HUMAN RESOURCES DEVELOPMENT PROJECT FOR THE DOMINICAN REPUBLIC

Mid Term Evaluation

May, 1985

PREFACE

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May, 1985

I. INTRODUCTION

1. Project Background

The goal of this project is to improve the income, productivity, and overall quality of life of poor Dominicans, through increased skills training. This project was implemented by the Fundación de Crédito Educativo (FCE) with headquarters in Santo Domingo, Dominican Republic. The project was funded by an A.I.D. loan in the amount of $4.25 million to FCE, (guaranteed by the GODR); a grant of $750,000, and by $1.79 million in counterpart to be provided by FCE.

The project was scheduled to provide $5.55 million in subloans to needy students as well as institutions and faculty; and approximately $890,000 for funding for technical assistance, training, and equipment for FCE and the participating institutions; and $350,000 in FCE counterpart to cover the salaries and costs for project support personnel and contigencies*.

Initially, part of the project was to have been implemented by Instituto Nacional de Formación Técnico Profesional (INFOTEP), but INFOTEP dropped out at the last minute and the entire project was awarded to FCE as the borrower/grantee.

The technical assistance contract was awarded to Texas A&M University.

2. Evaluation Objectives

The evaluation had six major objectives:

2.1 Review the validity of the project design and any modifications which were made to implement the project;

2.2 Assess FCE's effectiveness, to date, in the overall development of vocational technical institutions in the Dominican Republic through student, faculty, and commodity sub-loans.

2.3 Measure project progress using the stated project objectives and implementation schedule as verifiable indicators.

2.4 Examine the impact of the project on the intended beneficiaries.

2.5 Examine the efficiency of project management and implementation.

2.6 Provide recommendations for the continuation and/or redesign of the project.

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*Current budget, page 10

3. Methodology

The evaluation was conducted by a consultant in technical education and by a consultant in systems analysis. Principal activities included field visits by the technical education consultant to a sample of participating institutions of higher education, interviews with key participants, review of operating documents and financial statements, and audit of student records.

4. Relationship of the Project to the Overall Mission Strategy

Since the Dominican Republic is no longer able to sustain the current level of subsidies for social services, as of April 1985 USAID/DR embarked on a new program strategy which is private sector oriented and will be directed toward achieving the following objectives:

1) Economic Adjustment and Stabilization;

2) Private Sector Investment and Export Promotion;

3) Agricultural Diversification;

4) Development of Supporting Institutional, Physical and Social Infrastructure.

It is in the sub-sector of social infrastructure that the Human Resources Development Project is of prime importance. The implementing organization, the Educational Credit Foundation, is a private sector business that provides subloans for students, faculty and commodity procurement in vocational/technical education. Therefore, the improvement of vocational/technical institutions, as well as the preparation and expansion of trained personnel for employment in private sector industries, is a critical element in the achievement of the objectives of the new Mission strategy.

II. SUMMARY FINDINGS AND RECOMMENDATIONS

1. Key Findings

1.1 Poor Dominicans are being targeted by student subloans which for the most part are being efficiently disbursed, and, where appropriate, followed by efficient collection procedures.

1.2 Followup procedures are not well developed and as a result, valid information on enhanced income status of beneficiaries can only be estimated or inferred by the fact that the loans are being repaid.

1.3 There was no implementation of the faculty and commodity subloan components.

1.4 The technical assistance component produced few positive results.

1.5 The grants to improve computer capabilities of the borrower/grantee were very successful.

1.6 Devaluation of the peso has greatly complicated project implementation for teacher training and commodity procurement.

1.7 The institutions are facing a large mismatch between their agriculture graduates and availability of traditional jobs.

1.8 The borrower/grantee has not revised its organizational structure to reflect the project or expanded activity.

1.9 Neither the borrower/grantee or any other agency or private enterprise could be identified by the evaluators of FCE who has the capacity to provide the labor market studies/analysis called for in the project.

2. General Recommendations

Details of the recommendations begin with paragraph 4.1.9.

2.1 Extend and reprogram the project to permit full implementation of planned components.

2.2 Additional strengthening of the borrower/grantee should be provided by:

(a) enhancing computer capacity

(b) additional technical assistance

(c) aiding its reorganization

(d) stepping up public information activities of the borrower/grantee

2.3 Improve institutions by:

(a) grant funding of faculty training including off shore and in-country training

(b) implement the provisions of institutional subloans for commodity procurement.

(c) providing another cycle of technical assistance aimed at improving existing priority training and creating alternative programs where oversupply of graduates in agricultural areas exist. FCE can do this by employing a technical education specialist.

III. PROJECT ASSESSMENT

1. Project Objectives

1.1 The general and specific objectives of the project are summarized in similar if not identical form in the documents providing the loan/grant to FCE as presented below for reference.

1.1.1 The goal of the project is to improve the income, productivity, and overall quality of life of poor Dominicans, through increased skills training. The project's subgoal is to improve the access to employment opportunities for the poor, by assisting them in moving from an unskilled, unemployed, and/or underemployed status, to skilled or semiskilled employment. It is also a purpose of the project to expand vocational technical training opportunities and assist the poor to participate in vo/tech training programs for priority skill areas.

1.2 Specific Objectives:

1.2.1 Assistance to Students.

The vo/tech students are the primary target group under this project. The project anticipates making $4.5 million in loans to students to help them pay tuition and related costs of attending a postsecondary education program leading to skills development. It was anticipated that during the first year, student loans would number about 500 and during the five year life of the project it is estimated that between 3,000 and 4,500 students will receive loans under the project. It is expected that the average loan will be between $1,000 and $1,500 at a 10% interest rate.

1.2.2 Assistance to Vocational Technical Institutions.

Direct and indirect assistance would be received by the vo/tech institutions. Indirect assistance would arise from making them eligible to receive students whose subloans would pay for tuition and other training and subsistence costs. Faculty members would qualify for loans for training in the U.S. The institutions would receive technical assistance funded through a grant to FCE who would obtain long and short term technical assistance via a contract with a U. S. university. Direct assistance would come in the way of loans to the institutions for commodities, such as library resources and lab and shop equipment.

1.2.3 Assistance to Vo/Tech Support Agencies.

FCE was to receive assitance to improve its capabilities to implement the project. Such assistance was to include purchase of a computer and software, a vehicle, a publication fund, and off shore training, funding for a labor market analyst, and administrative support. This latter element was never accepted by INFOTEP and the entire project was assigned to FCE.

