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MISION COOPERATIVA PARA LA PLANIFICACION EDUCACIONAL

FINAL REPORT



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TABLE OF CONTENTS

- i Acknowledgements
- ii Project Staff
- iii Table of Contents

PART I

THE EXECUTIVE SUMMARY	1
A. Background	1
B. Research Findings	2
1. Economic Growth and Implications for Future Training Needs	2
a. Table I: Forecast of Gross Domestic Product by Sector	4
b. Table II: Composition of the Labor Force, 1971-1981	4
c. Figure 1: The Occupational Pyramid in El Salvador	7
2. The Establishment Study	8
3. Non-Formal Training Programs	11
4. The Bachillerato Diversificado Program.....	12
5. A Consortium for Educational Planning from Business and Education	16
C. Recommendations for Immediate Action	17
1. Recommendation One: <i>Form a National Industry and Education Training Council</i>	17
a. Background and Need	17
b. The Purposes of an Industry and Education Training Council	19
c. The First Six Months of the Council ...	19
2. Recommendation Two: <i>Improve and Creatively Expand the Bachillerato Diversificado Program</i>	21
3. Recommendation Three: <i>Employment-Generating Activities in the Rural Sector</i>	24

PART II

THE ABSTRACTS	27
A. Growth Prospects of the Salvadorean Economy and Implied Demand for Skilled Personnel	27
1. Past Growth Trends and Two Alternative Paths of Growth for the Period 1971-1981.....	27
a. Gross Domestic Product (Table).....	27
b. Two Forecasts of Gross Domestic Product by Sector (Table)	29
c. Characteristics of Forecast A (Modest Growth)	29
d. Characteristics of Forecast B (High Growth)	30
2. Implications of These Alternative Growth Paths for the Demand for Middle and Low Level Skilled Personnel	30
a. Composition of the Labor Force (Table)	31
b. Manpower Implications of Forecast A (Modest Growth)	31
c. Manpower Implications of Forecast B (High Growth)	32
3. The Present System of Skill Formation	33
a. Middle-Level Graduates Available to Meet Demand (Table).....	33
b. Demand and Supply of Personnel Corresponding to Bachillerato Programs, 1981 (Table)	33
B. Occupational Information for Educational Planning in El Salvador	35
C. A Study of the Need for Short Term Training Among Middle Level (Industrial) Workers in San Salvador, El Salvador	38
1. Past and Future Plans for Training	39
2. Effect of Technological Innovation	40

C.	A Study Continued	
3.	How Might the Cost of Training Be Met?	40
4.	Are Industry Facilities Available for Training?	40
5.	To What Extent is the Bachillerato Diversificado Program Known and Valued?	41
6.	Where is Training Needed Most?	41
7.	Conclusion	41
D.	An Overview of Selected Non-Formal Training Programs Not Under the Direction of the Ministry of Education	43
1.	Research Objectives and Procedures	43
2.	Major Findings	44
3.	Recommendations	45
E.	Report on Non-Formal Adult Education/ Training Programs Within the Ministry of Education in El Salvador	47
1.	Objectives/Procedures	47
2.	Major Findings	47
3.	Recommendations	49
F.	Position Statement: Perspectives for Curriculum Development and Expansion of the Diversified Bachillerato Education Cycle	51
1.	Qualitative Assessment of Four Bachillerato Diversificado Programs	52
a.	Major Findings	53
b.	Guidelines for Improving the Bachillerato Diversificado Program	55
2.	A Creative Design Toward Program Expansion	63
a.	Horizontal Expansion	63
b.	Vertical Expansion	68

G.	Report and Proposed Model with Alternative Action Plans to Create an Industry-Education Council in El Salvador	70
1.	Procedures for Development	70
2.	Development to Date	71
3.	Level of Commitment	72
4.	Related Support	72
5.	Guidelines for Immediate Action	72

APPENDIX A: Books and Other Materials Made Available to the Ministry of Education Through the San José State University Mission

PART III

THE SUPPLEMENTARY MATERIALS (Separate Items)

- A. "Growth Prospects of the Salvadorean Economy and Implied Demand for Skilled Personnel", by Stavros Apergis. Cover Entitled: *Economic Analysis*.
- B. "A Study of the Need for Short Term Training Among Middle Level (Industrial) Workers in San Salvador, El Salvador", by David J. Bond. Cover Entitled: *Industrial Establishment Survey*.
- C. "An Overview of Selected Non-Formal Training Programs Not Under the Direction of the Ministry of Education", by Gilberto Méndez. Cover Entitled: *Non-Formal Education/Training Analysis*
- D. "Report on Non-Formal Adult Education/Training Programs Within the Ministry of Education in El Salvador", by G. M. Arciniega. Cover Entitled: *Adult Non-Formal Education, MOE*
- E. "Report and Proposed Model With Alternative Action Plans to Create an Industry-Education Council in El Salvador", by Gilberto Méndez: Cover Entitled: *Industry-Education/Training Council*
- F. "Proposal for the Expansion of Capacitacion Laboral," by David J. Bond. Cover Entitled: *Capacitacion Laboral Proposal*

PART I

EXECUTIVE SUMMARY

BACKGROUND

La Misión Cooperative para la Planificación Educacional (referred to hereafter as La Misión) was initiated July 1, 1974, as a joint project of the Ministry of Education and Culture, El Salvador; USAID, El Salvador; and San José State University. The study grew out of a deep concern for the problem of unemployment, and inadequate supply of skilled and semi-skilled workers, unmanageable population increases and the desire to develop educational policies that could effectively deal with these and other national problems. After a feasibility study, conducted in May, 1974, the work of the Mission was organized to meet five broad objectives:

1. To identify trends in the nation's economic development profile that relate to educational planning decisions.
2. To determine the extent of the need for job skill training for workers at the middle levels of the occupational pyramid, the types of training needed, and how that training could be provided.
3. To determine the extent to which existing non-formal training programs for middle-level skilled and semi-skilled workers are capable of meeting current and future occupational training needs.
4. To determine the extent to which the Bachillerato Diversificado programs are effective in providing students with marketable middle-

level occupational skills, and to make recommendations for improvement.

5. To determine the feasibility of establishing a consortium of business, industry, and education leaders who could serve as a coordinating and planning agent for the nation's formal and non-formal occupational training efforts at the pre-university levels.

From July, 1974, through January, 1975, selected organizations and Salvadorean Leaders from education, business and government joined with staff and consultants from La Misión to work on various assignments. Field studies were conducted, operational strategies were explored, and ideas already available were examined. As Salvadorean leadership had the opportunity to judge some of the more promising action strategies, a few preliminary steps were taken to "feel out" those strategies within existing organizational policy.

RESEARCH FINDINGS

I. Economic Growth and Implications for Future Training Needs¹

One of the more difficult and intriguing aspects of La Misión's work was to study the problem of trying to project patterns of economic growth for the economy through 1981. This task was undertaken in order to provide educational policy makers with information about future labor demand and the need for manpower development programs indicated

¹In the supplementary materials submitted with this report are included two papers on which these findings are based: Growth Prospects of the Salvadorean Economy and Implied Demand for Skilled Personnel by Stavros Apergis and Occupational Information for Educational Planning in El Salvador by Robert L. Darcy. A third economic analysis prepared by Emil Krieder in May, 1974, and the quarterly reports prepared by the economic division of the U.S. Embassy under the direction of Clyde Taylor were also extremely helpful in pulling these data together.

by that demand. In reviewing the projections, however, a note of caution is advisable. The current worldwide monetary crises, the economic pressures of rapidly diminishing energy resources, an imbalance between recession and inflation with rates reaching and exceeding 20% confound the problem of predicting economic futures. Nevertheless, after reviewing and examining the best data from all sectors of the economic spectrum and CONAPLAN, these conclusions were drawn:

- A. The economy should be expected to grow at no more than a "modest" aggregate rate of 4-5% per year until 1981. This would generate a Gross Domestic Product of four billion colones in 1981, with a total labor force of just under 2,000,000. Under these conditions, income per capita would grow at a maximum of 1% per year. Unemployment would be expected to be reduced marginally below 1971 rates. However, this forecast for modest growth cannot occur without significant qualitative changes in the agricultural and manufacturing sectors. In manufacturing, export diversification and modernization will be required. In agriculture higher yields will be required through the use of improved fertilizers, seeds, irrigation techniques, etc..
- E. Given a "modest" growth forecast, the sector analysis reveals relatively small changes in the shape or profile of the economy. As shown in Table I, below, manufacturing increases from 19.2% to 21.5% of the economy; construction increases from 2.9% to 3.4%; and agriculture drops from 26.8% to 23.0%.

TABLE I

Forecast of Gross Domestic Product by Sector
(Million colones at 1971 Prices)
1971-1981

SECTOR	1971		1981	
	Colones	Per Cent	Colones	Per Cent
TOTAL	<u>2,697.4</u>	<u>100.0</u>	<u>4,000.</u>	<u>100.0</u>
Agriculture	723.5	26.8	920	23.0
Mining, Quarrying	4.3	0.2	10	0.2
Manufacturing	519.2	19.2	860	21.5
Construction	79.2	2.9	140	3.4
Utilities	40.3	1.5	70	1.8
Transport, Communications	131.6	4.9	200	4.9
Commerce	587.1	21.9	880	22.0
Financial Institutions	62.1	2.3	110	2.9
Housing	100.3	3.7	150	3.7
Public Administration	219.0	8.1	320	8.1
Personal Services	230.8	8.5	340	8.5

SOURCE: Apergis Report cited above.

TABLE II

Composition of the Labor Force, 1971 and 1981
(Labor Force Number in Thousands)

SECTOR	1971		1981	
	Number	Per Cent	Number	Per Cent
TOTAL	<u>1,315</u>	<u>100.0</u>	<u>1,990</u>	<u>100.0</u>
Agriculture	761	57.9	950	47.7
Mining	1	0.1	2	0.1
Manufacturing	134	10.2	180	9.0
Utilities	3	0.2	5	0.3
Construction	35	2.7	63	3.2
Commerce	119	9.0	240	12.1
Transport	40	3.0	80	4.0
Financial Institutions	10	0.8	20	1.0
Services	212	16.1	450	22.6

SOURCE: For 1971, Population Census of 1971; for 1981, Linear Interpolation of CONAPLAN projections for 1980 and 1985 (for total labor force only).

- C. As illustrated in Table II, preceding page, the labor force will grow correspondingly during this period from 1,315,000 in 1971 to 1,990,000 in 1981, a net increase of 675,000 persons. Significant changes occur in their location by sector. Migration out of the agricultural sector is forecast to continue -- from 57% of the labor force in 1971 to 47% in 1981. Please note that they do not go to the manufacturing sector. Instead, rural migration into the metropolitan areas has a corresponding increasing effect on the percentage rates of the commerce and service sectors.
- D. From the data display in the two preceding tables, first approximations of projected manpower needs by sector can be roughly delimited.²
- E. The economic development projection analyses point to three major areas in which manpower development will be needed:
1. Agriculture. Technological improvements will result in increases in demand for skilled workers, such as extension supervisors and agents, farm supply salespersons, bank credit agents, and farm supervisors. It is estimated that the agriculture sector will absorb an additional three to four thousand middle-level workers between 1975 and 1981.

