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An Evaluation of The Basic Skills Training Project

USAID/Jamaica

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Submitted by:

EDC
Education Development Center, Inc.

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Note: This report is a priviledged communication, not to be disclosed except for evaluation purposes.

REPORT OF THE EXTERNAL EVALUATION TEAM

The Basic Skills Training Project (Jamaica)

AID Project No. 532-0082

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EXECUTIVE SUMMARY

PURPOSE AND METHODOLOGY

The purpose of the Basic Skills Training Project which was evaluated is to assist the Government of Jamaica (GOJ) to establish an improved skill training system responsive to the GOJ's economic policies and labor market needs.

The purpose of the evaluation was to determine if the skill training system assisted through the project was responsive to the GOJ's economic policies and labor market needs. The evaluation was carried out by a two-person team representing the Education Development Center. The team reviewed major project documents and files, interviewed USAID staff, RCA/GE staff, government officials, and entrepreneurs in Kingston; faculty, students and administrators of H.E.A.R.T. academies at Portmore, Garmex, Kenilworth, and Stony Hill; and Vere, Dunoon, Marcus Garvey, and Herbert Morrison technical high school faculty, students, and administrators at their respective locations.

FINDINGS AND CONCLUSIONS

The Basic Skills Training Project was structured to improve the skills upgrading environment in Jamaica, and particularly its non-formal component. With Government inputs included, the project budget was US$63 million, or nearly US$29 per capita across the entire Jamaican population. U.S. AID inputs (about one fifth the total) covered technical assistance, the upgrading of facilities, the provision of equipment, instructor training, and participant training for administrative and supervisory personnel. The project supported a centralized, coordinative approach to skills upgrading; that is, a supply-side approach to human resource devlopment. Private-sector input was limited to advisory committees or boards. Although one of the primary project objectives was institution building, in the form of support for a coordinative, evaluative, quasi-public institution -- the H.E.A.R.T. Trust -- project inputs were skewed in favor of support for operational activities.

In retrospect, the original project design was based on some questionable assumptions or expectations. The importance attached to the role of coordination, as opposed to, say, instructor salaries, was debatable. It was probably unrealistic to believe that an oversight coordinative authority could be imposed on the existing bureaucracy from above. Insufficient consideration may have been given to the difficulty of trying to implement a project of this complexity within a five-year period.

The project was structured to involve three separate Government agencies: the Ministry of Youth and Community Development (MYCD), the Ministry of Education (MOE), and the H.E.A.R.T. Trust as the coordinator and monitor of other GOJ activities. Implementation responsibility was thus spread. Due to lack of clarity of lines of authority, the structure did not function in its intended form. There remains a question concerning the role of MYCD in the remainder of the project.

Moreover, the project environment was significantly changed with H.E.A.R.T.'s assumption of direct operating responsbility for academies. This decision was taken by the Government following an official inquiry into student complaints. H.E.A.R.T. is now primarily an operating institution. Planning, evaluating and

coordinating activities have been subordinated to operating concerns. Within H.E.A.R.T., there is no central analysis unit, although the base is being put into place. Data collection is spread across different divisions, with more consideration for administrative than for assessment or analytical concerns.

Implementation problems occured, as might be expected in a project of this relative magnitude. They have likely had less impact on project outcomes than had the change in H.E.A.R.T. focus from coordination to operation. Funding delays from USAID have set back overseas participant training opportunities, leading to a later recommendation for project extension.

Project outcomes, have been significant and generally positive, even though different from what was initially anticipated. The most important accomplishment of the Basic Skills Training Project has been to galvanize public attention for the skill upgrading issue. Public resources were mobilized in consequence. The H.E.A.R.T. non-formal training system has been put under the Office of the Prime Minister and is being used as a component of policy to attract foreign investment and increase exports. This is an illustration of the demand-side orientation lacking in the original project design. It raises other design questions, however. It is questionable whether an organization designed to promote the image of Jamaican labor can be enticed to evaluate the progress of its own programs to further upgrade that labor.

An unintended consequence of the project has been to demonstrate the underlying conflict between operations and assessment functions. Much of AID input has been specialized, governed by the objective of supporting foreign exchange expenditures. It is difficult to reorient these sorts of specialized investments, and the question must be faced, what happens when evaluations show that operations should be changed? It is difficult to transform sewing machines into electronic circuit boards. Too much emphasis on monitoring, without provision for change, we feel, is misplaced. It is noted that project inputs have assisted Jamaica along a particular, fairly costly path for skills development.

H.E.A.R.T. academies are models, and project inputs are in evidence. The Ministry of Education has benefited from technical inputs because their initial resource base was so low. So effective were project inputs that they permitted the project to shift focus from management to operations.

The final impact of the project inputs in terms of facilitating skills upgrading, increased employment, and improved development prospects, cannot be determined with sufficient reliability, due to a lack of data. In view of original project objectives, this was a dismaying surprise. On the other hand, data from the early stage of operations are not particularly reliable either.

A pilot tracer study was carried out but its methodology was flawed. Results show that employment among graduates was higher, at 52 percent, than original design expectations, but that very few graduates of H.E.A.R.T. academies were working in the fields for which they were trained. A recommendation that a full tracer study be implemented to correct sample defects was never implemented. Data from the Ministry of Education are equally unreliable.