2. Observations

2.1 External Factors

The last-minute withdrawal from the project by INFOTEP compromised the delivery system envisioned by the project paper. INFOTEP's prime function was to produce labor demand statistics that woul be used as part of guidance services for students wishing to enter a career and as a basis for vo/tech policy decision making. The latter aspect was to form the base of ascertaining priority training areas, guide the purchase of equipment, and generate a process for determining new vo/tech careers in the Dominican Republic. INFOTEP was to advise FCE, as a member of FCE's qualification review committee, on criteria standards to be used for vo/tech institutional qualification. INFOTEP was to serve as the link to the private sector and assist the vo/tech institutions establish their advisory committee structure. Although it was subsequently hoped that FCE could take on the above tasks and implement the entire project, in fact the above elements have not been realized by FCE.

The devaluation of the peso in early 1985 caused a great deal of uncertainty and raised many questions among the vo/tech institutions who were to have borrowed funds to improve their facilities.

The devaluation of the peso completely voided the possibility that teachers would borrow funds to study in the U. S., because of the tripling of such costs through devaluation; nor would the institutions step in to subsidize the off shore training of teachers because of their own greatly increased costs.

2.2 Inputs

Because of the lack of response to the faculty training subloan program, USAID approved a reprogramming of funds reducing the faculty subloan component from $800,000 to $400,000 and increased the institutional sub-loan component from $250,000 to a total of $650,000. The reprogramming was further justified because a survey by FCE showed a greater demand for commodity subloans than for faculty subloans. The current financial status of the project is found on the following page.

It should be noted that the budget expressed in US$ presents a completely unplanned level of activity for FCE. The figures after the February disbursements were that of the $3,200,000 budgeted for student subloans, $824,102 had been disbursed leaving $2.3 million. Adjusting the remaining funds for a peso/dollar value of $3.25 to US$1, the amount now remaining in pesos is $7.7 million which after deduction of encumbered funds of $1.5 million leaves FCE with $6,254,273 in AID funds to spend for student subloans. Together with the FCE match of $950,915 it gives a total unemcumbered reserve estimated at $7.2 million, 60% more than the budget with which they started.

The details follow:

STUDENT SUBLOANS

	AID	FUNDAPEC	TOTAL
Original Project	3,200,000.00	1,300,000.00	4,500,000.00
Spent	824,102.85	336,605.40	1,160,708.25
Available	2,375,897.15	963,394.60	3,339.291.75
Adjusted for Dollar/Peso Exchange Rate of 3.25:			
Available (US$)	2,375,897.15	963,394.60	3,339,291.75
Adjusted (RD$)	7,721,665.74	1,550,272.89	9,271,938.63
Encumbered (RD$)	1,467,391.85	599,357.23	2,066,749.08
Available (RD$)	6,254,273.89	950,915.66	7,205,189.55

2.3 Outputs

2.3.1 As of April 19, 1985*, 1,946 applicants had received student subloans. By school year, they were as follows:

1982-83	474
1983-84	832
1984-*	670

Because of the wide variety of starting times for students at the various vo/tech institutions, loans will continue to be made through August, the end of the reporting period.

Random check of student subloan records by both consultants revealed that none exceeded the $400 per month family income set as a desirable limit in the project paper. It should be noted that it is possible this guideline will be exceeded in the future because the loan unit at FCE is now taking into account the devaluation of the peso and number of children in the family in deciding if the applicant and his family meet the poverty criteria.

Interviews with school officials and random chats with students during the field visits revealed that once the first payment flows from FCE for a student subloan, the course of payments flows uneventfully. The first payment, however, is frequently delayed until all paperwork meets FCE requirements. In the case where a student is receiving only enough in the loan for tuition support, and the payment goes to the school, there is no particular inconvience to the student. If part of the student's loan is for subsistence, the delay causes inconvenience. Table I provides a sample of purposes for which loans are applied.

Computer generated letters should be used to inform student loan applicants of any deficiencies remaining in their loan application to avoid disbursement delays.

TABLE I

TEN PER CENT - RANDOM SAMPLE OF PROJECT LOAN DISTRIBUTIONS BY PURPOSE
($150,527)

Purpose	Disbursed	Per Cent
TUITION	$87,333	58.0
LIVING EXPENSE	38,594	25.6
TRANSPORTATION	11,441	7.6
SUPPLIES	10,015	6.7
OTHER	3,144	2.1

Computer study April 29, 1985

There is no record of a student being denied a subloan by FCE who qualifies for admission to an approved school and who completes all paperwork. A guarantor fund, initiated by donations and FCE revenues, permits FCE to approve high risk loan applicants who cannot obtain the quality of cosigners required of most borrowers.

Thirty three institutions are participating in the student subloan component. The most recent student subloan information shows that there are $722,152 in active loans; 356 repayments amounting to $274,648. Approximately $2 million has been committed, however, students are paid over time and it is not reflected in the actual expenditures under the loan.

Of the students who have received subloans, 394 had graduated. It is believed that most of the graduates have gone on to jobs. There is no system of followup by institutions and FCE beyond anecdotal records volunteered by teachers and other school officials.

Of the students who have received subloans, 16 had repaid the loan in full at the time of the evaluation. One student was in default. An

additional 473 students with subloans were no longer receiving loans and were at some stage of being subject to payback provisions. In addition to a six month grace period for loan recipients, students also may discontinue receiving the loan if they obtain other resources with which to pay school costs. These students are not subject to payback provisions until they complete or leave school, plus the six month grace period. Record summaries did not break out how many of each type of payback status were reflected among the 490 persons who were no longer receiving their loans because of graduation, abandonment of the loan, disqualification, or other.

There were 139 students making payments on loans, all employed. This is one indicator of increase in per capita income of students with subloans.

Because of their initial low or non existent income, few or no other assets, it is fairly certain that few of the beneficiaries could have financed their educational programs from their own or family resources.

2.3.2 Faculty Trained

No faculty was trained as a result of the faculty subloan provisions of the project.

Implementation letter 2-B authorized the decrease in the faculty subloan component from $800,000 to $400,000.

2.3.3
Institutions Improved

No institutions were improved within the design of the proposed project because of delays in implementing the institutional improvement components of the project.

A positive unintended or unplanned effect was that the provision of student subloans represents a significant flow of capital to the eligible institutions. Examples:

(a) In the first disbursement of the loan, one institution had 76 students who received $109,116 of the total disbursement made in the project out of $252,183 made to all institutions.

(b) In the second disbursement made, a total of $544,849, 125 students at another school qualified for $137,175.

(c) A school, UCMM-Puerto Plata Escuela Hotelera Dominicana qualified nearly its total enrollment one term (119) for student subloans.

The infusion of capital through student subloans has clearly benefited the institutions and has been indispensible to the growth and improvement of small and/or new schools.