²It was not possible during the period of the study to break down these data further. However, it is the understanding of the economists who worked with CONAPLAN on these projections, that more specific distributions of the labor force by economic activity and occupational category (at the three digit level) are stored on the computer tapes in the General Directorate of the Census.

2. Manufacturing. Increasingly, manufacturing activity will shift from 'small to large firms. Three to four thousand additional middle-level foremen will be required.
3. Construction. Committed or planned expansion in construction activity indicates that additional manpower will be needed (specific estimates were not made) in this sector.

F. Retraining activities will be required in all sectors.

G. As illustrated in Figure 1, it is estimated that 28% of the labor force consists of middle-level workers (semi-skilled, skilled, highly skilled). On the basis of the data above, it is estimated that an average of 18,900 new middle level workers will enter the work force annually over the next ten years. Other data available to La Misión shows that the educational institutions of El Salvador (including the Bachillerato Diversificado and all non-formal institutions) annually graduate some 16,000 students trained to enter the work force at the middle levels. It would appear, therefore, that existing programs are nearly 3,000 graduates short of meeting the projected annual demands of the labor force. However, because so many training programs are in need of improvement, many graduates probably have not acquired the skills they need. In this sense, the shortage of middle-level workers who are in fact skilled to enter the labor force is considered to be much higher than 3,000.

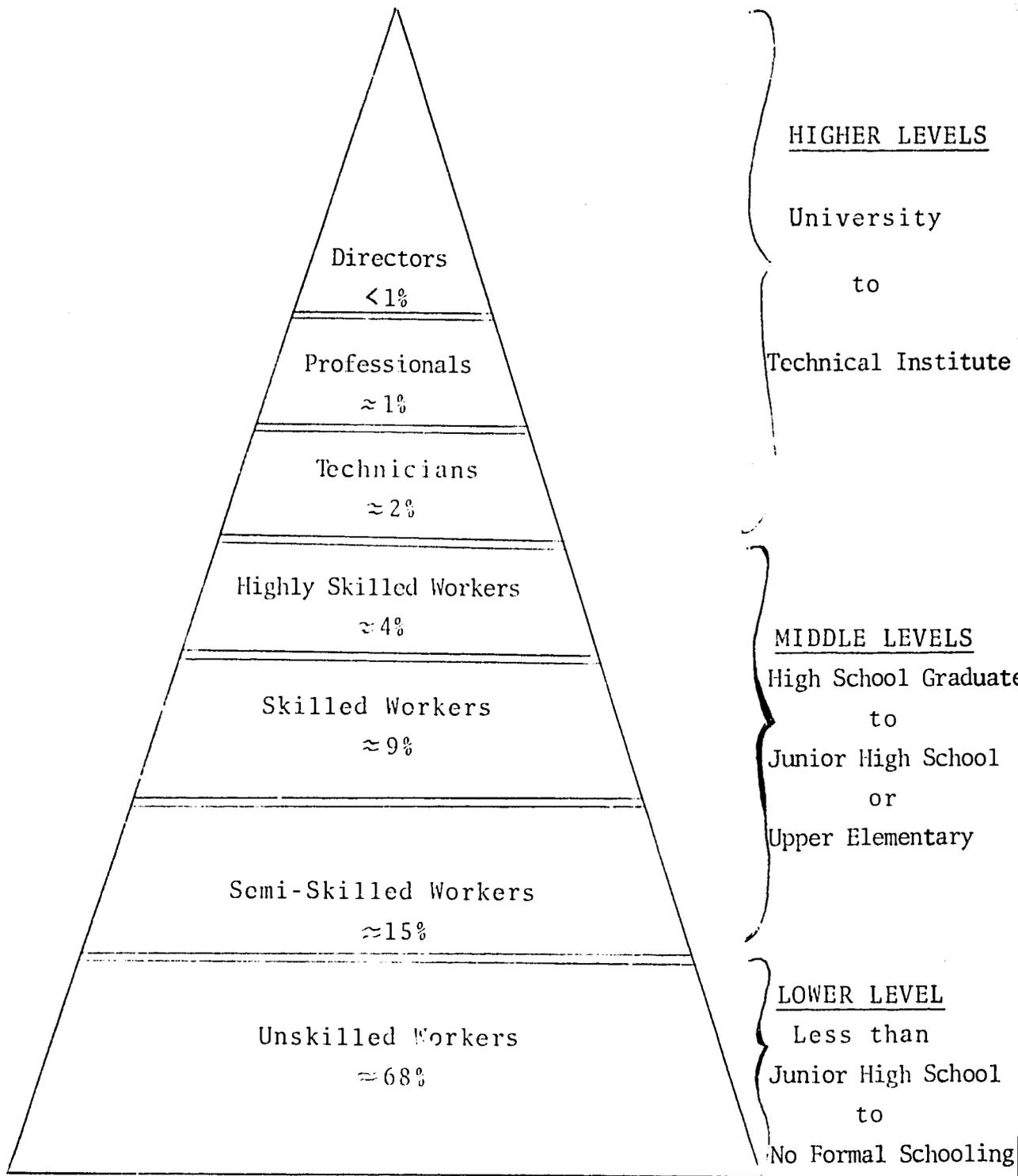


FIGURE 1
 THE OCCUPATIONAL PYRAMID IN EL SALVADOR
 The economically active population of
 El Salvador (1971 Census) = 1,269,663
 PERCENTAGE DISTRIBUTION

- H. In 1981, nearly half the work force of two million people will be employed in agriculture. Today the three-year Bachillerato Agrícola program enrolls a total of 555 students in four schools. Given the expected need for a variety of skilled workers in agriculture, serious consideration should be given to massive expansion of educational offerings and enrollment in agriculture.

II. The Establishment Study

A study of 19,669 workers in 242 medium and large industrial firms (50 employees or more) in San Salvador was conducted to determine the extent of the need for training and retraining among middle-level employees. The study focused on thirty-two middle-level occupations. A questionnaire was developed and administered to "persons-in-charge" in the businesses. Following are the major findings and conclusions from the study:³

- A. Approximately one-third of the middle-level workers in medium and large firms in San Salvador are judged by their employers to be in immediate need of remedial job-skill training. The data suggest, but do not confirm, that the portion of middle-level workers in small firms in need of training is even higher.
- B. Approximately 18% of the middle-level workers in medium and large firms could be promoted, were they provided appropriate training, to positions of higher responsibility.

³A Study of the Need for Short Term Training Among Middle Level Workers in San Salvador, by David J. Bond. Submitted with the Supplementary Materials.

- C. Approximately 75% of the employers of middle-level workers in medium and large firms characterize training needs as urgent.
- D. On-going training programs currently offered by business and industry are inadequate to meet existing training needs.
- E. A significant percentage of firms (this study indicates 61%) are willing to share the financial cost of training programs, were they to be offered by an industry-education consortium.
- F. There exist in businesses, particularly large businesses, both personnel and facility resources for providing job-skill training.

The data on which these findings were based suggest that mini-courses organized around single, specific skill areas would be more effective and successful than maxicourses or courses in which several skills are incorporated into the plan of studies. Most workers do not need comprehensive retraining; they need upgrading in one, two, or three specific skills.

It is recommended, moreover, that the courses be organized around carefully constructed performance criteria utilizing modern principles of curriculum planning. As incentive to workers, no fees should be charged for the training. Or, if a fee is charged, compensation in the form of pay increases should be guaranteed if the course is completed and the new skills acquired.

It is proposed that courses of retraining and training be used to develop a better linkage between education and industry. At the very least, they should establish a formal communication channel and avenues toward mutual goals. In

this sense, new facilities are not required for the training recommended here. Courses can be offered at either selected business sites or in the relatively modern technical/vocational classrooms and workshops of the schools.

The probability of success, moreover, is increased by the development at first of a few well-planned, carefully executed courses. At the outset, costly and elaborate administrative services should be avoided. Many technical education curriculum materials are already available and can be secured from a variety of sources.⁴

The finding that 61% of employers surveyed would be willing to share the cost of training programs is one of many "hidden resources" that should be pursued. The cost of developing and conducting mini-courses using plant or existing school facilities would be minimal, were it spread over a large number of companies. Other hidden resources include:

- the use of employees as instructors
- the use of existing capital equipment in businesses as instructional devices
- the use of existing curricula
- the use of business executives for uncovering other hidden resources
- the use of retired business persons who would be willing to donate their time (or work for small compensation) as instructors
- the use of radio and television stations which would be willing to make public service announcements about the training programs

The development and implementation of successful training programs will require not only careful planning by experienced professionals, but, as much as anything, creative planning.

⁴The curriculum resources already prepared and tested are truly innumerable. The International Labor Organization, for instance, has close relations with other Latin American technical training programs such as SENA in Colombia, INA in Costa Rica, INTECAP in Guatemala, etc., which have prepared a massive series of programmed instructional materials. Also, companies such as Sears-Roebuck and Texas Instruments develop special courses for their employees. These and other companies should be very willing to assist schools in securing materials.

Finally, it should be pointed out that these data can and should be used by the curriculum leaders of the Bachillerato programs in designing and developing new curricula for the future. The levels and kinds of skills needed, as expressed by business leaders, give school leaders "output performance criteria."

III. Non-formal Training Programs

Two separate investigations of non-formal training programs were conducted. One of these examined programs under the direction of the Ministry of Education; the other examined programs not under the direction of the Ministry of Education. Major conclusions include the following:⁵

- A. A variety of non-formal training programs exist, both within and outside the Ministry of Education.
- B. There is an urgent need for national coordination of these programs. Consideration should be given to developing a national training program strategy.
- C. Few of the programs have the resources they need in order to succeed. Many of the programs, for lack of resources, exist only on paper.
- D. Certain of the non-formal training programs (the National Apprentice Corps, Capacitación Laboral Urban y Rural, and Fé y Alegría) are promising programs well underway and could serve as models for other non-formal training programs.
- E. Increased attention needs to be given to skill training of women.

⁵Non-formal Adult Education Training Programs within the Ministry of Education, by G.M. Arciniega; An Overview of Selected Non-formal Training Programs Not Under the Direction of the Ministry, by Gilberto Méndez. See the Supplementary Materials.

F. Non-formal education is not yet regarded as a full partner with formal education in El Salvador's educational enterprise.

In light of the considerable pressure to expand formal educational opportunities and the limited resources with which to make that expansion, it is understandable that primary attention has been given to formal education. Nevertheless, there exist immediate training needs which formal education institutions are ill-equipped to meet. Many of these needs could be met with comparatively small resource allocations, without building new facilities, without purchasing equipment, without extensive teacher recruitment and teacher training efforts, and without creating (at this point in time) large, complicated administrative machinery to guide the training programs.

