 35 copies daily for each inhabitant, and magazines are still in short supply. Mail, telephone and telegraph services reach almost all parts of the country, but there are numerous out-lying areas where service is deficient. Public roads of varying quality serve almost all areas, although they may be seasonally difficult to traverse.

The Secretariat of Education itself has few educational technology resources, and those which do exist are dispersed among various departments and

frequently used for purposes only indirectly related to educational processes. Although there are trained technicians, some with advanced training abroad, their capabilities are underutilized as a result of low budgets and scarcities of both equipment and programs. Few schools have audio-visual facilities and many of those that do exist have been poorly maintained and thus are of doubtful value in their educational programs.

In other words, educational technology has been only sporadically (and in general ineffectually) used in the Dominican Republic. T.V. and radio educational programs of considerable magnitude have been launched, some of them with substantial outside assistance, but one by one they have disappeared, in part because of technical problems, in part because continuing funding was not available in sufficient amounts.

Once again radio - in association with techniques and other supporting approaches - is being brought into educational planning, this time in connection with the up-grading and preparation of teachers in the new reformed primary curriculum. Again, this is a project - type operation, designed for a fixed period of time, but it is of sufficient magnitude that it may indeed require enough training and equipment to justify and support a permanently functioning radio education unit within the Secretariat.

Six priorities have been established with respect to the use of educational technology in the Dominican educational system.

- A recognition that the only financial feasible way to reach all the school age population of the country is through the use of the media as a supplement/complement to the formal classroom. Radio, television, tape cassettes and other media can be combined in varying proportions to

accomplish the universal educational goals of the Republic, and in the process to produce an education which is more current and better adapted to the realities of Dominican society today.

- An attack on repetition, dropout and absenteeism rates, through the use of educational technology, could produce results, since it is recognized that certain types of people and certain kinds of learning problems are more responsive to media approaches than they are to traditional methodologies.

- To a certain extent, this is also true of the over-age student, who may already have passed the age where he or she is interested in attending traditional classes but who, on the other hand, may be responsive to the innovative educational approaches possible with educational technology.

- The evening schools provide an excellent target group for media-based education for some of the same reasons cited above. Furthermore their numbers are not automatically limited by the shortage of schoolroom space or qualified teachers.

- The need for teaching/learning resources in all the schools is constantly referred to. Not only textbooks and basic library resources are needed, but also at least minimal quantities of visual aids, maps, pictures and slides, all of which tend to enliven learning, increase motivation and, ultimately, improve school performance. If it is feasible to add to these items audio tapes, projectors, and film, the results can be even more positive.

- Finally, there is a need to educate the directors and teachers themselves to the advantages of media-assisted education. One way to effect this would be for the Secretariat to make fuller use of educational technology in its own programs for training teachers, administrators and technicians, who would thus get the message indirectly through having themselves experienced the advantages it offers.

## SECTION VI

## EDUCATION AND NATIONAL DEVELOPMENT

A. General Background

National development can be said to have various objectives:

1. Economic - a sustained increase in national income;
2. Social - the achievement of adequate levels of social penetration, stability and the strengthening of community spirit;
3. Political- respect for the law within a system of representative government;
4. Cultural - the sustaining and appropriate growth of national intellectual and cultural standards.
5. Ethical - the achievement of social justice and equity.

It can further be assumed that higher levels of education, better distributed amongst all the people, will increase the likelihood of reaching these objectives. These are the basic premises of the Dominican development strategy. For this reason, the ten-year development plan (1976-1986), stresses:

- The maintaining of a high rate of growth in national income
- The redistribution of income and wealth
- Increased opportunities for gainful employment
- The reaffirmation of education as the highest function of the State
- The reduction of dependency and external vulnerability.

The interrelationships which obtain between these various goals and principles are complex. For example, the Dominican Republic is heavily dependent on agricultural exports for foreign exchange and it commits heavy resources to agriculture. At the same time, the productivity of the

individual farmer is low, in part, it is believed, because his low level of education limits his ability to profit from information and services made available to him by the government.

Similarly, unemployment and underemployment have both long plagued the country. They are also causally but indirectly related to levels of education, since there is evidence of actual shortages of skilled and semi-skilled labor, the type usually provided by the better educated citizen. Perhaps because these links are indirect - they are certainly only manifest over relatively long periods of time - the evolving Development Plan, despite the above "reaffirmation," fails to articulate clearly the actual paths the government intends to follow in order to ensure that education does indeed enter the development equation. There are reasons for this, chief amongst them the fact that "education" has long been treated as an "internal" problem for the Secretariat. It has, for example, concerned itself with reducing illiteracy, increasing the coverage of public education, developing new models in secondary and primary education, and involving large numbers of people in cultural activities. As can be seen, these are method oriented goals which tend to be ends in themselves with little relationship to the broader goals of development. They are, in other words, semantically neutral with respect to such vital questions as income, employment, national pride, community solidarity and social justice.

These timid phrases are now being revamped in an effort to emphasize the real functions of an educational system in a developing country. The planning of education is being integrated into overall national planning and the potential values of sound data - based planning are being recognized.