At the time of the evaluation, none of the institutional subloans had been approved. Many were in process. The main bottleneck was that the institutions were missing advisory committees, ad hoc advisory committees, institutional development plans, or all of the above.

It should also be noted here that there had been a $30,000 limit placed on any one institution for a commodity subloan. With the increase of this item from $250,000 to $650,000 the limit requires some attention in the documentation.

In February, 1985 a consultant was hired by FCE to aid the institutions with their institutional development plans. A visit is planned to each school.

In the absence of labor market data or advisory council review of programs, the institutions are not able to evaluate properly whether training is being provided for priority areas or if there is a likelihood of employment for graduates until they test the market by sending graduates out. There was great concern that GODR was unable to absorb all the agriculture technicians being turned out. Ag technicians represent the single largest enrollment cluster with 434 out of 1,434 loan recipients. Notwithstanding lack of a followup system, most of the school officials interviewed expressed concern about lack of placement for Ag graduates.

The most positive activity in job placement is the widespread use of "pasantía", a final cycle of on-the-job training provided many vo/tech students before graduation. Pasantía causes the institutions to maintain strong links with industry and the placement frequently becomes the first job for the student.

The tally of loan recipients by career field is as follows:

TABLE II

Student Subloan Beneficiaries by Career Field

Agriculture	463	Mechanics	59
Computer Programming/Operator	110	Electronics/Electricity	163
Technical Drawing/design	27	Mining/Metals	4
Industrialist	135	Hydraulics	8
Refrigeration	5	Construction	6
Business Adm./Statistics	14	Hotel Administration	220
Accounting	45	Marketing	4
Social Communications	8	Executive Secretary	102
Nursing assistant	5	Physical Therapy	24
Bioanalysis	15	Publicity	17
T O T A L	1,434		

While the infusion of cash via student subloans has been a very welcome stimulus to the vo/tech institutions, the remaining critical need is for equipment. Because of the delayed implementation of this component, the institutions have been faced with the problem of maintaining current equipment needs before the FCE staff as initial needs are superceded, needed equipment obtained by other means, and curriculum changes over a two year period have placed the institutions in a constant state of having to revise their equipment loan requests. Any significant delays in implementation would set back the near state readiness in which the institutions presented themselves at the time of the evaluation.

AID/FCE made selection of the Procurement Services Agent through a request for proposal which yielded several proposals. The PSA was in readiness and the initial group of commodity loans was within days of being approved when the GODR announced the devaluation of the peso. That action delayed implementation of the commodity acquisition/institutional subloans through the period of time covered by this evaluation.

The detailed loan requests, including price quotes from potential suppliers, are rapidly getting dated and AID/FCE face the prospect of institutions wanting to make additional changes because of the passage of time, starting another cycle of delay.

While the loan requests and the list of commodities exhibited a great deal of effort, the prospect of $650,000 in equipment and supplies arriving in the country more or less in one large batch poses questions about how the logistics will cope with the processing of the receipt of the items.

2.3.4 Assistance to Support Agency

- The aspects of FCE to be strengthened included the areas of:
- Institution building activities
- FCE internal organization
- Training of FCE staff
- Implementation of computer systems
- Labor demand study capability
- Technical assistance

2.3.4.1 Institution Building Activities.

By selecting institutions eligible for student subloans, FCE has provided considerable stimulus for the development of the institutions. Institutional subloans applications had been solicited, but were pending satisfaction of conditions for approval. Because the subloans would ideally bring into play the factors of labor market information, advisory councils, ad hoc advisory committees, and institutional development plans, FCE cannot easily accomplish this objective without additional strengthening of its own capabilities. It took a step in this direction by hiring a consultant to work with the institutions on their institutional development plans. This did not occur until February, 1985.

Technical assistance to the institutions was in the form of help in formulating a self-study inventory. When the Texas A&M component concluded, no technical/vocational counterpart consultant was left to carry on the technical assistance part of the institution building activities. One of the main planned outputs of the technical assistance component was to leave advisory councils, in place at the participating institutions. The forgoing objective was not widely realized. Because of the low capability of the institutions to provide expertise in technical areas and lack of experience with advisory councils, the provision of technical assistance by FCE in this area continues to be a high priority in terms of overall success of the project. In light of the massive growth in subloan activity because of the devaluation of the peso, it might be a wise investment to consider external technical assistance to ensure success for the balance of the project. A minimum investment would be the addition of an FCE staff person to provide TA to the institutions.

On Dec. 1, 1983, AID Director Philip R. Schwab sent a strongly worded letter to the FCE Board of Directors President Dr. Luis Heredia Bonetti. It said in part:

> In order to maintain open and effective communication during the first year of implementation of this project, I would appreciate receiving quarterly reports, the first due at the end of March 1984, on FCE's efforts to put in operation the vocational/technical institutional development plans. These reports should include updated information on: faculty loans, commodity loans, student family income level, followup data on student graduates, and advisory committee activities for each participating institution.

While trimester reports were received which basically complied with the request, no mention was made about the factors of student family income level, followup data on student graduates, or advisory committee activities and institutional development plans. Mention was made about faculty loans, and commodity loans.

The important details ignored are central to improving the aforementioned programs.

2.3.4.2 FCE Internal Organization.

When the executive secretary was replaced in May, 1983, the incoming executive secretary was greatly discouraged from making any substantial organizational changes by the fact that the FCE Personnel Manual was registered with the GODR Department of Labor fixing in place the existing organization. While a new change could have been made, the incumbent decided to do without a formal reorganization--a decision that binds the organization to the present.

The organization chart which is officially adopted does not include any of the HRD project, its staff, or the HRD coordinator. The promotion of the FCE/HRD coordinator to fulltime status at the beginning of 1985 is a positive step in strengthening the organization, but the coordinator does not have line authority over the unit which is in charge of implementing the HRD project.

The operation of the HRD project has been "mainlined" in that it is handled "just like" any other project which comes into FCE. While this seems sufficient for the student (subloan) activity, it provides very little leadership for nonloan student subloan activities.

The newness of the fulltime coordinator and his flexibility in working with the entire FCE staff has avoided any conflicts, but it will become a strain on the organization as FCE is urged into carrying out other provisions of the project than student subloans.

Execution of activities is dependent on the personal involvement of the executive secretary and when his many duties do not permit his personal involvement, the organization is ill-equipped to respond to changing conditions.

Functioning as extensions of the executive secretary enables persons not on the organization chart to function at a passable level, but it seems nothing could be lost by recognizing the new operatives upon whom he relies for a significant new activity.

The executive secretary says that he has a proposal before the Fondo de Preinversión in the amount of about $630,000 to do an independent study on reorganization of FCE and its program of institutional loans, but that it has been tied up because of a freeze in the funding sources--the BID and GODR.