IV. The Bachillerato Diversificado Program

At the recommendation of the Ministry of Education, the research team spent considerable time studying the Bachillerato Diversificado education cycle in terms of (a) the quality of its instructional programs, (b) the strategies for improvement, and (c) perspectives for short-term or intermediate planning. In terms of the qualitative analysis, time limitations prohibited the study of all ten programs. Thus, it was necessary to concentrate on those programs that have the most relevance and implication for skilled manpower training. In this instance, qualitative assessments were made of the technological school programs (including the four vocational subsections), the rural agriculture schools, the commerce and administration programs, and the fishing and navigation school.

For the purpose of this report a position statement has been prepared which takes into consideration: a) the assessment cited above; b) many visits and interviews with leading school officials from El Salvador; c) projected

growth trends and the implications these have for manpower development from the economic analysis; and d) general conclusions which can be drawn from the intermeshing of these with sound principles of middle-level education.⁶ The findings, conclusions and recommendations in this area are as follows:

- A. The quality of instruction in all the programs studied suffers because:
 - 1. Teachers lack the necessary equipment, in good working order, to do their jobs;
 - 2. Programs do not have adequate curriculum guides, textbooks or library resources;
 - 3. Many teachers are not familiar with the equipment they must use in teaching mechanical and electrical concepts;
 - 4. Teachers do not seem to follow performance-based curricular practices whereby students are evaluated on the basis of their achievement to master skills (instead, most assessment practices are by written exam);
 - 5. Many laboratories, classrooms, etc. lack the necessary tools, materials and safety equipment to teach students the skills they need if they are to compete for middle-level skilled and semi-skilled jobs on the open market, or perhaps go into their own private business.

- B. Except for the Commerce and Administration program, none of the programs studied had close working relationships with local business and industry -- the eventual employers of the Bachillerato graduates.

⁶See Part II of this report.

- C. Although teachers and administrators agree that it is valuable to work more closely with local industry in an organized, formal way, there is no evidence of local-level industry-education councils working cooperatively with the schools.⁷
- D. All school programs operate without the benefit of a strong pupil personnel and career guidance support system. An example of the effect of this is that even though the system offers ten to twelve curriculum options on a regional level, the greatest percentage of students--approximately 70%--are still choosing the traditional academic program.
- E. Teachers and administrators are highly motivated to improve their need for pedagogical and management skills, and are aware of their need for in-service training.

In light of the above findings, and taking into consideration other aspects of the analysis, a number of program recommendations and guidelines for expansion of the Bachillerato Diversificado Program are suggested:⁸

- A. Seven recommendations are forwarded for the qualitative improvement of instruction
- B. Recommendations and guidelines are presented for establishing a pupil personnel and career guidance program, grades 8 through 12.

⁷One exception to this is the close working relationship that the Hotel and Tourism Program has with the Tourism industry. Although the program was not studied separately, much evidence exists which suggest that this relationship has a strong, positive effect on the programs in the schools.

⁸For a complete listing of recommendations and guidelines, please refer to Part II, Position Statement on the Bachillerato Diversificado Program.

- C. Recommendations for establishing a graduate "tracer" system to follow career paths of graduates in all technical/vocational programs are provided.
- D. Recommendations and guidelines for establishing work-experience options for students in the Bachillerato Diversificado Program are delimited.
- E. Guidelines and alternatives for program expansion in the Bachillerato Diversificado education cycle follow two basic paths:
 - 1. Vertical Expansion- consideration of establishing regional post-secondary technical training centers with broad accommodations for adult education and retraining facilities for employees of local industry.
 - 2. Horizontal Expansion- emphasis is given to broadening the scope of offerings in all programs. Agriculture programs must be expanded and broadened in scope to fill the needs of the agribusiness field. There are definite needs for creating new programs relating to the broad set of trades found in the construction industry. And finally, recommendations are provided for giving strong consideration to incorporating basic programs in the principles of business management, personnel administration and supervision in all programs of the Bachillerato Diversificado Cycle.

In an experimental vein, the team recommends that the Ministry of Education experiment with short - single topic, single skill - courses taught sporadically throughout

the technical and academic programs. Suggestions here range from the very sophisticated field of cybernetics and information data processing to basic instruction in making change, running tabs on sales slips, etc.. Areas such as small appliance repair, television repair, transportation, printing and operation of heavy equipment, are topics that should be studied from the very practical, short term, skill development viewpoint. Or, as more manpower data become available, these courses could become programs in and of themselves. They certainly lend themselves to the extended curricular programs cited in (1) above.

V. A Consortium for Educational Planning from Business and Education

A serious lack of coordination exists among those who rightfully share responsibility for training at all levels and in all sectors in El Salvador. There is simply too little contact between the public and private sectors and too little involvement on the part of the private sector in educational planning decisions. Other nations, with similar training and educational problems have established "industry-education" councils, some more elaborate than others, in a effort to improve communication between educational institutions and business.

To determine whether the idea of partnership planning is viable for El Salvador, La Misión undertook to explore the concept with key leaders in education and industry. After numerous discussions had been held, and several

position papers written, representatives from ASI, the Ministry of Labor, the Ministry of Education, and CONAPLAN traveled to observe the California Industry-Education Council in action. On their return to El Salvador, consensus was reached by Salvadorean leaders in government (MOE, MOL, CONAPLAN) and business and industry (ASI, et al) that implementation of a national training council to study existing data, coordinate strategies, develop resources, and implement innovative training programs is feasible and desirable.

USAID expressed willingness to provide technical assistance for such a project.

RECOMMENDATIONS FOR IMMEDIATE ACTION

Three major recommendations for dialogue and debate among the leadership of the nation who have responsibility for creating policy for planned change are derived from these findings.

RECOMMENDATION ONE

FORM A NATIONAL INDUSTRY AND EDUCATION TRAINING COUNCIL

Background and Need

The need for a national training council emanates from El Salvador's national goals of development, modernization and hope for a higher quality of life for all her people. Embedded in these goals is the will to improve education, generate employment and to provide the vocational and technical skills necessary to meet these goals. Unfortunately, the nation lacks an adequate short and long term training strategy carefully tuned to the Salvadorean situation.

Other countries have faced similar problems. The newly organized Industry-Education Council in California, SENA in Columbia, INCE in Venezuela, INA in Costa Rica, INTECAP in Guatemala are examples of large scale attempts to develop solutions to national training coordination and program development. However, rather than adopt what has been developed by others, El Salvador must decide for herself what kind of organization it ultimately needs, given its resources, state of development and plans for the future.

La Misión talked at length with CONAPLAN, the Ministry of Education, the Ministry of Labor and many business leaders. The following observations come out of those discussions:

1. Although CONAPLAN has conceptualized and established initial organizational parameters for a large quasi-autonomous training and retraining institution--INSAFORP--it seems highly unlikely that this program will become a viable mechanism to combat the problems mentioned above for at least four to five years.
2. Salvadorean leaders want to move now with a more modest, less expensive approach - one that is not too elaborate, costly or broad in scope. Later, if early experience proves promising, the concept could be expanded.
3. All parties involved to date are willing to convene such a Council at the invitation of the Ministry of Education.
4. Membership should be drawn from the public and private sectors, formal and non-formal education, and urban and rural areas.

The Purposes of an Industry and Education Training Council

At the outset, five purposes for the Council are identified:

1. Stimulate and support cooperative training programs between industry and education.
2. Develop and coordinate training strategies across the public and private sectors consistent with the known manpower needs of the nation. Emphasis will be on middle-level skilled and semi-skilled training.
3. Develop and coordinate the "hidden" training resources that exist in this and other countries.
4. Stimulate new programs of retraining for the already employed.
5. Assist the Ministries of Education, Labor, and Agriculture to better coordinate, plan, and develop their formal and non-formal technical/vocational programs.

The emphasis in these purposes is on training programs, rather than on further studies, elaborate organizational structures or solely "communication", as much as these are needed to predict a successful course for the council.

The focus at first is on short-term training based on data on hand. Success in pilot projects will do more to prove the idea than anything else.

The First Six Months of the Council

Launching the Council will require sensitive understanding and leadership. The first and immediate question is, "Who should belong to the convening Council?" Those who have agreed to participate are: CONAPLAN, the Ministry of Education, the Ministry of Labor, ASI, the Salvadorean Chamber of Commerce,

and the American Chamber of Commerce. We suggest membership in about equal number from the public and private sectors. A council of perhaps fifteen people would be maximum to begin with. Due to the intense need for manpower training in the agriculture sector, representation from this ministry is imperative.

Each participating organization in the Council should take some enabling action at the outset. This action can be by resolution, by letter of intent, or by vote of the governing body. What is important is that it gives legitimacy to the new organization. As the Council begins to develop programs, it will need the wholehearted institutional support of its membership. The fact that the Council has been approved by official action of key leaders will add credibility and power to its activities.

Key activities for the Council during the first six months should be to:

1. Establish a charter, by-laws, and procedures.
(It is recommended that this not become a central activity that drains the energy of the entire group.)
2. Study the data and findings that complement this report.
3. Send a small delegation to visit Guatemala and Costa Rica to see how they have handled similar problems.
4. Plan two or three pilot training projects in the urban, industrial sector and in the rural sector. Learn what problems may arise.
5. Develop and publish three newsletters which will disseminate information about the work of the Council and select exemplary training programs.

6. Begin to plan beyond six months; organization, program, budgets, etc.. Future financing (loans, tuition, contract training, taxation) will be central to continuation.

Resources for a small beginning are available. USAID has agreed to support a coordinator for five months. The Ministry of Education has agreed to house a coordinator, and the private sector has agreed to provide a secretary.

While the formation of the Industry and Education Training Council is the central thrust of these recommendations, we invite attention to two other key areas: the Bachillerato Diversificado Program and the implications of academic development for rural development.

RECOMMENDATION TWO

IMPROVE AND CREATIVELY EXPAND THE BACHILLERATO DIVERSIFICADO PROGRAM

Based on findings and observations, we recommend primary emphasis on upgrading the current Bachillerato offerings, so that students in fact acquire marketable technical and vocational skills. Only after this problem has been confronted and in concert with the enrollment and employment needs of the nation, should consideration be given to expansion of the program.

1. Increase the array and quality of instructional materials available to teachers.
2. Explore alternative schedules in order to accommodate more students and adults to make more efficient use of facilities.

3. Provide enriched learning experiences for students through work experience, cooperative education, credit for out-of-school experience and more flexible options in the curriculum.
4. Rewrite the common core courses in each track to make them relevant to the specialized subject matter; i.e., vocational, commercial, fishing, agricultural, etc.
5. Develop a comprehensive pupil-personnel program that works individually with students in selecting programs related to career choices, and one that works cooperatively with students, parents, and the private sector on basic concepts of career education programming, planning and evaluation.
6. Develop a follow-up tracer system of graduates to determine whether the Bachillerato track has been successful in providing students with the skills they need in their employment, and to get ideas for program improvement and expansion.
7. Provide more career exploration experiences -- vocational guidance, career guidance activities -- and then develop their secondary curricula programs around twelve to fifteen solid, more comprehensive middle-level technical skills.
8. Consider the concept of more intensive post-secondary level vocational/technical training programs where students voluntarily can select specialized career training programs. (The success observed at the Instituto Tecnológico Centro Americano in Santa Tecla supports this recommendation.)