Available cost data are not appropriate for analysis because of an inability to make clear distinctions between capital and operating costs and to separate out the cost of H.E.A.R.T. headquarters functions in direct support of academy

functions. For what they are worth, data show surprisingly low direct operating costs for academies, but high costs for the H.E.A.R.T. operation as a whole. It is noted that even if academies were operated at perfect efficiency, the operation would be costly as a result of its residential remedial components, its high-profile, "showpiece" nature, and its high capital base (particularly equipment). Depreciation and replacement costs will show up only in the future. Even so, recurrent costs per trainee in H.E.A.R.T. academies are over four times as high as those per student in technical high schools under the Ministry of Education. The data, to reiterate, are not sufficiently refined to support valid conclusions at this stage. The main concern must be the sustainability of these costs, given likely budgetary pressures, over the longer term.

The central finding of the evaluation, therefore, is that the project did not generate the outputs originally desired -- coordination, evaluation, management data, analysis, etc. -- but it generated other beneficial outcomes -- improved funding for non-formal skills training, a highly visible organization linking skills upgrading with development policy, and an apparently improved operating system for institutions. It is not yet an institutional system, as intended, but it is a solid base for that system.

None of this is new to AID, as most of the above has been discussed during two previous internal evaluations. That the recommendations of those evaluations have not been fully implemented, we suspect, might have been due to USAID ambivalence concerning the value of operations versus evaluations. We have been unable to determine why an external evaluation was not requested previously but note that the absence has occasioned a continued lack of data regarding project efficiency and effectiveness.

The evaluation team believes that a sound operating framework is a necessary precondition for the development of a skill-upgrading system. Operations are the cornerstone of any vocational education or training system. Much less has been achieved in this regard. Greater attention will now have to be paid to trying to introduce improved flexibility and to effect a shift in program costs away from the public-sector budget. This implies a shift toward non-institutional forms of skill upgrading.

RECOMMENDATIONS

It is recommended that the project be extended for an additional year, in large part for administrative reasons. Certain participant training had to be postponed due to a delay in the disbursement of funds from USAID. That commitment cannot be fulfilled in the remaining months of the current project.

It is assumed that the additional time would be used to implement some of the evaluation activities contemplated in the original project design; a tracer study of program graduates with a control group, cost data in a form suitable for analysis, employer opinion surveys, and surveys on private-sector training activities. Such activities need not await the full development of a management information system but can be implemented independently. They would assist in the improvement of internal operations, apart from their contribution to system design and coordination.

Beyond this, we would envision a longer term USAID commitment for future project activity. Five years on a project of this complexity, we feel, is too

short to do anything but to raise expectations. It is not necessary to try to specify the particulars of that longer-term commitment at this time. Final decisions will no doubt be dependent on accomplishments during project extension, should that occur. It seems likely, however, that the following issues will emerge:

-- How to induce greater private-sector participation in the provision of training, beyond merely providing external advice.

-- How better to select students or trainees in accordance with their aptitudes, abilities, commitments, and potential contributions to development objectives.

-- How to introduce flexibility into what is turning out to be a hard-to-reorient institutional framework.

-- How to introduce flexible entry-exit standards in the absence of specialized proficiency tests. How to accelerate the introduction of such tests.

-- How to address the fundamental question of attracting and retaining qualified instructors and administrators, which implies the yet more fundamental question, how to circumvent the problem of low public salaries.

Evaluations can assist in answering some of the above, or other questions raised in the main body of the report. Since they refer to what has been, rather than what could be, they provide only partial answers. Controlled experimentation, on an incremental basis, can serve to minimize errors, the costs of which can be large in the vocational training field. Mindful that previous investments represent sunk costs, we are persuaded by the fact that further investment requirement will cost on the order of one-third less as a result of funding to date. Moreover, we feel that returns on past investments will fail to be realized should project funding drop off significantly.

LESSONS LEARNED

The project design failed to anticipate a number of implementation problems and therefore attempted too much too soon. Therefore future projects of this nature should be introduced with:

-- a phased, experimental approach;

-- greater consideration of the absorptive capacity of participating agencies;

-- a large knowledge-development component: including controlled experimentation;

-- increased involvement of the private sector -- not merely as advisors, but as participating partners;

-- separate project funding for participating agencies; and

-- greater use of subcontracting among public agencies.

1.1 PURPOSE OF STUDY AND STUDY QUESTIONS

1.1.1. Between October 31 and November 26, 1988, a two-person team visited Jamaica and conducted the first external evaluation of the Basic Skills Training Project (BSTP), number 532-0083. The purpose of the evaluation was to determine if the skill training system assisted through the project is responsive to the Government of Jamaica's (GOJ) economic policies and labor market needs. The specific questions addressed by the evaluation included the following:

Study Questions	Paragraph Number
1. Was the project design appropriate for Jamaica?	4.1
2. What was the structure, organization and function of participating organizations/agencies?	4.2
3. Was the project implemented and operated as planned?	4.3
3.1 Have private sector advisory boards been implemented?	4.3.3
3.2 Did HEART undertake long-term policy planning & provide counseling & placement of students?	4.3.12
3.3 Did the non-formal component address upgrading/expanding of facilities, equipment, etc.?	4.3.7
3.4 Was an intra-agency agreement reached?	4.3.4
3.5 Did MOE implement a long-range plan?	4.3.15
3.6 What was the TVU's role and impact?	4.3.9
3.7 Did technical high schools have private sector advisory committees?	4.3.9
4. What were the project outcomes?	4.4
4.1 Has HEART become a National Training Board?	4.4.5
4.2 What were the impacts of technical assistance, participant training, and equipment?	4.4.8
5. What were the costs?	4.5
6. What are the alternatives?	4.6
7. What are the conclusions?	5.0
8. Which components of the current project should be modified?	6.1
9. Should a project extension be granted?	6.2
10. Should a follow-on project be considered and on what should it focus?	6.3

1.1.2. To answer these questions, the evaluation team members conducted their inquiry and provided the following findings and recommendations in the context of the project purpose: To assist the GOJ to establish an improved skill training system responsive to economic policies and labor market needs. Team members believe the responsiveness of the skill training system is influenced by a multitude of factors, some of which were not addressed in the evaluation scope of work. Therefore, in evaluating the project, the team has responded specifically to the questions in its scope of work and also identified and responded to issues of project design, Jamaican labor market realities, and costs.