The Board of Directors is very active in setting FCE policy as determined by a review of the Board Minutes.

2.3.4.3 Training of FCE Staff.

Three members of the FCE professional staff had off shore training. Two workshops for all personnel were held in 1984 and some managers attended workshops in Santo Domingo. The seminars at FCE included one on human relations and a second on collections. A third seminar on educational credit was planned for later this year.

When the technical education specialist is named, a worthwhile training trip in the U. S. would be to view modern vo/tech facilities. At the college level, Miami-Dade Community College and Oklahoma State Tech-Okmulgee are suggested. A combined university/technical school program can be viewed in Albuquerque, NM, where the university of New Mexico and the Albuquerque Technical/Vocational Institute operate joint programs.

2.3.4.4 Implementation of Computer Systems

Using inhouse programmers and systems analysts, FCE has succeeded in developing appropriate software for the computer. The computer is at the point of near saturation as additional applications are added nearly daily. Mass quantities of information are available in data file form and have the possibility of being upgraded to a useful data base. Also possible with additional upgrading (based on the information on file) would be a management information system of much greater utility than what exists at the present. See appendix C for detailed analysis of the computer systems

Expansion of computer capacity is a near certain requirement particularly with the leveraging of pesos via the high exchange rate which will result in many more loans than originally contemplated.

2.3.4.5 Labor Demand Study Capability

FCE has no capability in this field.

An FCE staff member who was originally assigned to become acquainted with this component and had some off shore training is no longer assigned to the project nor is he pursuing it as part of his new assignment.

2.3.4.6 Technical Assistance.

The ill-fated technical assistance component came to an end with few gains recorded. The work of the technical education consultant was utilized in qualifying institutions eligible for student subloans. A self-study inventory designed by the technical education consultant was made available to all of the institutions. The counterpart consultant was able to continue collecting the information, but because of lack of experience or specific knowledge in technical education was in no position to continue providing technical assistance.

Except for a seminar on setting up advisory councils, there appears no record of followup activities to monitor this part of the project. The institutions do not send minutes of meetings with advisory councils or any other evidence of their existence.

None of the other so-called technical assistance activities contributed substantially to the strengthening of FCE or the institutions.

3. Progress Since the First Evaluation

The loan recipients are coming from the target population. The application process has been simplified and made more efficient with the passage of time. A guaranty fund has been created to accommodate high risk borrowers.

Institutional development plans are actively being pursued by both FCE and the vo/tech institutions. A consultant to help the institutions has been hired by FCE, albeit recently.

Some small success has been recorded in the field of advisory councils, mainly with the very new, and/or very small institutions in the project.

FCE has been successful in developing its own software for the computer purchased as part of the project.

The FCE staff has participated in both off shore training and inhouse education programs.

4. Conclusions and Recommendations

4.1 Student Subloans.

Conclusions:

4.1.1 The target population of the project is being reached by the project and under the current rules will become even more targeted because of the peso devaluation. The $400 monthly income per family becomes even more restricting than it was at the beginning of the project.

4.1.2 Public information activities have been substandard during the period of the project evaluated. With the large increase in leveraged pesos available, public information activities will have to be stepped up considerably.

4.1.3 Computer records are vastly improved but are not at the point where all needed statistical information is readily available.

4.1.4 Followup activities on employment and family income have not been pursued.

4.1.5 Priority training areas in terms of probability of employment have not been identified.

4.1.6 Delays occur in disbursement of initial loan proceeds.

4.1.7 Collection procedures are well established.

4.1.8 Training programs are approved and based on institutional self study and submission of curriculum materials. Labor market information is not available.

Recommendations:

4.1.9 FCE computer records and feedback system should be upgraded to provide target population data and followup. Summary information of student subloan beneficiaries by family income and geographic region should be provided. Summaries of beneficiaries who have gone on collection status should be routinely provided. These summaries should give the reason: whether because of graduation, voluntary discontinuation of the loan, disqualification because of poor grades, abandonment of training, or interruption of studies.

4.1.10 A technical education specialist should be employed by FCE to see that proper procedures are followed before institutions and programs are approved and to monitor the quality of education provided. The specialist should be knowledgeble in two or more technical areas, know technical/vocational equipment, and be experienced in working with advisory councils. See Appendix D for suggested qualification profile.

4.1.11 Public information activities must be stepped up. Consideration should be given to an increased budget for this purpose if the project is extended to use up the much larger project budget which would be available through extension of the project. Greater use of materials to secondary schools and direct mail to potential beneficiaries should be planned. Emphasis should be to locations with high concentrations of disadvantaged persons.

4.2 Faculty Trained

Conclusions:

4.2.1. There is little probability that loan provisions will be used.

4.2.2. The original subloan component for faculty training is under consideration by AID/FCE staff for reprogramming for small and medium business managerial training.

Recommendations:

4.2.3. Grant funds should be provided for faculty training off shore. Appropriate off shore training in Spanish should target 10 to 13 faculty members for summer, 1985. Nominations by FCE should be provided by mid-May to carry out this recommendation. Persons nominated should have a need based on their subsequent use of equipment and materials requested by institutions as part of the institutional subloans

4.2.4 A summer 1985 program of faculty and institutional training should be provided within the country. Programs which can be offered include:

a) CREATION AND USE OF ADVISORY COUNCILS (Santo Domingo & Santiago)

b) USE OFELECTRONIC INSTRUMENTS (Facilities at INTESA)

c) REFRIGERATION TECHNOLOGY (Facilities at INTESA)

d) WORD PROCESSING (Vendor facilities)

e) MACHINE TRADES TECHNOLOGY (Facilities at INTESA)

4.3 Institutions Improved

Conclusions:

4.3.1 Subloans to students have reaped the unplanned benefit of providing enormous economic assistance to some institutions.

4.3.2 Institutions have been wary of inviting public scrutiny by means of naming advisory councils or ad hoc advisory committees.

4.3.3 School officials have a good idea of the success of their graduates, but have no system for obtaining systematic information.

4.3.4 The institutions involved have little experience with planning and need help with institutional development plans.

4.3.5 There is no planned method of curbing oversupply of graduates in saturated occupations.

Recommendations:

4.3.6 Achieve compliance on basic procedures (councils, followup, plans,

etc.) by enforcement leading to decertification if necessary. Set a firm timetable for compliance. Advisory councils should be updated and/or named by September. Meetings should be at least quarterly. Minutes should be mailed to FCE. Comments by FCE staff should be sent within ten days. Followup systems should be in place by November. Exit interviews and/or questionnaire should be obtained from each student who finishes, abandons, or interrupts a program of studies. Quarterly summaries should be sent to FCE.