The following curricular emphases should prove fruitful to both the manpower and the sector economic development needs of the nation in planning for expansion of the Bachillerato Diversificado Education Cycle:

1. Expand the agriculture curricula considerably to include programs that relate more closely to agribusiness.
2. Expand the technology centers' curricula to include construction skill areas, emphasizing:
 - a. Electricity
 - b. Masonry (all phases)
 - c. Interior Finishing
 - d. Painting or coating
 - e. Plumbing
 - f. Operation of heavy and light equipment
 - g. Rough and smooth finishing
3. Expand commerce and administration programs to include:
 - a. Computer Technology
 - b. Electronics
4. The following programs seem to have promise as potential curricular areas:
 - a. Printing
 - b. Communications
 - c. Sales and Marketing
 - d. Advanced Bookkeeping or Accounting
 - e. Restaurant Cooking/Management
5. Consider putting management and administration leadership sources in all Bachillerato Diversificado programs.

6. Consider establishing short courses dealing with single skill areas so students can gain intermediate skills in more than one vocational area.

RECOMMENDATION THREE

EMPLOYMENT-GENERATING ACTIVITIES IN THE RURAL SECTOR

After seven months of study, the data began to point to an unanticipated area of concern. The rationale for Recommendation Three is synthesized from five interrelated observations:

1. The high birth rate will continue to create staggering requirements for new jobs each year if unemployment rates are to be maintained or reduced.
2. Unless dramatic action is taken, migration into the cities will continue, worsening already overcrowded conditions.
3. Modern industrialization is rarely labor-intensive, and cannot be relied on to generate significant numbers of new jobs. Data suggests the reverse. For instance, if very rapid industrialization occurs, unemployment would likely increase.
4. Manpower economists conclude that with either a modest or high-growth economic future, the agricultural sector must become significantly more productive. Given these conditions, many more people with middle-level skills will be needed to achieve this objective.

The full impact of this issue was brought out during the last three weeks of the study, following a visit by Dr. Frederick H. Harbison, Professor of Economics and International Affairs, Princeton University. From a lifetime of experience in developing countries all over the world, Dr. Harbison advised us that:

In most developing countries with rapidly rising populations, the bulk of the labor force is in the rural areas and will be there for several decades to come. Estimation of the absorptive capacity for rural labor is thus of primary importance. In most cases the major concern will be not to release labor from the land, but to find ways of employing it more productively in rural areas...

In summary, it is possible for developing countries, following logical policies, to have industrial and urban development which will generate substantial employment. Yet it would be unrealistic to assume that such development can provide the major solution for the problem of underutilization of human resources...It is doubtful, indeed, whether manufacturing and construction combined in the urban areas can absorb more than a fraction of the annual increase in the labor force. Until such time as growth in population declines to the levels of the presently advanced countries, most of the labor surplus will have to be absorbed in the countryside rather than in the cities.⁹

We recommend that the government of El Salvador, through CONAPLAN, appropriate ministries, the private sector, and with possible technical assistance from international organizations, undertake employment-generating activities for the rural sector. The perspective and the technical skills of the Misión de San José are largely oriented to education, so we have reservations about making specific recommendations

⁹For a more comprehensive understanding of this problem, reference is made to: Harbison, Frederick H., Human Resources as the Wealth of Nations, Oxford University Press, New York, 1973.

not based on experience or data specifically derived from our research. However, we are convinced that unless immediate policies and programs are developed to expand the rural development sector, long range manpower training needs will not be met.

Part II contains abstracts of the studies used to support our arguments.

Part III consists of supplementary materials related to the research and development phases of the study; i.e., studies, incidental position papers and other related documents.

PART II

MAJOR ABSTRACTS OF PRINCIPAL DOCUMENTS
AND
THE POSITION STATEMENT ON THE
BACHILLERATO DIVERSIFICADO EDUCATION CYCLE

ABSTRACT

GROWTH PROSPECTS OF THE SALVADOREAN ECONOMY AND IMPLIED DEMAND FOR SKILLED PERSONNEL, by Stavros Apergis, September, 1974.

The purpose of this paper is to survey the basic trends of the Salvadorean economy, and to forecast the probable size and sectoral composition of the economy until 1981. The rationale is to provide guidelines for expanding the formal and non-formal systems of middle and low level skill creation as a function of market demand for such skills.

I. PAST GROWTH TRENDS AND TWO ALTERNATIVE PATHS OF GROWTH FOR THE PERIOD 1971-1981

GROSS DOMESTIC PRODUCT (Million Colones, Current Prices)

	1961		1966		1972	
	Colones	Per Cent	Colones	Per Cent	Colones	Per Cent
	1,444.0	100.0	2,105.8	100.0	2,890.7	100.0
TOTAL						
Agriculture	465.6	32.2	573.9	27.2	740.5	25.6
Mining, Quarrying	2.1	0.1	3.0	0.1	4.5	0.2
Manufacturing	223.4	15.5	392.6	18.8	550.2	19.0
Construction	47.2	3.3	74.7	3.5	99.3	3.4
Utilities	17.8	1.2	29.9	1.4	44.2	1.5
Transport, Communications	69.2	4.8	91.2	4.3	139.3	4.8
Commerce	299.2	20.8	511.3	24.3	647.6	22.4
Financial Services	23.6	1.6	38.2	1.8	70.4	2.5
Housing	70.4	4.9	81.4	3.9	109.8	3.8
Public Administration	121.1	8.4	155.2	7.4	238.3	8.3
Personal Services	104.4	7.2	154.4	7.3	246.6	8.5

SOURCE: CONAPLAN, Indicadores Economicos y Sociales, 1972, pp. 39-40.

Between 1961 and 1966 the value added in manufacturing (at constant prices) increased at an average annual rate of 11.1%, and income per capita increased at an annual rate of 4.4%*. Since the mid-60's, several factors combined to stagnate economic growth in the manufacturing sector:

- A. Lack of raw materials
- B. Establishment of small manufacturing firms who rely on marketing products in low-income Central American countries.
- C. Low demand for manufacturing input based on a skewed distribution

In the agricultural sector, major products (coffee, sugar, and cotton) produced a low elasticity of demand for a significant part of the total output. Also, the amount of land with agricultural use per inhabitant is very limited. As population grows, average farm size decreases (6.9 hectares to 5.4 hectares from 1961-1971). Reproducible capital is scarce.

Consequently, between 1966 and 1972, Gross Domestic Product per capita increased at an average annual rate of only 0.7 percent (at constant prices). Furthermore, because of worldwide inflation, the price of imports has risen sharply, and it can be expected that the limitation on growth imposed by balance of payments will persist.

*CONAPLAN, Plan de Desarrollo Economico y Social, 1973-1977, Vol. 2, Desarrollo Industrial, pg. 7.

TWO FORECASTS OF GROSS DOMESTIC PRODUCT BY SECTOR
(Million Colones, 1971 Prices)
1971-1981

SECTOR	1971		1981 Modest Growth		1981 High Growth	
	Colones	Per Cent	Colones	PerCent	Colones	PerCent
TOTAL	<u>2,697.4</u>	<u>100.0</u>	<u>4,000</u>	<u>100.0</u>	<u>4,700</u>	<u>100.0</u>
Agriculture	723.5	26.8	920	23.0	1,050	22.5
Mining, Quarrying	4.3	0.2	10	0.2	10	0.2
Manufacturing	519.2	19.2	860	21.5	1,340	28.5
Construction	79.2	2.9	140	3.4	180	3.8
Utilities	40.3	1.5	70	1.8	90	2.0
Transport, Communications	131.6	4.9	200	4.9	210	4.5
Commerce	587.1	21.9	880	22.0	870	18.5
Financial Institutions	62.1	2.3	110	2.9	120	2.5
Housing	100.3	3.7	150	3.7	160	3.5
Public Administration	219.0	8.1	320	8.1	330	7.0
Personal Services	230.8	8.5	340	8.5	340	7.0

Characteristics of Forecast A (Modest Growth)

1. Aggregate rate of economic growth of 3-4% per year.
2. Income per capita would grow at a maximum of 1% per year.
3. Output of worker grows at a rate slightly lower than income per capita.
4. Unemployment rates reduced marginally from 1971.
5. Structure of Gross Domestic Product by economic sector.
6. Presupposes a major effort in agricultural productivity and export diversification.

Characteristics of Forecast B (High Growth)

1. Aggregate rate of economic growth of 7.5-8% per year.
2. Per capita income grows at a rate of 4-5% per year.
3. Sectoral structure would be modified significantly; the share of agriculture would fall faster, despite a higher rate of growth; the share in the manufacturing sector would increase rapidly.
4. Unemployment would increase.
5. Agriculture and manufacturing will have to grow at double the traditional rate.

The author concludes that: "Given the basic preconditions corresponding to each one of these alternative forecasts, and the performance of the economy since the mid 1960s, it seems reasonable to suggest that the actual point at which the economy will be found in 1981 will correspond much more closely to the 'modest' (Forecast A) alternative...than to the more ambitious one (Forecast B)".

II. IMPLICATIONS OF THESE ALTERNATIVE GROWTH PATHS FOR THE DEMAND FOR MIDDLE AND LOW LEVEL SKILLED PERSONNEL

Using linear interpolations of CONAPLAN projections for 1980-85, the author presents the composition of the labor force in 1981 for Forecast A, and draws inferences about manpower training needs in both Forecast A and Forecast B. It is possible to derive first approximation occupational breakdowns at the three digit level by expanding the table entitled, "Distribution of the Labor Force by Economic Activity and Occupational Category" (The General Directorate of the Census is said to have the information stored on computer tapes).

Composition of the Labor Force, 1971 and 1981
(Labor Force Number in Thousands)

SECTOR	1971		1981	
	Number	Per Cent	Number	Per Cent
TOTAL	<u>1,315</u>	<u>100.0</u>	<u>1,990</u>	<u>100.0</u>
Agriculture	761	57.9	950	47.7
Mining	1	0.1	2	0.1
Manufacturing	134	10.2	180	9.0
Utilities	3	0.2	5	0.3
Construction	35	2.7	63	3.2
Commerce	119	9.0	240	12.1
Transport	40	3.0	80	4.0
Financial Institutions	10	0.8	20	1.0
Services	212	16.1	450	22.6

SOURCE: For 1971, Population Census of 1971; for 1981, Linear Interpolation of CONAPLAN projections for 1980 and 1985 (for total labor force only).

A. Manpower implications of Forecast A (Modest Growth)

1. The agriculture sector postulates improvement of yield by technologic change, without introducing labor-displacing machinery. Suggests the need for more extension service supervisors and agents, salesmen, bank agents, and progressive foremen... "about 3,000-4,000 middle level personnel can easily be absorbed by the agricultural sector by 1981".
2. The manufacturing sector postulates shifting to larger firms and increased production by better productive foremen... By 1981 there would be a demand for "3,000-4,000 foremen".