Consequently new language is appearing in the context of education, with such phases as these:

- Rational distribution and utilization of human, fiscal and financial resources
- Improved internal efficiency in the schools
- Enrollment distribution according to the abilities of students and the needs of national development
- Curriculum changes leading to greater relevancy and more realistic relationships to the realities of present-day life
- Planning at the regional level
- Increased educational appropriations as a form of national investment
- Projection of the schools as community socio-cultural centers for everyone
- Harmonization and coordination of the efforts of the various sectors towards a better and more comprehensive utilization of human and material resources applicable to the educational needs of development

These are all concepts which are germane to overall development, yet they serve to illustrate and underscore education's particular role in it. But they also lead to the recognition that the Secretariat of Education needs some internal self-examination to determine its capacity to be responsive to these emerging insights. As this takes place, certain factors tend to indicate that, while the awareness of new needs seems to be present, the mechanisms to deal with them effectively need to be re-examined, strengthened and, in some cases, totally redesigned.

Before examining these specifics, however, it is useful to consider the present external efficiency of the Dominican educational system. Ideally,

the efficient performance of a national educational system should create the following conditions:

- Reduced levels of unemployment and under-employment.
- No serious over or under supply of specialized manpower.
- The return on investment in education is similar, at its various levels, to the return on capital investment.
- The emigration of professionals, especially those trained at public expense, is minimal.
- The internal efficiency and equity of the system is such that the general level of education is high, as is the level of education of the work force.

Examined from the point of view of these "ideal" criteria, the Dominican system appears to have had the following effects:

- In spite of a satisfactory increase in the overall economy, unemployment and underemployment remain at very high levels and show no signs of going down.
- There is serious imbalance in the supply and demand for specialized manpower.
- There is great variation in the returns on educational investment, as between men and women, between the professions and the artisans, and, regionally, between similar jobs in different parts of the country.
- There is a heavy stream of emigration of professionals, many of whom had their education at the expense of the State; at the same time there is heavy immigration of Haitians, whose skill and education levels are almost non-existent.
- As noted above, the internal efficiency of the system is low, with inordinate numbers of dropouts, repeaters and absentees. Even though the

average school level attained is now 6.9 years, that of the labor force is only 3.2, indicating that it will take many years to raise that level to one which clearly indicates an educated work force.

Returning to the question of the capability of the Secretariat of Education to improve its performance in the direction of improved external efficiency, one finds no simple answers, but some disturbing facts. For example, changes have been made in the primary school curriculum and they have been approved for the vocationally oriented intermediate curriculum. Yet, of 180 intermediate schools, only 20 have actually adopted the reformed plan and of those 20, all of them offer the traditional pre-university program, 7 offer specialization in commerce, 1 agriculture, 1 health sciences and none offers industrial education.

Again, the Secretariat has initiated the nucleo system of education, mostly in the rural area, but the implementation of the program has been sporadic and incomplete, the training of nucleo Directors is yet fragmentary and the total philosophical basis for the nucleos remains hazy and ambiguous.

Two critical questions, as yet neither asked nor answered, ought to be:

"What is the possible utilization of the human capital generated by a given type of educational program?"

and:

"Is the formal design of that type of program the most effective one to produce the desired human capital, and if not what are the most interesting and efficient alternatives?"

It is questions like these which must be asked. The answers to them, probably only obtained through rigorous research, should then lead to planning which in turn should result in programs to be implemented in the schools

The entire process is interlocked. As of the present, one weakness of the Secretariat has been its inability to bring together working groups of people apparently engaged in separate pursuits - curriculum design, planning, research, field implementation - on a functional and integrated basis which encourages both diachronic and synchronic of energy to a single problem or group of related problems.

This problems exists also at the level of higher education, where social demand outweighs social needs, in the sense that university programs leading to degrees in the liberal professions in response to social demand have far outstripped degree programs in what are viewed as less prestigious vocations than activities which are equally or even more needed in national development. The result is an over-supply of trained doctors, dentists, pharmacists etc - who solve their problem by the nationally costly process of emigration - and an under-supply of highly trained specialists in agriculture, engineering and other areas vital to development.

B. Summary: There are five major concerns with respect to the external efficiency of the Dominican educational system.

1. Educational needs related to national development touch all levels of formal schooling; primary education must be more widespread and more relevant (especially in the rural areas); intermediate education needs more effective diversification; and the range of offerings at the level of higher education needs to be increased and put more into harmony with the needs of the economy.

2. Sustained progress in primary studies and an improved level of relevance at that level, could result in greater agricultural productivity and indeed favor the development of that sector. In the urban areas, a similar

improvement in the diversification patterns at the intermediate level could result in comparable gains in the industrial sector.

3. The aggregated up-grading of general levels of education could have the effect of slowing down population growth, due to the demonstrated inverse relationship between the education and the fertility of women.

4. The supplementing of traditional systems of delivery of educational services by the use of educational technology, "distance teaching," and non-formal educational models could broaden the range of educational coverage and have a favorable impact on the system.

5. A well designed planning operation, backed up by strong research and sound data could provide the basis for improving decision making about programs and thus increase the range and effectiveness of those decisions, thereby improving the entire educational system.