4.3.7 A technical education specialist should be available to the institutions. See 4.1.10 and Appendix D.

4.3.8 The Board of Directors of FCE should consider policy regarding support for students wishing to obtain loans to enter career fields which are already saturated with graduates seeking employment. Only agriculture has been identified as such a field at this time.

4.3.9 The Board of Directors of FCE should host a conference in June of directors of schools providing agricultural technician training. The purpose would be to discuss strategy for diversification of training at those schools affected by planning for other sectors of the economy. A focused study of the agricultural labor market should be done by FCE staff and participating institutions as a base for the conference.

4.3.10 The project coordinator should provide AID a monthly checklist of institutions and their status with compliance items such as self studies, advisory councils, ad hoc committees, institutional development plans, followup systems and studies, etc. A timetable for compliance should be written. Technical assistance should be provided the institutions as needed.

4.3.11 The Board of Directors of FCE should reconsider at its next meeting its continued involvement in institution building and the likely costs of FCE resources of this mission emphasis.

4.4 Assistance to Support Agency

Conclusions:

4.4.1 FCE has been delayed in mobilizing components of the project outside student subloans.

4.4.2 FCE will soon outgrow its current organizational structure/style.

4.4.3 FCE has the basic components of a useful data base in its computer system and makes maximum use of its equipment.

4.4.4 FCE has a well developed system of administering loans and collections.

4.4.5 A labor market analysis component is beyond the reach of an institution such as FCE.

Recommendations:

4.4.6 Establish a firm timetable for obtaining a current description of the FCE organization. The project staff should be specifically identified and lines of supervision indicated. This action is indispensable before any project extension is approved. The project staff should be large enough to carry out all components of the project. The following positions are vital. Project Director, Assistant Director for Loans and Collections. Staff Member for Institutional Planning, Staff Member for Technical Education Assistance, and Staff Member for Faculty Training.

4.4.7 Obtain realistic timetables for accomplishing the balance of the provisions of the project. The maximum two year extension is necessary to achieve project goals. A particular problem unique to this project is that the student subloans approved during the late stages of the project (with or without extension) will overlap the end of the project by up to four years.

4.4.8 Use the student subloan data base to provide planning information to the institutions and mobilize nation-wide planning as to priority training areas. FCE has on computer file many elements of an excellent student profile plus job information on students paying back loans. In cooperation with the institutions, a followup system could be readily designed. See also 4.3.6.

4.4.9 Delete labor market studies component from the project. Explore the participation possibility of international labor organizations in providing labor market information or technical assistance in this field. The International Labor Office has had good success in providing technical assistance to UCMM-Puerto Plata and would be one possible source of collaboration.

4.5 Project Design

Conclusions:

4.5.1 Considering the compensation levels of teachers, the faculty subloan provisions were poorly conceived.

4.5.2 The lack of government powers of the borrower/grantee makes a labor market analysis component nearly impossible to achieve.

4.5.3 The quality and intensity of technical assistance needed to help institutions qualify for participation was underestimated.

4.5.4 The project did not accommodate the possibility that some faculty training could be productively carried out within the country.

4.5.5 The project did not anticipate the need to consider entrepreneurship as a safety valve for the decline of some labor markets, such as government employment of agriculture technicians.

4.5.6 The project could not anticipate the devaluation of the peso and its effect on project participation.

4.5.7 The project did not contemplate the lengthy career training module at the participating schools. It is not unusual for a student subloan beneficiary to enroll in a four to five year program before reaching entry level skill proficiency. A student approved for a loan during its latter stages could be left with four years of loan eligibility at the schedule end of the project (with or without extension).

Recommendations:

4.5.8 Provide grant funded faculty training, including appropriate training within the country. See 4.2.3.

4.5.9 Delete labor market studies component. See 4.4.9.

4.5.10 Provide a waiver for deficiencies in institutional qualification, but establish a firm timetable for compliance, including compliance as a precondition for commodity subloans and faculty training grants.

4.5.11 Add a small business management component to the project which among other objectives will channel some of the agriculture technicians into primary occupations and private enterprise.

4.5.12 Adjust peso limits to reflect devaluation and budget revisions such as (a) the maximum monthly family income, $400, for student subloans; (b) maximum commodity grants, $30,000.

4.5.13 Clarify the 25% maximum activity to any one institution called for in the project. Because of the variances in the school year, distortions can occur. Some admit students only one time a year and others admit four times a year. The 25% maximum should be by project year or over the span of the project rather than by disbursement cycle.

5. Lessons Learned

The quality of technical assistance is crucial to the success of the project. The poor results with the technical assistance provided has had a lasting deleterious effect on professional implementation of the project.

6. Special Comments

The advisory council and ad hoc advisory committee system in technical/vocational education are a U.S. invention of necessity. They exist because labor market studies and information have proved to be inadequate to the needs of educational planning in the U. S. Technical education institutions are forced to the advisory systems to guard against bad misjudgements of the labor markets. There is an inverse relationship between the quality of labor market information systems and the rise of technical education advisory council/committee systems. The worse the labor market information system, the better the technical education advisory system.

APPENDIX A--ANEXO A

Taking into account that the only institution building activity of note has been the flow of loan funds to students at the institutions, a brief discussion of their disbribution follows based on the chart on page A-2.

The 13 institutions ranked represent 93.8% of all student loans made, although there are 33 institutions listed whose students are eligible to receive loans. At the time of the evaluation, the remainder of the institutions did not represent significant activity of the project.

Instituto Politécnico Loyola is a very sound institution which would compare favorably with postsecondary vocational institutions in the U. S. Its programs reach into the lower levels of postsecondary with its "perito" training. When equipment loans are made, this institution can be a model institution for the Dominican Republic. It has a healthy distribution of career fields although a third of its students are in agriculture.

Instituto Agrícola Salesiano devotes itself entirely to training in agriculture. Notwithstanding the looming mismatch of graduates vs. lack of jobs, it is well equipped to deliver the education it offers. It has an active program of development which has resulted in substantial donations of equipment. Equipment loans will permit it to fill in where donations have been incomplete or need moderate additions to make the equipment fully operational.

Universidad Católica Madre y Maestra of Santiago is the flagship of Dominican higher education. Students receiving loans through the project are well distributed among 18 career fields, with a little bunching up in computer program where 77 of its 183 are studying.

The 181 loan recipients do not represent a significant enrollment for UCMM-Santiago but aid which it might receive could be of considerable benefit for its aging vo/tech shops, even though their level of equipment is second only to IPL-San Cristobal.