3. A large demand for retraining courses.
4. More productive technology in manufacturing growing more slowly than the sector.
5. Emigration from agriculture to other sectors will continue; the service sector will have to absorb the greatest part of the expected increases.

B. Manpower implications of Forecast B (High Growth)

1. Rapid technological change must occur in all key sectors of the economy.
2. Agriculture will require skilled middle management, 1,000-2,000 new positions (mayordomos, working proprietors).
3. Manufacturing will require significant upgrading of skills.
4. Rapid growth of service sector, notably in tourism, perhaps requiring 500 middle level persons with skills in hotel management and tourism.

III. THE PRESENT SYSTEM OF SKILL FORMATION

Middle Level Graduates Available to Meet Demand 1971-1981

AREA	Graduates from Public Schools (Bachillerato)	Graduates from Public and Private Schools
Hotels and Tourism	400-500	400-500
Fishing and Navigation	500-600	500-600
Industry	2,500-3,000	3,200-3,700
Commerce and Administration	6,500-7,500	22,000-25,000
Vocational Arts	150-250	150-250
Agriculture	1,400-1,600	1,400-1,600

SOURCE: Educational Statistics provided by the Ministry of Education

The author estimates that 80% of the graduates will be available to meet demand.

Demand and Supply of Personnel Corresponding to Bachillerato Programs, 1981

AREA	DEMAND	SUPPLY
Hotels and Tourism	500	300-400
Fishing and Navigation	X	400-500
Industry	3,000-4,000	2,500-3,000
Commerce and Administration	X	18,000-20,000
Vocational Arts	X	100-200
Agriculture	3,000-6,000	1,100-1,300

[X=Not calculated, but could be projected.]

The Bachillerato Agrícola appears to be seriously underdeveloped. However, expansion should not occur, in the judgement of the author, unless skills provided are significantly upgraded, and after the government firms up a policy on the size of the ENA (Escuela Nacional de Agronomía). "If one is to relate the tentative demands identified in previous sections with graduates of the Bachillerato Diversificado, it is a precondition that the skills acquired in each area should be raised well above their present level."

If the "modest" growth forecast is adopted, projected demand and implications for the non-formal systems can be determined from the data on hand. If the "high" growth forecast is adopted, the author hypothesizes radical transformation of several basic economic sectors, and the possible need of creating a special agency to supervise the manpower training that would be required.

Finally, the author discusses the idea that "supply creates its own demand"; i.e., human capital prematurely produced is durable and, hence, can be conserved until investment demand is generated. While true for high and low level skills, the author argues that it is not true for middle-level skills. "In order to avoid waste of presumably scarce resources by investing in not immediately marketable skills, it is necessary to study the size and timing of the probable demand for such skills."

ABSTRACT

OCCUPATIONAL INFORMATION FOR EDUCATIONAL PLANNING IN EL SALVADOR *

A five-week, on-site study of occupational information in El Salvador focusing on the middle skill levels disclosed that: (1) there is considerable interest in attempting to link educational planning more closely with sound empirical analysis of the demand and supply of human resources classified by occupation; and (2) serious data gaps exist with respect to the present occupational composition of El Salvador's economically active population (an indicator of manpower demand) as well as the rate at which workers are acquiring occupational skills within the formal school system and through nonformal education (i.e., sources of manpower supply). A substantial quantity of statistical and nonstatistical data has now been compiled dealing with educational programs, employment and unemployment, and training needs--all classified by occupation. (Listed in the full report)

Three principal recommendations are suggested by these findings:

1. Ministry of Education should begin exploring, as soon as possible, the feasibility of setting up -- in the Office of Planning and Organization (ODEPOR) or other office that has data collection, processing, and analysis capability -- an Occupational Information Section charged with continuing responsibility to:

- a. Compile existing occupational information pertinent to formal and nonformal educational programs in El Salvador and serve as a clearing house for the Ministry of Education in this field

*Report submitted December 18, 1974, to USAID/San Salvador (Education) by Robert L. Darcy, DOLITAC Manpower Development Advisor, USAID/LA/DR/EST/Washington, based on five and one-half weeks of technical assistance service with the San Jose Mission in support of the Ministry of Education, Government of El Salvador.

- b. establish liaison with occupational specialists in the Ministry of Labor, CONAPLAN, Census, private groups, and other sources to assure that the Ministry of Education is effectively represented and kept apprised of developments in the field of occupational information
 - c. formulate plans for disseminating occupational data and procedures to schools in order to provide students with information to use in planning their own careers
 - d. advise other divisions of the Ministry of Education on the occupational implications of existing and proposed educational programs, both formal and nonformal, with respect to demand and supply of various occupational categories of workers.
2. Based on available (though incomplete) information, it is suggested that the Ministry of Education give careful consideration to modifying the occupational curricula of the Bachillerato Diversificado schools by:
- a. adding a major Program in Construction Trades, including the function of "Coordination of Construction Activities", as well as the respective Construction Trade Occupations
 - b. expanding total enrollment in Agriculture in order to meet existing manpower requirements in agriculture
 - c. reexamining the worthwhileness (benefit-cost efficiency) of certain existing Bachillerato Diversificado programs having both low enrollments and questionable social/individual value from the viewpoint of national development priorities

3. Concerted action should be taken by the Ministry of Education and other appropriate governmental and non-governmental agencies (including the proposed Industry/Education Council) to expand immediately the opportunities for out-of-school youth and adult men and women to receive short term skill training in occupations identified by the San José State University study and other sources as areas of especially high need.

ABSTRACT

A STUDY OF THE NEED FOR SHORT TERM TRAINING AMONG MIDDLE LEVEL (INDUSTRIAL) WORKERS IN SAN SALVADOR, EL SALVADOR,
by David J. Bond, January, 1975

This study examined the training needs among middle level, skilled workers employed in 242 firms in the department of San Salvador. The goals of the study were to determine:

1. The extent to which there is a need for immediate short-term training for middle level, skilled and semi-skilled workers.
2. The specific types of training which could be expected to remediate skill deficiencies among the workers.
3. How that training could be effectively organized and offered.

A personal interview questionnaire was developed, field tested and used to collect data on about 19,669 workers in 32 major occupations.

The major findings of this study are:

1. Of the workers, 5,581 were judged by their employers as in immediate need for training (28.4%). Of the 242 firms studied, 193 (79.8%) reported a need for immediate training.
2. Approximately 18% of the middle level workers in medium and large businesses could be promoted to positions of higher responsibility if they were provided training.

3. Approximately 75% of the employers of middle level workers in medium and large business characterize their need for training as urgent.
4. Current training programs offered by business are inadequate to meet the need for training.
5. Sixty-one percent of businesses would be willing to share the cost of training programs.
6. Resources (personnel and facilities) are available to be used to provide job skill training, particularly among big businesses.

Thirty-two major occupations were studied in depth to determine which specific job skills are seriously deficient and in need of corrective training. The occupations studied were: Secretary, General Mechanic, Auto Mechanic, Salesperson, Electrician, Warehouse Laborer, Accountant, Assistant Accountant, Radio Technician, Weaver/Spinner, Dye Washer/ Applier, Bookkeeper, Brick Mason, Framer, Carpenter, General Painter, Automotive Body Repair, Cosmetologist, Dressmakers, Quality Control Inspector, Assembler, Cashier, Fisher, Librarian, Driver, Baker, Plumber, Supervisor (of Blue Collar Workers), Shoemaker, Telegraph Operator, Telephone Operator, Tailor.

Detailed tables of specific job deficiencies, and a quantitative estimate of the extent of the deficiency among employees of the companies studied are presented. These tables provide important information for anyone with responsibility for designing on-the-job training programs for middle level skills in the department of San Salvador (Tables 7-37).

PAST AND FUTURE PLANS FOR TRAINING

Forty-four percent of the firms surveyed reported that they had organized training programs during the last three years. About one-third of the firms reported they needed

training for their employees, but are unable to provide it. The author concludes that this is one indication of an unmet need for training. Appendix B lists those training courses which have been offered in the past. Fifty-three of the firms report that they have no plans for future training.

THE EFFECT OF TECHNOLOGICAL INNOVATION

The extent to which technologic innovations have influenced training programs among the firms was examined. Nearly 1/3 of the employers reported that innovations have indeed caused change in their employment practices, primarily in the creation of new positions. The author predicts further impact on job skills if San Salvador follows normal modernizing trends. Data on new technological procedures or innovations, new skills required and number of employees who need training to meet changing needs are found in Appendix C of the paper.

HOW MIGHT THE COST OF TRAINING BE MET?

Of 237 firms responding, 61.2% of the employers indicated that they would be willing to contribute financially to the support of the training courses. Working cooperatively through an industry-education consortium was the favored form of organization (37.15%). Thirty percent of the firms would be disposed to share the cost of training if the programs were organized solely by industry.

ARE INDUSTRY FACILITIES AVAILABLE FOR TRAINING?

About half the firms reported that facility and personnel resources exist that could be used for training. Not unexpectedly, large companies reported more available training resources than smaller areas (64.3% vs 38.7%).

TO WHAT EXTENT IS THE BACHILLERATO DIVERSIFICADO PROGRAM KNOWN AND VALUED?

Forty-nine percent of the respondent firms regard themselves uninformed about the Bachillerato Diversificado Program; only 10% feel well-informed about it. Twenty-seven percent reported they have a definite need to hire future graduates. Most respondents were less sure about future hiring practices.

WHERE IS TRAINING NEEDED MOST?

Small firms had nearly twice the need for middle-level training than large ones (44.8% vs 20.3%). Commerce, Business Services and Construction were all sectors with greater employment retraining needs.

IN CONCLUSION

The author concludes that if a decision is made to implement new training programs in the private sector, these recommendations should be followed:

1. The training programs should focus exclusively on the upgrading of job skills which can be stated in behavioral terms.
2. Programs should be developed under the guidance of a curriculum developer with experience in writing behavioral objectives and all the curricular ramifications behaviorism implies. A curriculum development model should be followed.
3. The training curricula should be organized as mini-courses.
4. The training courses should be free to the students, unless the student is guaranteed that significant compensation (e.g., pay increase) will be awarded upon successful completion of the training.

5. Programs should be conducted as far as possible in the businesses where the trainees are employed, using the materials, equipment, facilities, personnel and other resources of those same businesses.
6. Implementation of training programs should be pilot tested.
7. The erection of an elaborate administrative mechanism should be avoided.

ABSTRACT

AN OVERVIEW OF SELECTED NON-FORMAL TRAINING PROGRAMS NOT UNDER THE DIRECTION OF THE MINISTRY OF EDUCATION, by Gilberto E. Méndez, M.A., November, 1974.

This report had a twofold purpose. First, it intended to produce an inventory of non-formal training programs existing outside the Ministry of Education. Second, it intended to provide data useful for estimating the outputs of selected meaningful programs.