2.1 COMPOSITION OF THE EVALUATION TEAM AND EVALUATION METHODOLOGY

2.1.1. Team Composition

Terence P. Kelly Member of Contract Team and Team Leader
Larry J. Kenneke Member of Contract Team

2.1.2. Methodology

The evaluation methodology was described in the Scope of Work prepared by USAID/Jamaica and involved the following:

2.1.2.1. Orientation

After the contract team's arrival in Jamaica, an orientation meeting was conducted by Dr. William Charleson and Mrs. Audrey Tomlin at USAID. The purpose of the meeting was to provide an overview and background reading materials. An orientation meeting was also held with the USAID/Jamaica Evaluation Committee.

2.1.2.2. Collection of Data

To collect the data required for analysis and recommendations, the evaluation team reviewed major documents and files available at USAID, HEART Trust, MOE and CAST, and MYCD (SDC, VTDI, NFED). The list of documents and files reviewed is given in the Appendix. The team also conducted interviews with key individuals at the institutions/agencies indicated above. Visitations were made to Portmore, Garmex, Kenilworth and Stony Hill academies. Additionally, team members visited Vere, Dunoon, Marcus Garvey and Herbert Morrison technical high schools.

2.1.2.3. Interim Briefing

The evaluation team prepared an interim report and on 17 November presented it before both the Project Management Committee and USAID/Jamaican Evaluation Committee.

2.1.2.4. Preparation of Evaluation Report

The evaluation team prepared a draft report according to AID reporting requirements as outlined in the Scope of Work. The draft report served as the basis for separate presentations to USAID/Jamaica staff and the Project Management Committee.

2.1.2.5. Presentation of the Evaluation Report

Prior to the evaluation team's departure from Jamaica, it made separate presentations of the draft report to USAID/Jamaica staff and the Project Management Committee.

2.1.3. Acknowledgements

The evaluation team wishes to acknowledge the valuable project background research and documentation done by Lorraine Blank and Mary Nerbonne. Their close examination of details relating to the non-formal, formal, and H.E.A.R.T. project components as well as RCA/GE, provided invaluable information for the team. The ready availability of this information freed team members from time-consuming investigative tasks and enabled them to pursue more analytic endeavors. We are grateful for their significant contribution to this effort.

2.1.4. Notation

While the team and the research associates amassed large quantities of information, we concur that there is an absence of reliable documented data on: training costs, benefits, relevancy of training to the the demand side (employability of completors), employer views on likely future skill requirements, former student views on their training, and employer perceptions of skill training (See appendix F for data reliability matrix and appendices H, I, and J for background data). Given this lack of reliable data, the team acknowledges its conclusions and recommendations are based on subjective interpretations of other, more objective findings.

3.1 ECONOMIC, POLITICAL AND SOCIAL CONTEXT OF THE PROJECT

3.1.1. The original Project Paper as well as annual Country Development Strategy Statements provide detailed descriptions of the project environment, with particular emphasis on the labor market outlook and implications for skill-upgrading programs. That material will not be repeated in this report. Attention is given, however, to five important factors which have helped to shape the project or which may influence future activities.

3.1.2. First, the major labor market problem in Jamaica continues to be youth unemployment. More than half of the Jamaican population is under 19 years of age and the labor force is growing at 2.5 percent per annum. The problem is significantly greater for females than for males. One of H.E.A.R.T.'s primary objectives, as listed in authorizing legislation, is the reduction in youth unemployment. A particular concern about the persistence of the youth unemployment problem has been possible damaging effects on youth attitudes, motivation, and aspirations. This had an effect on the Government decision to emphasize a residential approach to non-formal training.

3.1.3. Second, economic policy has been favorable to growth and output and there has been a decline in recorded unemployment from 24 percent to 20 percent (data not comparable with U.S. measures). The growth strategy is export-oriented and significant effort has been expended in attracting foreign investment. One of the selling points for that strategy has been the availability of English-speaking, trained and educated labor, at wage rates lower than international standards. This explains rather substantial Government committment to the Basic Skills Training Project and to H.E.A.R.T. It raises the warning signal that progress should be monitored to insure that training not be directed only to low-wage industries.

3.1.4. Migration has been an indirect outlet for employment -- in - direct in that the majority of those who migrate are the more highly skilled whose vacancies are ultimately filled by the unemployed. In the preceding decade, Jamaica lost nearly one-third of its professionals and managerial manpower and 13 percent of its skilled labor. This could be justified economically, depending on remittances sent back by migrants, but it raises questions about skill-development strategy. In recent years, nearly one-half of professional, technical, managerial, and skilled workers have migrated.

3.1.5. Jamaica's British heritage, as well, has had an indirect effect on the project environment, in the form of a centralized bureaucratic structure, a demand for credentials among employers and prospective employees, and a consequent demand for skill upgrading among the population at large. This, along with fiscal and monetary policy, created a favorable project environment.