INSTITUTIONS RANKED BY AMOUNT
OF LOANS DISBURSED TO STUDENTS
Report of April 17, 1985

Rank		Students	RD$ Dis-bursed	% Students	% Loans	Size	Sector	Level	Skill Level
1.	Instituto Politécnico Loyola	250	$261,091	17.3	28.3	M	R	PS	5
2.	Instituto Agrícola Salesiano, La Vega	94	118,250	6.5	12.8	VS	R	PS	4
3.	UCMM-Santiago	181	96,196	12.5	10.4	L	U	U	4
4.	UCMM-Puerto Plata	210	70,610	14.6	7.6	S	U	PS	5
5.	Col. Agricola San Ignacio de Loyola	115	62,275	7.9	6.7	S	R	PS	-
6.	Instituto Dominicano de Technología	80	50,704	5.5	5.5	M	U	PS	3
7.	Instituto de Estudios Superiores, UNAPEC	117	47,569	811	5.2	L	U	U	2
8.	Instituto Superior de Agricultura, Santiago	95	35,996	6.6	3.9	S	R	PS	5
9.	Universidad Tec. del Cibao UTECI	38	34,108	2.6	3.6	M	U	U	3
10.	Altos de Chavon Esc. de Diseños	20	31,181	1.3	3.3	VS	U	U	5
11.	Instituto Colegio Luis Muñoz Rivera	25	31,142	1.7	3.3	M	U	PS	5
12.	Instituto Tec. de Santo Domingo	25	16,389	1.7	1.7	L	U	U	5
13.	Instituto Téchnico Salesiano	13	13,932	.9	1.5	S	U	PS	5

TOTAL LOANS DISBURSED $922,154
TOTAL STUDENTS 1,438
TOTAL INSTITUTIONS 33

SIZE L-over 2,000 M-501 to 2,000 S-200 to 500 VS-under 200
SECTOR R-Rural U-Urban
LEVEL PS-Post Secondary, U-University (Highest level offered)
SKILL LEVEL 5-Highest 1-Lowest (Overall impression of training offered)

Possibly the greatest yield for the funds invested by way of student subloans is given by UCMM-Puerto Plata and its hotel school. With 14.6% of the students, it only accounts for 7.6% of the funds disbursed. Not only is its curriculum well organized, the hotel school was the one institution which could provide a thorough study of its students and every aspect of their background. Only its followup data was weak although school officials report that they cannot fill all the jobs they receive. The school is doubling its output with twice-a-year admissions anticipating the many hotel starts not only in Puerto Plata but other parts of the country. The program receives technical assistance from the International Labor Office.

Colegio Agrícola San Ignacio de Loyola, was not visited. Its entire program is in agriculture. It faces the same job placement problems as the other institutions providing ag training.

IDT, Instituto Dominicano de Technología,is a private school catering to after-work students. Sharing an abandoned hospital facility with a primary school, it reports enrollments nearing 1,000. In operation for 12 years, its facilities present a mixed level of quality. Among the smaller schools visited, it had the better of the computer training programs. Its electronic and machine trades shops were modestly equipped but adequate for the level of instruction being offered. It is among the school most likely to realize real improvement as a result of the project. The three clusters represented most of its total enrollment as reflected by loan recipients.

Instituto de Estudios Superiores, UNAPEC, had its 117 loan recipients distributed among 15 career fields. With nearly half of its technical enrollment in electricity/electronics it is in dire need of equipment and supplies for the program since it has practically nothing available with which to do its work. Its secretarial program was of good quality, notwithstanding aging equipment. The school appears to have the infrastructure needed to achieve major improvement with the application of resources and its young staff was energetic and committed to the programs. It is designating its electricity/electronics programs as its top priority for improvement.

Instituto Superior de Agricultura, with its enrollment entirely in agriculture, faces the nation-wide problem of oversupply of ag technicians. It counts with possibly the best educated faculty for a school of its kind outside of the U. S. It has an active research program and is involved in the reforestation program in its area. It is well equipped for the job it is doing.

Universidad Tecnológica del Cibao (ITECO) in La Vega was visited. Its 42 loan recipients were divided among agriculture, accounting, bioanalysis, construction, and six other areas.

Escuela de Diseños de los Altos de Chavón is a small school with strong international links. Providing quality training in interior design, grafic arts, fine arts, fashion design, and related specialities it has the promise of providing technical manpower for its segment of the marketing industry. Because of its smallness, it takes particular interest in the best placement of its graduates as well as recommending the brightest for scholarships abroad. It is extremely well prepared to deliver the education it offers.

Colegio Luis Muñoz Rivera provides solely secretarial training to its loan recipients and its graduates are highly recruited.

The project has helped launch a well developed program in physical and occupational therapy at the Instituto Tecnológico de Santo Domingo (INTEC). The program is well linked with cooperating hospitals, rehabilitation centers, and clinics. It has little need for improvement in its other technical areas as the institution is in the midst of a major facility development program via loans from the IDB. INTEC could be a resource for teacher training once its technical facilities become fully operative. All of the student subloan recipients were in physical therapy.

Instituto Técnico Salesiano had its 13 loan recipients divided among electronics, electricity, machine trades, graphic arts, and industrial electricity.

The Rest of the Institutions

Notable for its absence of actitivy in the project is the mammoth Universidad Autonoma de Santo Domingo. The project has not pursued strong links with the graduate degree granting institutions nor have they responded in any large numbers. This is also true for Universidad Nacional Pedro Henriques Ureña with campuses at Santo Domingo, La Vega, Montecristi, and San Juan. Because the institutions have very low tuition, they do not have a great need to be in the project but their outreach to the project's target population is also likely to be very small.

Of the smallest institutions, Technologia y Sistema (TESIS) is a unique enterprise being advocated by the project staff. It is located in one of Santo Domingo's poorest areas. Although its programs are extremely poor in every way, they represent an endeavor which might be regarded as fulfilling the project objective of serving "the poorest of the poor". Symbolic of its meagerness might be that secretarial students practice on manual typewriters which had no ribbons. The evaluator, however, recommends the assistance contemplated because of the way it targets many of the project's objectives. The small school has formed an advisory council and has an institutional development plan. It is headed by three energetic, young proprietors.

Overall, the project is skewed to the rural areas because of the large participation of the agriculture schools and the lack of participation by the very large universities. The serendipitous division of emphasis is consistent with the project's objectives.

In the chart on page A-2, an effort was made to assess how well the respective schools are doing the training job they have taken on. While you cannot compare Altos de Chavon with Insituto Superior de Agricultura, each would get the highest rank, each in its own field and based on the goals of each of the institutions. Among similar schools, ISA would rank ahead either CASIL o IAS.