RESEARCH OBJECTIVES AND PROCEDURES

1. Obtain data relative to the task and scope of selected non-formal training programs (henceforth referred to as Programs) not under the direction of the Ministry of Education (henceforth referred to as MOE).
2. Obtain data relative to the organization of the Programs.
3. Obtain data relative to the training value of the Programs as studied through their curriculum.
4. Conduct on-site assessment of facilities and other material or physical facilities available to the Programs.
5. Analyze data relative to:
 - a. Task
 - b. Scope
 - c. Offerings and/or curriculum
 - 1) Objectives
 - 2) Rationale
 - 3) Content

- 4) Organization
- 5) Delivery Strategies
- 6) Evaluation Strategies

MAJOR FINDINGS

1. The aggregate output of the Programs is modest as measured against training needs.
2. Approximately 5,445 individuals are served annually by the Programs. (The annual number of middle-level trained individuals who need to be incorporated into the economically active population at the occupational steps served by the Programs is estimated to be 13,000. This figure, of course, does not include retraining or skill upgrading needs.)
3. Training efforts by individual programs were judged to be generally ineffective and of limited value to the overall manpower development problem of the nation. Exceptions to this were the FOCCO, a community development program; Fé y Alegria, a popular privately supported education/training movement; and the National Apprenticeship Center, a labor intensive-skills training program under the auspices of the Ministry of Labor.
4. Articulation among the programs, and coordination between the programs and MOE, and other germane ministries is critically deficient.
5. All the Programs lack a management information system. This seriously limits their training need-assessment processes.
6. Specific training needs are not being served. This is particularly true when studying modern training needs and program offerings for women.

7. Little is being done to create promotional opportunities between levels of occupations within the nation's occupational pyramid profile.

RECOMMENDATIONS

1. The quantitative and qualitative demand for training of the Salvadorean work force should be detected as accurately as possible. An effective overall effort of human resource training requires knowing:
 - a. What to do
 - b. How much to do
 - c. For whom
2. A system should exist to continuously provide training organizations/programs with relevant information in order to assist their priority setting, decision making, and resource allocation processes.
3. It is necessary to find out what linkage relationships--diffuse, normative, functional, enabling--exist between training programs and MOE.
4. MOE should take the initiative (as it is constitutionally charged to do) to facilitate the creation of a communications network between itself and the different training programs representing functional and normative linkages.
5. More attention should be given to promotional needs/opportunities training programs designed for specific functions.

6. The creation of an overall training model should be carefully studied. For example, a decentralization study should be conducted according to training organizations' structures and functions. This is a prerequisite for assessing the feasibility of developing the proposed INSAFORP.
7. A global framework of functions, responsibilities, and actions relative to manpower training should be clearly outlined for all public institutions involved in this process.
8. An industry-education/training council seems to be a viable strategy for articulating training programs and for coordinating the same with MOE, MOL, CONAPLAN, and industry--immediate attention should be given to establish such a council.

ABSTRACT

REPORT ON NON-FORMAL ADULT EDUCATION/TRAINING PROGRAMS WITHIN THE MINISTRY OF EDUCATION IN EL SALVADOR, by G. M. Arciniega, September, 1974.

The purpose of the study was to analyze the non-formal education/training programs under the Division of Adult and Continuing Education, Ministry of Education (MOE).

The goal of the study was to assess the extent to which the programs analyzed contribute directly or indirectly to meet actual and emerging manpower training needs in El Salvador.

OBJECTIVES/PROCEDURES

1. Collect and review information on adult education/training programs within MOE.
2. Analyze and evaluate the programs in terms of their objectives, rationale, curricula, delivery strategies, equipment and material resources, and evaluation systems.
3. Identify the programs with the greatest capacity to help meet Salvadorean manpower training needs.
4. Present recommendations for program expansion and development.

MAJOR FINDINGS

1. There are nine non-formal education/training programs under the direction of the Division of Adult and Continuing Education, all of which are under-

funded, lack articulation within themselves, and lack coordination with other germane institutions or governmental bodies closely associated with the programs themselves.

2. At this time, the programs are in the embryonic stages of development and implementation.
3. At best, the programs represent a strong commitment from persons involved - including student associates - but marginally contribute to meeting manpower training needs in their target areas.
4. Six of the programs are aimed at providing basic education to adults: Básica Acelerada, Orientada, Funcional, Cívica, Defensa, and Voluntariada.
5. Three of the programs provide job oriented skill training to adults: Educación Funcional de Asociados - Zapotitán, Capacitación Rural, and Capacitación Urbana.
6. In terms of budget, staff, and enrollment, the largest non-formal education/training program is Educación Básica Acelerada, a national level program providing condensed academic skills to approximately 32,000 individuals.
7. The programs which appear to have some potential for meeting the most urgent manpower training needs of the country are:
 - a) Educación Funcional entre Asociados, Distrito de Avenamiento y Riego - Zapotitán
 - b) Capacitación Laboral Rural
 - c) Capacitación Laboral Urbana

Educación Funcional entre Asociados, Distrito de Avenamiento y Riego - Zapotitán serves 1,205 campesinos, but is not yet a fully developed comprehen-

sive program for meeting training needs of rural people in the Zapotitan area.

Capacitación Laboral Urbana serves approximately 1,300 individuals and is a comprehensive skill formation program for urban dwellers throughout El Salvador. This integral formation program includes basic education, family education, and skill training. The basic characteristics of the Capacitación Laboral Urbana program are community involvement and services for both men and women -- the women's program component is actually broader than the men's. Strong demand for this program has manifested itself in excellent retention rates.

Capacitación Rural, serving about 1,300 persons, provides short term job skill training without basic education. The training time span of one week may not be sufficient to provide rural dwellers with adequate job skill training.

8. Overall, the adult and continuing education/training programs represent the least expensive education efforts within MOE, and get the least amount of economic allocations; yet these programs represent a strong potential for reaching a significant number of Salvadoreans who are in urgent need for training.
9. The total number of persons served during 1974 through the non-formal adult and continuing education/training programs was estimated to be 41,000.

RECOMMENDATIONS

1. More economic resources should be allocated to the Division of Adult and Continuing Education.
2. Staff development should be conducted in the following areas: curriculum design, administration and

supervision, research, and evaluation.

3. An administrative rationalization of the current non-formal education/training programs should be conducted.
4. A master plan for program development should be prepared.
5. A council to coordinate and articulate resources of the programs and the various ministries should be formed.
6. Local industry-education/training councils should be developed.
7. Increased utilization of existing resources (especially the Bachillerato Diversificado facilities) is needed; immediate exploration should be started.
8. Curriculum development and evaluation is needed; resources should be assigned for those areas.
9. A proposal to expand the Capacitación Laboral Program was developed. It is strongly recommended that this document be examined by the Adult and Continuing Education Division, as it may prove useful as a frame of reference for program development.

POSITION STATEMENT

PERSPECTIVES FOR CURRICULUM DEVELOPMENT AND EXPANSION OF THE DIVERSIFIED BACHILLERATO EDUCATION CYCLE, Prepared by the staff of the Misión Cooperativa Para la Planificación Educacional, January, 1975

This report is prepared especially for the Ministry of Education (MOE) and directed toward the immediate and short term planning strategies for formal secondary education in El Salvador. The statement is drawn from a series of related research projects, personal interviews and visits, activities and meetings. Its purpose is to propose guidelines for future development of the Bachillerato Diversificado education cycle. Rather than being a comprehensive statement on secondary education in its total perspective, the report focuses on those programs which have the closest relation to middle-level skilled and semi-skilled occupations. The report is divided into four sections: a) a qualitative assessment of four Bachillerato programs as studied at nine educational centers; b) guidelines for designing and implementing a comprehensive pupil personnel and career guidance program that complements the goals and objectives of the Bachillerato Diversificado Program; c) a proposal for implementing a cooperative work-experience program at the Bachillerato level; and, d) a discussion of strategies and alternatives for program expansion.

I. Qualitative Assessment of Four Bachillerato Diversificado Programs *

A trained clinician assessed four specialized programs in the Bachillerato Diversificado Program cycle: a) Industrial Education with four sub-programs; general mechanics, automotive, electricity and electronics; b) administration and commerce; c) agriculture; and, d) fishing and navigation. The criteria for selecting these four programs were directly related to the overall thrust of the project which focused on national problems related to middle-skill level training and education.

In making the assessment, two research methodologies were used: a) on-site visits to nine instructional locations; and, b) a survey instrument that examined the program of studies in each vocational area as well as job related perceptions of 129 teachers and administrators.

Less empirically research oriented than the other projects of the Misión San José study, the report raises many practical, yet critical, issues facing Salvadorean educational leaders. These issues center around resource allocation (or more precisely, dilution of programs because of limited resources), facilities utilization, inadequate in-service and pre-school teacher training curriculum development and equipment and materials.

The author concludes that the Bachillerato system is in place, but that the resources allocated to the program to produce the desired expected outcome (i.e., secondary graduates with strong marketable technical skills) is inadequate.

*The material for this section of the report is drawn from the final report submitted to the San Jose State Foundation by Joseph Troncoso, August, 1974.

Major Findings

The report presents data regarding teachers' perceptions, facility layout, curriculum, etc.

1. Physical Facilities. In twenty-one of twenty-two programs studied, the facilities themselves, including equipment, student material and supplies, safety equipment, lighting, laboratory space, etc. were found to barely meet minimum standards considered necessary to prepare students for the skills needed to secure employment in the modern industrial sector.
2. Common Core Curricula. Teachers and administrators interviewed agreed that the common courses of study: physics, mathematics, chemistry, etc. were far too irrelevant to the specialized level of training emphasized by particular Bachillerato programs. Data were not presented that would reveal if the problem rests with the "nationalized standard curricula guidelines", or with the inability of the teachers to develop creative learning experiences that would extend and complement the specialized curricula offered. It is assumed that the problem is a result of both factors. Nevertheless, teachers strongly felt that the general curricula should be designed to correspond more closely with the technical training offered in the special programs.
3. Pupil Personnel Services. One of the most critical findings emerged in the area of poor student personnel guidance and counseling services throughout the system. This is especially important because of the nature and design of the Bachillerato Diversificado philosophy of secondary education.

In essence, this program proposes a multi-track

series of curriculum offerings designed to: a) give a student the general basic academic preparation needed to function as a mature Salvadorean citizen, b) give him the necessary academic preparation necessary to be able to pursue his educational career by going on to the university or other post-secondary education programs, and c) provide the curricular experiences concurrently needed to acquire the marketable skills necessary to work in business or industry upon graduation. Because students must select their education career path toward the end of the eighth grade, it is important that as much information as possible is available to students and parents in order that good judgments and decisions will be made.

Moreover, in order that the schools (programs) can receive feedback information regarding the success of graduates in pursuing their career and ancillary information regarding qualitative dimensions of the curricula programs, a pupil personnel service must include a graduate follow-up program that "traces" each graduate from three to five years following graduation.

4. Teacher Training Needs. The survey revealed that teachers and administrators were highly motivated to improve their pedagogical and management skills, and were aware of their instructional deficiencies.
5. Industry-Education Cooperation. The field visits and interviews found that few school programs had functional and relevant on-the-job or work experience programs organized as an integral part of their instruction. Where there was good cooperation between the program and related local business or

industry, there were strong indications to show that such a relationship positively affected the morale of students, the quality of the program and the instructional practices of the teachers.