3.1.6. Fifth, for the future, it is necessary to recall the uncertainty of the environment. Elections are about to be announced and this always implies uncertainty. The recent hurricane caused quite a bit of damage and a disruption of time schedule. The immediate effect of

this disaster is to improve employment prospects and wages among technically skilled workers. The longer term impact could be beneficial as well, considering insurance and international assistance for renewal of the capital stock. Tourism remains a large question-mark. The greatest element of uncertainty, however, is the public budget. Given current debt and debt-service requirements, there is a question whether the rather substantial likely future operating costs implied under the current operating budget, can be sustained without outside assistance.

4.1 PROJECT DESIGN

4.1.1. ISSUE: The project was predicated on a number of assumptions and expectations which shaped its subsequent structure and the nature of associated inputs. These expectations, as reflected in project targets, also set the guidelines for future assessments of performance. The consequent question is whether the initial objective and project directions were appropriate.

4.1.2. OBSERVATIONS: Project design reflected the following implicit assumptions or expectations:

4.1.2.1. - That Jamaica was suffering from shortages of specific skills which was somehow limiting the economic growth outlook.

4.1.2.2. - That, in result of this latent demand for skilled labor, an increase in training/vocational education would imply a reduction in unemployment.

4.1.2.3. - That a system of skills upgrading could be established by filling certain institutional gaps, upgrading of program inputs, and the creation and superimposition of a centralized coordinating authority.

4.1.2.4. - That such an oversight, coordinating, institution could be implemented early enough during the project to effect measureable improvement by the project's end.

4.1.2.5. - That the major gaps in the skill development system in Jamaica were on the nonformal, remedial sides of the market. Other international assistance was being or could be targeted on other problem areas in the basic and formal sectors.

4.1.3. Some of these assumptions were not entirely appropriate. The first, regarding the impact of skill deficits on the growth outlook, was probably not true at the time of project formulation but became more valid as the project took hold. Skills upgrading is most useful as an adjunct to economic growth policy, which is when it is used to facilitate the absorption of capital and technology. This seems to be current Government policy, and the availability of skills programs and trained labor are being used as selling points for Jamaica's industrial development strategy. Supportive fiscal and monetary actions created an environment favorable to the development of a skills upgrading environment.

4.1.4. A further implicit assumption was that there would be a sufficient demand for skills upgrading, among prospective trainees and employers, to support the project investment. This seems to have materialized, even though there may have been insufficient evidence to support the assumption at the time. We have no evidence that surveys were undertaken to measure the strength of demand among employers or project trainees. Moreover, we remain unconvinced that sufficient study was made of the amount of training already being provided within the private sector, and whether employers prefer to train within their enterprises or to use outside sources, such as H.E.A.R.T.

4.1.5. The belief that training, in and of itself, can reduce unemployment, is a common misconception within skill upgrading programs. Fortunately, this assumption has not had to be put to the test, as, by and large, H.E.A.R.T. program efforts have been directed to growth industries or occupations (garments, construction, data entry, cosmetology, etc). It is sufficiently difficult to identify areas of future labor demand that constant revalidation of outcomes, as measured by placement rates, is required. This, the project has not done (see below). Moreover, we see a potential conflict, which has not yet surfaced, between USAID objectives of assisting industrial growth through skill upgrading, and the H.E.A.R.T. objective of assisting the unemployed through such efforts. The former is a demand-side concern, the latter, supply-side.

4.1.6. The next two assumptions reflected, in our view, an underestimation of the difficulty of implementing such an ambitious effort. The restructuring and rationalization of a skills development system is a massive undertaking, involving the manipulation of bureaucracies and the resolution of a significant number of implementation problems.

4.1.7. We are less enthusiastic about the likely impact of the systems approach contemplated in the project design than were its framers. Admittedly the project provided a variety of inputs to address a number of perceived problem areas in the skill-upgrading sector. The heavy emphasis placed on coordination and control functions under a centralized organization -- a very popular model -- suggests the belief that this "system development function" was the primary project objective. This further implies the assumptions that the creation of a coordinated system would be possible and that it would function measurably better than a less well coordinated set of institutions or agencies.

4.1.8. Our own view of the skills development system is a bit more complicated. We feel that so many components are so tightly interlocked that changing some without others may not achieve much. Most training evaluations suggest that the quality of instructors and institutional administrators is more important than the organizational form under which they operate. Certain organizational forms may be more conducive to selecting superior instructors or administrators, but the main problem in Jamaica is salary. And this will remain a problem so long as salaries are tied to Government standards. It would have been useful were this question raised in the initial project design.

4.1.9. The project emphasized the non-formal, remedial approach to skill upgrading. Given extant circumstances at the time, particularly the understanding that other projects would address the formal education sector, this was understandable. The H.E.A.R.T. operating budget now exceeds that for the technical and vocational components of the Ministry of Education, which has the potential of providing incentives to young people to fail in the "normal" academic system so as to be able to enter into the more generous remedial system. The value of a vocational education diploma is still more highly valued, but the relative price has risen.

4.1.10. We have observed that some of the central features of the Basic Skills Training Project -- emphasis on informal pre-employment remediation and training under a centralized coordinating authority (and, later, a significant residential component) -- have subsequently been cut back in U.S. programs, due to cost considerations. It strikes us as paradoxical that a model which was viewed as too costly to maintain in an industrialized country was encouraged for a developing economy. Not necessarily inappropriate, just paradoxical. As noted in the section on project outcomes (4.4.), the large scale of the project did serve to galvanize attention, resources, and enthusiasm for skill-upgrading activities. We rather feel that a significant shock was required to achieve this important objective. The central remaining question is how long this intensive effort can be sustained.