The consultant estimates that no more than 10% to 15% of the students receiving student subloans could be considered as receiving more than entry level technical skills. These would be at the universities where university level academic work is provided along with the technical training. Whereas such persons are recognized as having a higher technical level in the country because of the related academic training, the universities were <u>all more poorly prepared</u> to present the vo/tech skills than the better of the perito schools such as IPL and ITESA.

APPENDIX B--ANEXO B

Summary of Visits to Institutions

April 17, 1985 (Saavedra, O'Neill, Wagner, Perez, Iglesias)

1. Instituto Agrícola Salesiano (IAS). 9:30 a.m. Bro. Rosario Pilonero received us and gave us a tour of the institution. Bro. Gomez met with us after we visited his chemistry class and gave us a tour of his new instrumentation lab. We also visited with professor Santos.

2. Universidad Tecnológica del Cibao (UTECI). 11 a.m.
A presentation about the institution was given us by Luis Rosario, vice rector for administration and Mr. Holguin, vice rector for academics. We were also joined by prof. Santos from IAS.

3. Instituto Superior de Agriculture (ISA). 2:30 p.m.
We were received by José Luis Rojas, assistant academic director, Jesús Rodríguez, dean of students, and Isabel Abreu de Ceara, assistant to the director.

4. Universidad Católica Madre y Maestra--Santiago. 4:30 p.m.
We were received by Pedro Pichardo, dean of students, who showed us a videotape of UCMM. We were taken on a tour of the institution by Silvia de Rodríguez and Viarda Fadul. The faculty met us at the technology shops for a tour and explanation of the programs.

April 18, 1985 (Saavedra, Pérez, Iglesias)

Instituto de Estudios Superiores (UNAPEC). 3:30 p.m.
We started our visit with a meeting with top officials of the school. Present were Fernando Ferran, Eduardo Garcia Recio, Baltazar Gonzalez, Rafael Romero, Noris Céspedes, Bienvenida Mirabal, Ramon Aquino, and an appearance by the rector and member of the FCE board of directors, Leonel Rodríguez Rib. The meeting was followed by a tour.

April 19, 1985 (Saavedra, O'Neill, Iglesias, Herrera)
Escuela de Diseño, Altos de Chavón. 11 a.m.
We were received by rector Leopoldo Maler and were taken on a tour by Nilda Giraldi, director of student services. At lunch we were the guests of Maria Victoria Kurcbart, a member of the faculty.

April 22, 1985 (Saavedra, Perez, Iglesias)
Instituto Politecnico Loyola. 11 a.m.
We were received by rector Fr. Somoza and shown through the shops by prof. Rosario.

Tecnología y Sistema (TESIS) 4:30 a.m.
The three directors of TESIS met us for a meeting and a tour of the facility.

April 23, 1985 (Saavedra, Iglesias)
Clinica Dr. Contreras. 9:30 a.m.
We were met by Dr. Alfredo Contreras and Mrs. Maria Rivera de Contreras who discussed their training program for physical and occupational therapy. They subsequently provided us a tour of their well equipped and improved facilities.

Instituto Tecnológico de Santo Domingo (INTEC). 11:15 a.m.
We were met by Milagros Maldonado, director of the physical and occupational therapy program. After discussing the needs of the physical therapy program, she showed us some of the INTEC plant. The students in the program use various classrooms and labs of the overall plant, much of it new. She explained that one of her major problems is that her faculty is from other countries (Colombia and Chile) and that she is hoping to develop Dominicans who can eventually take their place.
April 24, 1985 (Saavedra, Pérez)
Universidad Católica Madre y Maestra, Programa de Formación Hotelera--Puerto Plata. 11 a.m.
Socorro Muñiz de Martinez, assistant director, met with us and discussed curriculum and program followed by a tour of the hotel training facility.

Centro Artesanal de Joyería, Puerto Plata. 2:30 p.m.
We were met by Antonio Carreño of the faculty who explained their program and gave us a tour of their shops and store.

April 25, 1985 (Saavedra, Iglesias)
Instituto Dominicano de Tecnología (IDT). 3:30 p.m.
We were received by Mr. and Mrs. Eduardo Sagredo, founders and owners of the school. After a briefing, we had a tour of the facilities.

April 30, 1985 (Saavedra, Iglesias)
Colegio Luis Muñoz Rivera. 9:00 a.m.
We were received by the founder, Dr. Felix Rodríguez, who had two faculty members gave us a tour and discussion of programms. The all-female school provides only secretarial training. The are considering adding word processing to the curriculum if equipment can be obtained.

Instituto Técnico Salesiano. 3:30 p.m.
Fr. Julio Soto provided us information about the school and took us on a tour. It had outstanding facilities for electronics, electricity, machine trades, and printing. It makes little use of the project because of its low cost to students ($15 monthly, includes meals), and its equipment acquisition program is so successful it frequently makes subdonations to other Dominican institutions. Its level of training is to perito level.

Instituto Marítimo Dominicano. 5 p.m.
César de Windt Lavandier and Luis A. Facundo Esteva, directors of the school, gave us a description of the school and its programs. It is located on the seventh floor of a building near the port. With its facilities overlooking the sea, they are able to simulate introductory maritime functions, but they also have facilities at dock side, including boats, dry dock, and swimming courses at a nearby facility. Graduates take state tests for sailors. If students are willing to take work on ships with foreign registry, the directors say that there is work for everyone. Their work is donated as part of the sponshoship they give through the Rotary Club. They have about 100 students at the present.

May 2, 1985 (Saavedra, Bobadilla, de los Santos)

Dr. Leonel Rodríguez Rib, member of the Board of Director. 10 a.m.
Dr. Rodríguez discussed with us his views on what the Board's policy should be on institution building and other aspects of the project.

May 2, 1985 (Saavedra, Bobadilla)

Dr. Jaime Viñas Roman, member of the Board of Directors. 5 p.m.
He discussed with us his views of FUNDAPEC as an accreditation agency and the continued participation of FUNDAPEC in institution building.

APPENDIX C-- ANEXO C

COMPUTER SYSTEM

Hardware

The IBM system 34 with 128 K of main (internal) memory and 118 Mb of disk storage was fully installed by September, 1981, following advice of consulting systems-analysts that at the time it was the best system available for small business. It offered the best selection of packaged software. It was an excellent choice.

Software

FCE elected to build its own software for the IBM System 34 due to the special nature of their business. FCE was responsible for software as part of the original loan agreement, whether by purchase of software or if it was developed by FCE.

FCE's contribution of $100,000 R.D. has been exhausted on salaries for software development. The exercise has also provided internships for highly-qualified and able students who are majoring in computer fields.