Guidelines for Improving the Bachillerato Diversificado Program

Based on the data received in the survey and the information received during the interviews, guidelines for qualitative improvement are offered below for Ministry of Education consideration.

1. Qualitative Improvement of Instructional Programs. Concentrated effort has to be given to the quality of instruction offered if the ultimate goals and objectives of the Bachillerato Diversificado program are to be met. Said simply, the students are not receiving the level of instruction or kinds of curricular experiences necessary to become strong candidates on the open market of employment. Students are not endorsing the program at the level hoped for. Approximately 70 per cent of the secondary school students still select the academic track, either because they are not convinced that the "vocational" tracks will give them the skills they are designed to, or because they still consider them "below" the academic track in the social-cultural sense, or both.

The only way to combat this problem is to make the program-quality so good, so appealing, that students and parents will judge them only on the basis of vocational choice or career aspiration, and not on extraneous variables which have little bearing on the programs themselves.

A number of suggestions are made here:

- a) Each student should have all the materials he needs to do practical work in the classroom.
- b) All machines should be in good operating order and instructors should be well trained to teach from each machine.
- c) Programs should be closely related to the skills needed by local industry.
 1. Develop instructional projects in the fabrics or goods served by local industry.
 2. Draw on local industry for curriculum resources.
 3. Get curricular material from organizations such as OIT (ITO), SENA, etc.
- d) Establish and maintain minimum student performance criteria so that every student will achieve competency before completion of the program. These criteria should correspond closely to entry level job skills required by local industry and business firms.
- e) Students should be given a set of textbooks and curriculum material that they can "relate to" during the course study.
- f) Back up classroom and field experience course work with complementary library resources and materials.
- g) Set up in-service education programs for the instructional staff so that they receive first-class orientation related to their instructional problems.

2. Designing and Implementing a Career Guidance Program

The success of a multi-track secondary school program with strong emphasis in the vocational/technical arts,

rests essentially with the ability of the program to "match" its offerings with the aptitudes and career aspirations of students. If the system fails to do this, a variety of problems arise:

- a. Students waste precious time in coursework for which they will make little use.
- b. The system expends valuable resources accommodating the students.
- c. Students may be resentful at the end of their high school experience, simply because they feel that they didn't get the education they wanted or needed.
- d. The climate for learning established in classrooms and laboratories is negatively affected because of poor motivation on the part of the students.

The Ministry of Education should develop a system to provide students with as much data as possible concerning careers, individual aptitudes, success criteria, etc.. The average ninth grade student and parent simply cannot obtain the quality of data necessary for making good career or program selection decisions. Some students may have strong intuitions toward a career goal. However, once the stark realities of choice come into play, and students find themselves locked into a program track, and find out their intuitions were wrong, it may be too late to change, and much has been lost. Thus, the formal system should develop and implement a comprehensive career guidance system no later than the eighth grade, and continuing throughout the whole diversified cycle. Elements of this program are:

- a. Development of occupational information pamphlets, brochures or other material that discuss the general nature of employment - the positive and

negative attributes - in different occupational areas.

- b. Individual testing and measuring of student aptitudes no later than the eighth or ninth grade.
- c. Follow-up counseling after the aptitude test and before selecting a program and orientation with individual students and their parents.
- d. Field visits to related work centers during the ninth grade.
- e. Career orientation fairs; days given to inviting employers into the schools to explain their work, and discuss questions with students and parents.
- f. Continuous monitoring of students' progress throughout the diversified cycle.
- g. Following up the student immediately after graduation, and for three to five years following.

3. Designing and Implementing a "Graduate Tracer" System.

The tracer study idea is suggested by the bullet which traces its path from the firing point to the target. It is a system for following the work experience of those who leave or complete programs of training or education, formal or non-formal. Even though such follow-up programs are difficult and initially expensive, the returns in terms of effective evaluation and feedback to skill and knowledge-generating institutions are potentially very great. Experience with pilot studies in other countries has shown that:*

* The material offered in this section was afforded by Dr. Frederick Harbinson on his visit to El Salvador in January, 1975.

1. Most school leavers can be traced to their places of employment, but personal follow-up interviews are necessary to supplement mailed questionnaires.
2. Information about work experience and conditions of employment can be secured easily, but analysis of the data collected typically involve more time and expense than originally estimated.
3. School directors and vocational counselors are eager to make use of the information received on employment experience pathways.
4. Estimates of unemployed school leavers derived from the tracer studies have a tendency to vary considerably with estimates derived from manpower surveys - estimates from tracer studies tend to be lower (Kenya education study).
5. It is necessary to provide inducements (such as extra personnel or grants) if institutions are expected to take on the task of implementing tracer programs.

4. The Need and the Opportunity to Develop Work-Experience Options for Students

The whole concept of schooling programs having a closer relationship to local industry and business concerns deserves more attention. One way in which schools can effectively bridge the gap between theory and practice as experienced in the classroom and the "real" world of work one experiences in a factory or business establishment is to bring the two together in a functional, meaningful and productive way. Many school systems have found success in this area by incorporating Work-Experience Education into the upper two years of a

student's secondary school program. The work-experience program has two purposes: a) to expose the student to the actualities of the profession he is studying and get credit for such experience, and b) to give industry an opportunity to get close to students and programs of the school.

An outline of the total dimensions of the program is set forth below:

To facilitate middle-level graduates' transition into a productive, rewarding occupation, the following "pupil personnel" services have to be developed:

1. Pre-graduation orientaiton
 - a. Career Guidance
 - b. Career Education
2. Pre-graduation Employment
 - a. Work Experience
 - b. Work-study
3. Post-graduation employment services

Ideally, the services indicated above should mesh into what is known as cooperative education. Coöp Ed involves:

1. Work experience options interwoven into the curriculum for which school credit is given;
2. An array of attractive work-study stations located in each high school;
3. Career guidance and counseling facilities for each program offered;
4. Reference and follow-up systems.

Following is an outline of a cooperative education (coöp ed) component, which may be made more specific if the Ministry of Education should decide to explore

its potential applications in El Salvador.

WHAT IS COÖP ED?

- A coordinated joint learning venture between the student, the teacher, and the employer

WHAT ARE THE GOALS OF COÖP ED?

- To enrich the educational experience received by students.
- To provide current industrial, business, and community work experience that gives meaning and direction to the student's total education experience.
- To provide students with marketable skills and objective knowledge about occupations.

HOW DOES COÖP ED WORK?

- Enrolment is optional
- Employment of students is supervised, evaluated, and credited.
- Limited overall number of credits can be earned through coöp ed.
- Students' work performance is jointly evaluated by: the student, the supervisor (employer), and the teacher.
- One teacher may coordinate the work-study/work experience activities of several students.
- Performance and/or learning objectives are formulated by the students with the help of the supervisor and the teacher coordinator.

- Flexible work schedules are prepared. For example, students may choose: a) The Parallel Plan--Students hold part-time work afternoon or evenings. b) The Alternative Plan--Students dedicate $\frac{1}{2}$ of their school time to work experience one year, usually the last, and work a maximum of 15 hours per week for one year; or c) Other organizational plans that have merit and applications to the social setting.

WHAT KIND OF WORK STATIONS CAN BE DEVELOPED?

- Assistant Accountant
- Assistant Teacher
- Hotel and Resort Clerk
- Nurse's Aid
- (Week-end) Agricultural Extensionist
- Credit Clerk
- Small Appliance Repair Technician
- Auto-mechanics Technician Trainee
- Merchandise Management Trainee
- Retail Clerk
- Food Processing Technician Trainee
- Court House Clerk
- Secretary

A CREATIVE DESIGN TOWARD PROGRAM EXPANSION

A number of social and cultural factors extant in El Salvador make it imperative that the secondary schools expand their capacity to enroll students. Indeed, this is a top priority of the Ministry of Education. Each year the aspirations for a secondary level education rise among the 15 - 18 year old age group. Each year hundreds of young adults seek access to the system for the first time. At the same time, the university systems are having more and more difficulty accepting even 25% of the Bachilleratos seeking admission to higher education. It was for this reason in the first place that the Bachillerato Diversificado was established; the purpose being to provide an opportunity for Bachillerato students to graduate with a saleable skill.

Taking into consideration the philosophy of the Bachillerato Diversificado program, the realities of both the existing economic and manpower development needs of the country and the system as assessed by members of the team, we propose a number of alternatives and program changes that balance both the demand for expansion and the need for qualitative program improvement.

Horizontal Expansion. The system must expand and grow right now. There is too little time to plan and develop a new level if the Ministry of Education is to meet the immediate demand for more student spaces. The design and direction of this expansion should take place in three basic ways: First, major attention should be given to the quality of instruction and the quality of instructional resources available to students in the existing school settings. A number of suggestions have been made here. Second, if the vocational aspects of the philosophy of the Bachillerato

Diversificado Program are to be realized, the system must consider implementing a strong and comprehensive pupil personnel and guidance system starting at the eighth grade level and continuing until at least five years after the student graduates. Again, we have outlined above how this could be achieved.

Finally, in addition to the internal program development procedures described, (in essence, quasi-horizontal expansion) our data give us some insights into those kinds of curriculum programs that could be developed at the Bachillerato level now that promise to play a significant role in meeting the skilled training deficit of the nation's labor force for the near future. However, it is necessary to point out that we should not be misled by the realities of vocational and technical education training at the secondary level and the absorption factor of such graduates by industry upon graduation. Three factors play a somewhat pejorative role here in any country in the world:

- a) It is not uncommon for high school students and parents to treat the technical side of education with deference and suspicion. After all, history and culture has shown them that the path to "success" has been through higher education. There are some indications that this level of understanding is changing a little. It changes rapidly when young adults get positions and feel internally the need for improving their occupational skills.
- b) Secondly, it is difficult, whatever the skill may be, to train students in a group, multicultural setting for specific skills needed by local industry and business. For this reason, almost all business firms have their own short-term training

programs for new employees. For this reason alone, it is important to have the close relationship with industry so cooperative work study programs can be realized and curricula can be developed along with changing manpower needs.

- c) Thirdly, it is not feasible, given the state of a rapidly changing world economy, to plan educational programs precisely according to projected manpower needs. Even the most sophisticated analyses fail to keep up with the economic changes. Those programs which are traditional in the academic and program sense and steep in bureaucratic organization fail to serve a nation responsibly when industry and development seek more responsive and flexible programs, as they do in periods of rapid change.

Keeping the above in mind, therefore, the study team makes the following recommendations regarding horizontal expansion:

1. Agriculture/Agribusiness programs All indications from the economic development sections of the study show the hope and promise of economic development in the expansive sense resting with a broader and more active agribusiness industry utilizing and developing the human and physical resources of rural El Salvador. The need for qualified manpower in the rural areas in the future is staggering. The demand that this need will put upon existing programs and curricula in the Bachillerato Agrícola schools is likewise critical. Although the team does not pretend to be able to analyze all the implications of this recommendation, we do have an insight into some of the programs that could result.