4.1.11. FINDINGS: Project expectations were set unrealistically high, in apparent underestimation of the magnitude and complexity of the effort required. A reasonable time horizon for a project intending to create and superimpose a coordinating agency on top of a well-financed operating system in Jamaica would be at least 15 years.

4.1.12. One of the project's primary objectives was institution building and much of our evaluation will concentrate on this issue. This somewhat "top-down" approach to the creation of a training system later had to contend with implementation delays of a bureaucratic origin. These might have been better anticipated. While mention was made of political uncertainty regarding project implementation, the project objectives and time frame did not reflect a realistic preassessment of other constraints on the implementation of such fundamental institutional changes.

4.1.13. Moreover, while the intent may have been institution building, project inputs were heavily tilted toward operating concerns -- facilities, equipment, curriculum, training for instructors, etc. It should therefore not be surprising that greater progress has been achieved on the operational side than on the monitoring/coordinating sides of the project.

4.1.14. The simple scale of the project (US$13.4 million AID and US$49.9 million from the Government of Jamaica), added complexity and implementation problems. For a country of 2.2 million people, this works out to nearly $30 per head. The fact that this funding was designed to structure a centralized system, with only advisory committee or board input for the private sector, suggests a certain predisposition which appears curious in light of USAID general emphasis on private-sector involvement. Then with 1988 Government decisions regarding the assumption of operating responsibilities by H.E.A.R.T., the implementation problem became larger and absorbed greater attention and resources. Therefore, the project was forced to confront changes in the environment which could not have been anticipated, along with others that should have been.

4.1.15. Project design notwithstanding, what was actually put in place was rather different than what was intended, with greater emphasis on operational matters and less on coordination, evaluation and the sharing of information. This was due to the policy decision, taken by the Prime Minister and the Parliament, to shift operating responsibility for a number of academies to H.E.A.R.T. This, in turn, reflected the rather valid view that it would be logical to have an effective operating system in place before turning attention to monitoring it. More directly, the decision was taken pursuant to an inquiry prompted by student complaints. Leaving aside the question whether an evaluation component should not be built into such a project from its inception, we find that the flexibility shown by USAID in the actual implementation of the project was useful. The original design was not necessarily appropriate for the conditions it later had to confront, so change was permitted. This strikes us as reasonable and appropriate, although we feel that evolving project objectives should have been better recorded in the form of project amendments.

4.1.16. RECOMMENDATIONS: Given what has already transpired on the Basic Skill Training Project, we believe the primary constraint on future activities will be budgetary -- in particular, funding for recurrent costs. Only a small portion of these funding problems are likely to involve foreign exchange, which implies that the relevance of USAID contributions will diminish if current AID contractual procedures persist. Jamaica has been encouraged to embark on a fairly costly approach to skill upgrading. Sustaining that effort will require different, more flexible types of international assistance.

4.1.17. Project experience has shown the unpredictability of the environment, particularly the changing nature of policy objectives. The requisite funding flexibility which is implied in consequence could be built into the initial project design or at later stages of implementation. The former could be achieved through open-ended contributions to a Trust Fund (presumably under the authority of H.E.A.R.T) which could be allocated according to changing Government priorities. If it is decided to allow flexibility during implementation, provision will have to be made in terms of a rather general design and preparation for a number of likely amendments or task statements over time.

4.1.18. In recognition of the many serious difficulties involved in trying to impose harmony within the bureaucracy, we later recommend consideration of separate project funding for H.E.A.R.T. and the Ministry of Education (see para. 4.2.11), Barring this, or even in conjunction with separate funding arrangements, we would recommend far greater use of subcontracting among public agencies. If H.E.A.R.T. is having trouble gaining leverage over the bureaucracy, subcontracting would appear to be a possible solution. We are mindful that reaching agreement on contract terms may be just as arduous as reaching agreements without contracts. We note, however, that suggestions for greater use of subcontracts have been made by the Ministry of Education and the Ministry of Youth and Community Development.

4.1.19. One design issue which will have to be given greater consideration should further project funding become available is how better to involve the private sector -- not merely as advisors, but as participating partners. The foundation for that partnership already exists and the 3% training tax on payrolls is a tool which could further it. In general, we are concerned by the supply-side orientation of the initial project design. Experience has shown that training programs function well only when they are governed by demand-side concerns. In this regard, the Government of Jamaica has shown greater awareness of the lessons of vocational training in other countries than did the drafters of USAID's Project Paper. Both the Ministry of Education and H.E.A.R.T. are in the process of operating their facilities at night for skill upgrading for the employed. We have heard of intentions to utilize experienced workers or supervisors as instructors in these evening courses. Raising productivity among the existing work force should be a high priority for human resource development strategy. We feel that, to date, insufficient attention has been given to this important activity. We would suggest that an experiment be initiated to test the feasibility of providing a tax credit to all firms whose workers pass a certified examination devised by H.E.A.R.T. This of course, presupposes the existence of competency-based proficiency examinations for trades, which is something the current project was supposed to achieve but which has not yet been implemented.

4.1.20. In general, we recommend that future project activites be introduced on a phased, experimental basis. Some of the implementation problems noted in section 4.3 seem to have resulted from attempting too much too soon. Greater consideration needs to be given, in our view, to the absorptive capacity of participating agencies. A project of this magnitude, we feel, should contain a large knowledge-development component with due provision for feedback and modification. The original project design did not call for a sufficient degree of controlled experimentation and this weakness should be corrected in any future design.

4.2 STRUCTURE/ORGANIZATION/FUNCTIONS

4.2.1. ISSUE: Three basic organizational components were thought to be interrelated and mutually supportive of the Government's efforts to develop a sound skill training system. The question is whether or not these components, when working together, represent sufficient internal consistency to achieve project objectives.