It is amazing for a U.S.-based consultant to see that what has been achieved with only a Programmed Text on RPG-II Interactive (in Spanish) and some IBM courses on RPG and System 34, in total isolation from other data processing centers and from news and similar developments in the data processing field.

It is serving the purposes of FCE, despite the built-in limitations of RPG, which is a report generator. Further updating of the system in the direction of data base access and query capability should be added in the future.

Peripherals

Accompanying the System 34 were a printer, 650 lines/minute, which has proven to be suitable to the task, a small printer, 120 characters/second, for printing receipts in Cash, where students pay directly at the window, 10 terminal screens, Model 5251, distributed throughout FCE as follows:

Computer Center	(3)	1 used as console and 1 available for use by departments
Collections	(1)	
Cashier	(1)	
Collections of everdue payments	(1)	
Credit	(1)	
Project Development	(1)	Used for data-entry
Accounting	(1)	
Treasurer	(1)	

Present Use

The above configuration has proven adequate until relatively recently. In recent months the number of blocks remaining has become dangerously low during processing. At present, no additional modifications based on necessity or on user requests can be added because the amount of memory is insufficient. Seldom used programs are on disk already.

In contrast to the TAMU's Systems-Analyst's report of May, 1983, the system is now heavily used, particularly in collections and in accounting.

The system is interactive and menu-driven, the latter a boon to users, a hindrance to programmers who subsequently must follow through their own menu system to get to a specific procedure. More modern (in the last 2 or 3 years) data base systems allow the computer to remember paths to popular programs, which can then be accessed directly.

The programs, Consultations and Statistics, permit the user to view desired files on screen, but the lack of printers at all but one user site prevents printed output of screens, which is a built-in capability. Users instead must copy the viewed data onto paper. Some users at higher levels have successfully avoided computer use, consulting file folders or reports instead.

Monthly updates between subsystems are done automatically, to all relevant files. Regular users need not help. Occasional users, including the Executive Secretary, request exception reports often enough to suggest that the Center should survey users on their more or less regular needs for exception-reporting, reporting which answers specific questions.

Systems Development Progress

Remaining to be done are some small programs for specific uses which are not of first priority. Suggestions from TAMU's Systems-Analyst were heeded. A checklist was shown which indicated that Systems and Operations documentation were complete, that all subsystems have been integrated, that the system has been totally backed-up, and that it has been optimized to make best use of computer time.

Security is assured by systems backups residing in both a safe in the Computer Center and a bank in the capitol. Catastrophe plans have been developed with the local IBM dealer, where critical programs can be run if necessary.

Employees include:

Computer Center Director
Full-time Programmer
Part-time Programmer (Student Intern)
On-call Programmer (Student Intern)

The assignment of the latter two illustrates excellent computer center management:

1 to Documentation
1 to Data Entry,

both of which are critical parts of a data processing system. The latter meets for 2 hours daily with the full-time programmer to dicuss any problems in data-entry procedures. He would be assigned to Microcomputer use if they are purchased in the future.

An added benefit of computerization has been the streamlining of data entry forms which are actually student loan application forms.

Equipment Rating

The System 34 and its peripheral equipment has proven to be a success. A maintenance contract with IBM locally was discontinued due to lack of need. Four years have passed with no down-time except for one key on the keyboard two months ago.

SUBLENDING SYSTEM EFFECTIVENESS

The results of external audit reports, computerization of all possible procedures, and a rate of default of 1/1622 students to date indicate a sound sublending system. Furthermore, this is FCE's field of expertise and the reason for its existence.

Following are excerpts taken from flowcharts of the system produced for this evaluation and corroborated by each department:

CREDIT	Student applies via application form	
Credit	Report of application	
Opening	Data introduced into committee-file	
	Printout to Committee for evaluation	
	If accepted, application formalized	
	student data coded	
	Data transferred to Master File	
CREDIT	Records of communications to students and	
Disburse-	matriculation data	
to students	Validation of data	
	Check if studies are complete	
	If no	If yes
	Program produces	Program passes data to
	disbursement rept.	COLLECTIONS
	Revisions made	Program reports transfer to
	Program produces	COLLECTIONS
	pre-check report	
	for TREASURER	

RECOMMENDATIONS

1. To increase the probability of administrative forecasting being used in the project the following is recommended::

   a. Courses on quantitative techniques for management
   b. Courses on microcomputer uses in forecasting
   c. Short-term consultants in the field of management
   d. Subscriptions to management journals

   Administrators involved in the project have some knowledge of quantitative techniques for management, but have not used these techniques for solving real problems.

2. Within the Computer Center minor deficiencies are:

   a. Lack of indexes in systems and operations manuals
   b. Bookshelves to hold the library of manuals and books
   c. Programmed edit checks for reasonability and more query procedures
   d. Logs of telephone calls from users for assistance. These logs provide a measure of the system's effectiveness

3. Computer-related purchases should include:

   a. an additional 64 K of main (internal) memory to ensure adequate space for efficient functioning
   b. an additional 128 Mb of storage to hold increasing data files and future data bases: Small businesses and Agri-businesses.
   c. 1 additional workstation for use in COLLECTIONS, which shows heavy usage.

4. 1 or 2 IBM P C's for the following uses:

   a. Wordprocessing for project communications, Form letters are an important application. Wordstar is the recommended software package. It is the most widely used, and though difficult to learn is the most efficient, especially when used with MailMerge, which processes form letters using name-address files.
   b. Forecasting using LOTUS 1-2-3, which offers an electronic spreadsheet and graphics. The What If nature of the electronic spreadsheet allows repreated projections for the same data.

One of the IBM P C's should be connected to the IBM Systems 34 in order to use summary data for forecasting applications. Price comparisons show that P C's are about equal in price to good quality terminals.

5. 1 or 2 small printers connected to the P C's

In addition the IBM Center in Santo Domingo offers free training on P C's and Microcomputer packages such as LOTUS 1-2-3.

6. The large printer and 1 workstation consisting of screen and keyboard have until now been rented, with option to purchase.

APPENDIX D -- ANEXO D

QUALIFICATIONS OF CANDIDATES

FOR TECHNICAL EDUCATION SPECIALIST FOR FCE

Technical knowledge in two or more technical areas. Major job: reprogramming agricultural education to other career fields	40
Executive and promotion ability to permit effective work with management personnel at participating institutions	30
Experience working with Boards of Directors, community groups, and/or business representatives.	30
Education	30
Writing Skills	10
Bilingual Ability	15
Public Relations Experience	10
Knowledge of the Dominican Republic	30
Knowledge of Educational Credit	15
TOTAL SCALE POINTS	200