Extensive rural development programs call for technical expertise in occupations related closely to extension service supervisors, farm supply salesmen, bank credit agents, progressive farm foremen, ecological surveyors and analysts, etc. Therefore, the secondary programs in the agriculture track should be expanded to incorporate these and other technical skill areas relating to the agribusiness and rural development programs. Or, urban school programs can add components of these program needs to their curriculum.

2. Construction and Trade Programs If there is one area of the national labor force that is sure to feel the pains of a reservoir of untrained, unskilled manpower supply, it is the broadly-based construction and trades industry. There are enough development projects planned and presently under way to absorb a tremendous amount of skilled electricians, plumbers, brick layers, large machinery operators, carpenters, finishers, etc. This occupational area has implications for the urban marginal population, the rural campesino and the inner city dweller. The implication for program expansion here is that the urban industrial schools and the rural agricultural schools expand their programs to include curricula that are tied in with the related manpower development needs germane to these areas. In this area in particular, there are implicit implications for opening up these programs to adults during slack periods in the school year, and the evening and weekend hours. The manpower needs simply outstrip the reservoir of resources among the young adult age groups.

3. Supervision and administration courses. Data from the survey and interviews with leading business/ industrial leaders indicate that a critical need for supervisors and administrators skilled in management and personnel administration exists in every occupational sector. Basic courses in the principles of business administration, accounting, personnel administration, and supervision should be developed as both separate and integral components of each Bachillerato track.

Short term, single skill area courses. A third way the system can expand its offerings horizontally is by offering a variety of curriculum options in all the Bachillerato programs. The purpose of expanding the course offerings is threefold: a) it will increase the alternatives for curricular experiences students have; b) it will expand students' occupational, personal and technical perspectives and experiences and c) it will provide insights into areas of student interest before major curriculum decisions have to be made.

It is suggested that these options be short one semester courses built around single topic areas, such as photography, furniture repair/upholstering, small appliance repair, small motor repair, short interrelated courses in computer science and data processing, finishing, printing, landscaping, flower arranging, etc. The ideas and options are innumerable.

This arrangement for designing new curriculum should have, again, a close relationship to industries and businesses in the area. It is conceivable that many of the courses will be taught out in the industry itself. These courses should be offered to adults upon demand,

and every opportunity to have the schools respond to individual needs should be studied carefully before being disregarded. This program will make the schools more comprehensive in nature and more responsive to the individual needs of the students and the social/cultural needs of the community.

Vertical Expansion. Traditionally, the middle-level education cycle has thought only in horizontal expansion - typically by adding new program tracks. We propose that it begin to think of extending some of the special programs - industrial, agriculture, commerce, and administration - beyond the twelfth year, and possibly into the 13th and 14th. Several organizational arrangements should be studied more closely. Because students would be concentrating in one area, they would attend school for only a half day. Thus, the student capacity in these programs could be doubled.

At first, it would be necessary to use existing laboratory facilities. In the future, the system could consider building one or two regional post-secondary technical education centers that would have a close relationship to regional business and industrial establishments, thus assuring industry that the system can respond quickly to its manpower training and retraining needs.

Two good models for this level of expansion already exist in the country: a) the Instituto Tecnológico Centro America and the b) National Agriculture School. Conceivably, the public programs would offer a broader scope of offerings related more closely to the pluralistic economic and manpower development training needs of the country, while at the same time having the capacity to provide quality in-service training to the already employed. Business and industry should participate closely in the program develop-

ment aspects of the schools' programs. They should be expected to contribute substantially to those programs that would provide retraining and upgrading of skills to their employees. This organizational arrangement should have two basic purposes:

1. It should provide a second avenue for career development for secondary school graduates - thus taking pressure off the university system, and giving students an opportunity to broaden and polish their technical skills. (Two more years to think through their career opportunities).
2. It should provide an education cycle within the Ministry of Education that by its nature and design would be integrated into the fabric of middle-level skilled and semi-skilled manpower training programs needed by industry today and for economic development tomorrow.

ABSTRACT

REPORT AND PROPOSED MODEL WITH ALTERNATIVE ACTION PLANS TO
CREATE AN INDUSTRY-EDUCATION COUNCIL IN EL SALVADOR, by
Gilberto E. Mendez, M.A., December, 1974.

The Industry-Education/Training Council concept has been developed gradually to allow for its presentation as an organizational process or mechanism to be used by Salvadorean industrial, educational and training leaders to enhance the possibilities for improving existing education/training programs and to design effective new ones.

The goal of the council is to generate a mutual exploration of education/training problems and/or needs as perceived by CONAPLAN, the Ministries of Labor and Education, and private business and industrial leaders. These explorations can lead to eventually developing action priorities utilizing the aggregate resources available from those institutions, and the private sector.

PROCEDURES FOR DEVELOPMENT (July 1974 through January 1975)

The activities for developing and implementing the council concept should include but not be limited to the following:

1. Preparation and presentation of a proposal (to explore the possibilities of the concept) to USAID and Salvadorean organizations.
2. Preparation and presentation of an action plan to USAID and participating Salvadorean organizations interested in exploring further the role, function, and purpose of the Council.
3. A series of planned exchanges between CONAPLAN,

Ministry of Labor, and private sector leaders, in order to generate communication and action between these entities.

4. Exchange between leaders from the mentioned Salvadorean organizations and the California Industry-Education Council (CIEC) staff.
 - a. Visitation to El Salvador by CIEC's leading development consultant
 - b. Visitation to CIEC generated programs (cooperative agriculture, technical-vocational education) by leaders from participating Salvadorean organizations.
 - c. Visitation to El Salvador by high ranking California State Department of Education staff.

Implicit in the development and exploration of the council concept has been the principle that Salvadorean expertise was to play an active role in this process, so that adaption rather than adoption would be the prevailing mode of thought.

DEVELOPMENT TO DATE

Decision making:

1. The Ministry of Education has decided to officially endorse the formation of a National Training/Education-Industry Council.
2. CONAPLAN and the Ministry of Labor have endorsed the council and expect to participate fully in its development and implementation.
3. The private sector, through ASI (Salvadorean Association of Industrialists), the Salvadorean

Chamber of Commerce, and the American Chamber of Commerce, has demonstrated interest and commitment to support the council endeavors.

LEVEL OF COMMITMENT

1. The Ministry of Education is ready to house an executive council unit for an initial proposed five-month council development period.
2. The private sector has offered to finance a bilingual secretary for the initial proposed five-month council development period.
3. Salvadorean leaders are willing to form task forces to exchange their expertise in manpower development, training/education, and labor market demand areas.

RELATED SUPPORT

1. The San José Mission has produced a wealth of data that can be used by the council to think through immediate training needs/priorities in terms of overall national developmental goals, and plan training programs accordingly.
2. Proposals for implementing training programs in the rural areas have been produced by the San José Mission, as well as council development models with alternative action plans.

GUIDELINES FOR IMMEDIATE ACTION

Enough evidence has been generated by the Mission which shows that there is an urgent need to create a mechanism like the training/education-industry council in El Salvador. Furthermore, the exploration/development phase detected a

propitious environment for the implementation of the council. Moreover, the general opinion of Mission consultants and other AID/Washington evaluators who have been related to the San José Project is that the council is a viable strategy for improving the quality of education/training efforts in El Salvador. Accordingly, and as action alternatives are presented to some depth elsewhere in this report, it shall suffice here to indicate the broad domains of interest for the council within a five-month time span:

1. Joint planning of education/training programs according to national needs, priorities, and resources.
2. Pilot tests of modest but highly visible education/training programs.
3. Articulation of short term, and long term, formal and non-formal education/training resources.
4. Facilitation toward the creation of the INSAFORP type training institution.
5. Examination and evaluation of education/training efforts in the light of national developmental goals.
6. Evaluation of cost-efficient exemplary programs.
7. Implementation of feasible and desirable cooperative, short-term, intensive training programs.

[See Industry-Education/Training Council paper for specific payoff description.]

APPENDIX A

BOOKS AND OTHER MATERIALS MADE AVAILABLE TO THE MINISTRY
OF EDUCATION THROUGH THE SAN JOSE STATE UNIVERSITY MISSION

[Lista de Material recibido de Misión de San José -- San José State University]

- William W. Rogers, Director, Curriculum Center, Wentworth Institute, Boston, Massachusetts; Paul L. Welton, Late Head, Department of Mathematics and Science, Jefferson High School, Rochester, New York; Blueprint Reading at Work Manufacturing. Silver Burdett Company, A division of General Learning Corporation, Morristown, New Jersey, Park Ridge, Ill., Palo Alto, Dallas, Atlanta, 1971, pp. 136.
- J. M. Arola, Spanish Books, Elementary Schools, High Schools, Colleges, Libraries, Ediciones Arola, Tarrasa (Barcelona), Espana, 1971, Catalogo.
- Eugene Benedetti, California School Law. Bonanza Publishers, Monterey Park, California 91754, 1972, pp 175.
- Starrett Tools, Fourth Edition, Catalog No. 27, The L.S. Starrett Company, Athol Massachusetts, pp. 545.
- Adult Basic Education and Continuing Adult Education, Steck-Vaughn Company, An Intext Publisher, Austin, Texas, 1975, pp. 16.
- Lanny Sparks, Prototype Specifications Manual, A Guide for Instructional Development, Prepared for the National Special Media Institute, produced under a grant from the U.S. Office of Education, Bureau of Libraries and Educational Technology, Division of Educational Technology, Media Specialist Program, 1972.
- Educational Facilities with New Media, Published by the Department of Audiovisual Instruction National Education Association, in collaboration with the Center for Architectural Research, Rensselaer Polytechnic Institute.
- Bill Crews, Automotive Design and Operations, Catalog (4), 1974.
- SHD, Standard Handling Devices, Inc., Catalog 74-2, Medford (Boston)

M. David Merrill and R. Irwin Goodman, Selecting Instructional Strategies and Media: A Place to Begin, Produced under a grant from the U.S. Office of Education, Bureau of Libraries and Educational Technology, Division of Educational Technology, Media Specialist Program, 1972, pp. 196.

Answer Key Blueprint Reading at Work, Manufacturing, pp. 15.

Eugene Benedetti, William R. McDonald, School Finance in California, 1971, pp. 149, published by W. R. McDonald, Redondo Beach, California.

Individualized Curriculum for Electronics (IEC)--Course in Electronics (67 different manuals).

Policies of Metropolitan Adult Education Program (MAEP), San Jose, California

Tom Kepner, Lanny Sparks, Objectives Marketplace Game, What You Always Wanted to Know About Performance Objectives But Were Afraid to Ask, 1971, National Special Media Institutes, Produced under a grant from the U.S. Office of Education, Bureau of Libraries and Educational Technology, Media Specialist Program, pp. 137.

Instructional Development Institute Glossary, National Special Media Institute, 1972.

Guide to Audiovisual Aids for Spanish Speaking Americans, U.S. Department of Health, Education, and Welfare, Public Health Service Administration DHEW Publication No. (HSA) 74-30, 1973.

Student Evaluation of San Jose Regional Vocational Center, June, 1971.

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