4.2.2. OBSERVATIONS: The project was designed to achieve its objectives by focusing on three basic components - the H.E.A.R.T. Trust, Non-Formal Skills Training, and Formal Skills Training. Three Jamaican Ministries and five institutions were charged with implementing and operating the project's scope of work.

4.2.3. With the exception of the H.E.A.R.T. Trust, participating institutions were well-established and fully operational at the start of the project. The two implementing institutions (MYCD and MOE) have functioned for 20 years or more and operate systems that provide skills development.

4.2.4. FINDINGS: While the participating agencies were involved in a common effort - to improve the skill training system - each had its own agenda. The H.E.A.R.T. Trust had a mandate to coordinate training (formulate policy, set guidelines, fund, monitor, and evaluate). Responsibility for the educational system and formal skills training through technical high schools rested with the Ministry of Education (MOE). The Ministry of Youth and Community Development (MYCD) had responsibility for Jamaica's public-sector supported non-formal skill training activities as well as social-services related activities. Each agency thus brought a unique and specific mandate to the project environment. Each tended to focus on what it perceived as its primary mission. The agencies seemed only secondarily concerned about interrelationships and common efforts. This is not to say that certain individuals within the three agencies did not work cooperatively. We merely suggest that, in general, the agencies looked to themselves first and to the system second.

4.2.5. Each agency was organized to facilitate achievement of its own mandate or mission. Line and staff structures were established to facilitate the accomplishment of agency business. Being a new agency, the H.E.A.R.T. Trust established a structure thought best to serve its coordination role. This was later amended to account for the added responsibility of administering the H.E.A.R.T. academies. This is an evolving structure that is accommodating significant, internal changes. The Ministry of Youth and Community Development and the Ministry of Education possessed long-standing organizational structures that have undergone periodic attempts at change. The Ministry of Youth and Community Development sought to facilitate project activity by creating a new division to set policy for the H.E.A.R.T. academies. This division was called the Non-Formal Education Division (NFED) and was delegated a staff relationship to the MYCD Minister. This division never fully realized its potential and its future was clouded when academy oversight was removed from MYCD jurisdiction. A peculiar organizational relationship existed

within MYCD whereby the Social Development Commission (SDC), which ran the Academies, was directed by a board which was not in a line relationship to the MYCD Minister. Confusion existed within the agency regarding roles and responsibilities. These serve to illustrate some of the internal organizational problems impacting on the agencies. With confusion within an agency there is little wonder that more inter-agency cooperation did not occur.

4.2.6. To say that project agencies were organized without regard for each other is only a slight exaggeration. Processes, procedures, and a bureaucracy were strongly entrenched for the MYCD and MOE and evolving at the Trust. This is not all bad. In fact, such vehicles are sometimes necessary to help organizations fulfill mandates and missions.

4.2.7. The unique and specific mission/mandate for each agency required staffing patterns that both contributed to and detracted from inter-agency cooperation. Both the MYCD and MOE possessed staff who provided technical support for curriculum development and instructional materials as well as training and upgrading of instructors. Monitoring and evaluation support was also found to be duplicated in the two agencies. There was and continues to be duplication of effort within and between participating agencies. Moderate to high turnover of key staff in all sectors has aggravated this situation. H.E.A.R.T. headquarters staff are not particularly strong in terms of vocational education or training experiences, so interaction among the agencies has been an important activity.

4.2.8. Mechanisms exist for give and take between the agencies. A communication network has been established through the project and provides a viable means of making an entry into other GOJ participating agencies/institutions. People, offices, and committee chairpersons have been designated as contact points. They function well considering the complexity of the project and the environment in which it must function. However, the formal and non-formal sector organizations still cling to tradition and seek to operate as if in isolation.

4.2. 9. A fourth agency, USAID, is still another factor to be considered in this mix of participating agencies. While supportive and well-intentioned, USAID internal procedures have created some roadblocks to successful achievement of an internal consistency of agencies sufficient to achieve project objectives. The oversight it provided for delivery of services by the primary contractor, approval of project amendments and waivers, and monitoring and evaluation of activities sometimes caused confusion and subsequent delays in implementation of planned project activities.

4.2.10. Given long-standing traditions, differing agency mandates, and divergent views on how skill training can best be improved, we feel that remarkable progress was made in getting participating agencies to work together as a team. These agencies possess sufficient internal consistency to achieve project objectives. They also have the potential of mutually supporting one another's activities, establishing methods and means for accomplishing tasks, both

stability and flexibility of structures and, most important, a pool of talented and dedicated agency staff.

4.2.11. RECOMMENDATIONS: Project agencies are now in a position to strengthen the entire training system by establishing cooperative working relationships. To achieve these relationships we recommend contractual funding for such targeted activities as a feasibility study for combining duplicated services among skill up-grading agencies (technical support activities in curriculum and instructional materials development, instructor training and upgrading). We recommend further contract funding of efforts to better utilize the training facilities of the academies, technical high schools through combined programming, night schools, and summer programs. We further recommend the H.E.A.R.T. Trust take immediate action to foster increased understanding among all agency staff of the ways in which agency cooperation can benefit the individual agency employees and most importantly the skill training system. Finally, should further project funding be contemplated, we recommend separate agreements be reached with H.E.A.R.T. and the Ministry of Education, with distinct financing for each entity.

4.3 IMPLEMENTATION/OPERATION

4.3.1. ISSUE: Implementing and operating planned project activities in a complex changing environment.

4.3.2. OBSERVATIONS: The dynamics of skill training in Jamaica likely requires a greater level of implementation flexibility and experimentation than is generally warranted in a project of this financial magnitude. That flexibility was essential at the time of project formulation because of the complexity of Jamaica's skill upgrading problems, characterized by: a fragmented system of skills training, duplication of programs and facilities, curricula divorced from current or anticipated demands, poor private-sector relationships, ineffective placement services, inequitable distribution of facilities, and changing roles and responsibilities of GOJ training agencies.

4.3.3. FINDINGS: Progress was made toward institutionalizing the H.E.A.R.T. Trust as the National Training Board, but it has been only partial. The Trust implemented procedures and secured staff to formulate policy, set guidelines, fund, monitor, evaluate, and coordinate skill training activities in Jamaica. It also made some progress toward increased private-sector participation in skill training activities. This was accomplished through the use of private-sector advisory boards. Advisory committees for individual industry/business or occupational groups have been appointed from the private sector. They assist the Trust to set occupational performance standards and certification procedures, review curricula, and generally organize training activities within their sector. The Trust also assumed responsibility for the management and operation of all H.E.A.R.T. academies. This action required the Trust to undertake operational activities in addition to its coordination mandate.

4.3.4. Agreements over roles and responsibilities within and between GOJ project agencies were not reached. There remains confusion about the roles and responsibilities of MYCD/NFED, SDC and VTDI and their continued participation in the project. Failure to reach such agreements has, to some extent, had a limiting effect on certain project implementation activities. This is particularly noticeable in the areas of curriculum development and instruction, certification, proficiency testing, training, and upgrading as related to the VTDI and H.E.A.R.T. Training Division. Confusion exists about the future role and responsibilities of the VTDI within the project.

4.3.5. Technical assistance and training were provided in management and administration, curriculum development, counseling, placement services, tracer studies, food service, testing, and information systems. While generally well-received, technical assistance was not provided without some difficulty. In some instances the work of foreign consultants was found inappropriate for application to the Jamaican situation. In other situations, consultants operated without Jamaican counterparts. In still other situations consultants

were perceived to have been selected without sufficient input from the Jamaican perspective.

4.3.6. The primary contractor for technical assistance (RCA/GE), provided both long-and short-term technical assistance to assess training needs and assisted in the development of training plans. Additionally, the contractor assisted each participant trainee in developing an individualized training plan and in selecting an appropriate training institution. Participant trainees were generally pleased with their experiences reporting that knowledge and skill gained have enabled them to improve delivery of services.

4.3.7. Facilities, equipment, and institutional technology were also upgraded and expanded as planned, although not always in a timely manner. Both the formal and non-formal sectors accomplished these tasks. Four new H.E.A.R.T. academies were established and operationalized while seven technical high schools and four other secondary schools were upgraded. Difficulties were experienced when equipment and tools were delivered that did not meet specifications or required 60 cycle electricity. The procurement contractor was subsequently replaced by another firm.

4.3.8. In-service training was provided to project-related personnel in administration and management, testing, monitoring, inspecting, tracer studies, and curriculum and competency-based materials development and use. Training was carried out in a timely manner with generally favorable results.

4.3.9. A number of project activities were not implemented as planned. Private sector advisory councils (PSAC) for the technical high schools were not realized. The PSAC concept was designed to help both the Technical-Vocational Unit (TVU) and technical high schools (THS) establish links between training and labor market needs. Composed of TVU and THS staff and private-sector representatives, the PSACs were to help the TVU and each THS with assessment of manpower demands, development of appropriate job-related curricula, and the training and placement of THS graduates. Because of difficulties involved with approvals for committee membership, PSACs have not made significant contributions to the TVU and THS. The evaluation team believes that advisory committees imply only one step toward private-sector involvement in skill upgrading. They are somewhat passive, reactive, responses to private-sector needs. Better discerning those needs is the first priority. Sustaining enthusiasm for advisory committees among occupied private-sector employers is sometimes difficult, and divining the appropriate composition of the committees more difficult still.

4.3.10. However, subject-area PSACs attached directly to the MOE do exist. Subject-area advisory committees have worked closely with content specialists and have been instrumental in the design, development, pilot-testing and implementation of catering and food preparation, garment construction and design, entrepreneurship, auto mechanics and business education.

4.3.11. As called for in the Project Paper, recent technological advances in

training, (self-paced, competency-based, modularized and programmed instructional techniques) were introduced and adapted for use in Jamaica. Competency-based curricular modules were developed in auto mechanics, garment construction and design, catering and food perservation and entrepreneurial education. The modules were tested in the field and implemented on a limited basis. Wide-scale acceptance and use of the modules has not occurred as instructors reportedly do not feel a real sense of ownership of the materials and because many of the instructors trained in the use of these materials have left their posts for other non-project-related assignments. Competency-based modules designed for the life-skills have faced similar implementation problems.

4.3.12. Counseling and placement of students is still another project activity that has not been fully implemented. Procedures and staff are in evidence, but much remains to be accomplished for full-scale implementation. Processes and procedures need to be more fully developed, clarified and documented. More staff need to be recruited, trained and assigned to these duties.

4.3.13. Systems for testing/monitoring/evaluation/follow-up and managing information were not fully operationalized. Groundwork has been laid to establish these systems. However, the processes, procedures, and schedules that have been developed must be further refined and put into operation. Additional technical assistance and in-service training will be required to place these systems on line.

4.3.14. The Government of Jamaica and USAID/J created a working environment whereby the project succeeded in implementing and operating many planned activities. The H.E.A.R.T. Trust has made some progress toward becoming the Training Board for Jamaica, though not as much as was envisioned in the original project design. We are concerned, however, about the Trust's assumption of operational responsibilities for the academies. We are concerned regarding the possibility that such responsibilities might divert resources or attention from the Trust's project's responsibilities of formulating policy, setting guidelines, funding, monitoring, evaluating, and coordinating skill training activities. We are concerned about the possibility that H.E.A.R.T. may ultimately come to be viewed as simply another layer in the bureaucracy. This is particularly likely should H.E.A.R.T. pursue its operational responsibilities at the expense of its monitoring and coordinating functions.

4.3.15. Eleven technical high schools and four H.E.A.R.T. academies have upgraded and expanded facilities, equipment, and institutional technology to better deliver skill training. Technical assistance, participant training, and inservice training have all contributed significantly to the improvement of the training system. The system can be further improved by: increasing cooperation within and between project agencies and the private sector; better utilizing competency-based and other curriculum materials already on-line; and effecting systems for testing, monitoring, evaluating, counseling, placement and information management. We recognize the importance of private-sector involvement in skill training and the significant

role advisory boards and committes can play in making efforts relevant to the labor market. However, we suggest that such committees alone will not insure relevance. Therefore, it is essential that administrators and instructors get out into the private-sector to observe, work, and generally interact with employers in the private sector.

4.3.16. RECOMMENDATIONS: We recommend that, in the remaining months of the project, emphasis be placed on: implementing private-sector advisory councils at technical high schools; building cooperative relationships with the private-sector; using, assessing, and modifying competency-based materials in experimental settings; improving testing, monitoring, evaluation, counseling and placement programs; conducting tracer studies; and implementing a management information system (MIS). Before operationalizing the MIS, we recommend that all agencies work together to make their internal systems compatible. We strongly urge a study be made of the functions and resources of the MOE/Training Materials Resource room, VTDI/Training Materials Resource Center, H.E.A.R.T./Training Division, and CAST/Instructor Training. A pooling of these resources might well provide an effective and efficient means of developing curriculum and providing for instructor preparation and upgrading. When foreign technical consultants are to be employed, they should be carefully screened by appropriate agency heads and provided with Jamaican counterparts. We further believe that a clarification of roles and responsibilities of MYCD/NFED, SDC and VTDI as related to their continued project participation is in order, but understand that it is underway. The nature of competency-based modularized training requires a continuing and stable pool of instructors who are well versed in the art of adapting and delivering this form of instruction. Therefore, we recommend that technical assistance, participant training, and in-service activities be provided on a continuing basis to develop a cadre of instructors and administrators who are available in each school/academy for purposes of orienting new instructors and upgrading existing personnel on the implementation and operationalization of competency-based programs. Finally, we encourage continued use of the flexible management model which enabled the project to satisfactorily implement many of its planned activities. However, we urge those with oversight responsibility to use authority to maximize implementation of project activities.

4.4 PROJECT OUTCOMES

4.4.1. ISSUE: Given project inputs utilized to date, what was the net impact on the skills upgrading system and its components -- H.E.A.R.T., the Ministry of Education, etc., as well as participants -- the young people of Jamaica, employers, instructors, etc.? Was the desired oversight coordinating institution created?

4.4.2. OBSERVATIONS: One fortuitous development which could not have been forseen at the project's outset was the eventual placement of H.E.A.R.T. under the Office of the Prime Minister. More than a symbolic gesture, this move has insured that the emerging skills development system is firmly grounded on national growth policy, which is particularly useful. It implies that training priorities can be set by investment priorities, such as when the Government decides to promote a particular foreign exchange earning opportunity. For this reason, some of the planning functions originally envisioned for H.E.A.R.T. have become less relevant during project implementation. However, to insure that policy assumptions about future labor requirments are correct, monitoring and program evaluation take on greater significance. Of course, the organizational structure implies a high political profile for H.E.A.R.T. This is not particularly conducive to the evaluation and analysis functions to be carried out by the organization.

4.4.3 FINDINGS: Institution building, which we see as one of the project's primary objectives, takes time. The effects of institutions on such specific outcomes as placement rates or employer opinions take longer still to discern. Five years is too short a period in which to measure the full effects of this project.

4.4.4. One of the most positive accomplishments of the project has been its catalytic function. USAID funds have been matched more than 3:1 by the Government of Jamaica. Training, and H.E.A.R.T., have received the attention necessary to create the feeling of scale, the first prerequisite of a structured system.

4.4.5. As to the central question, whether H.E.A.R.T. has achieved its objective of becoming a national training authority or board, the answer is mixed. H.E.A.R.T. is not yet a coordinating body since it has been an implementing and operating body. We note, however, that one way to achieve coordination is through centralization, which is what is implied by H.E.A.R.T.'s growing operational responsibility. Moreover, we also note an attempt to centralize authority for technical education within the Ministry of Education, which we interpret as a response to the coordination concern. H.E.A.R.T. is still in the process of setting up its management-information, evaluation, and monitoring systems. While this is somewhat understandable in light of the changed project environment, we feel that operations, if that is the priority function, would be enhanced by monitoring and evaluating activities implemented at the same time as operations. Baseline data on placement rates, costs, and other project data relating to outcomes, would have provided a valuable point of reference for later comparisons. The assumption of

operating responsibility by H.E.A.R.T. does not clearly explain the hesitation to structure an evaluation system -- such as tracer studies -- prior to H.E.A.R.T.'s implementation of that responsibility.

4.4.6. A pilot tracer study of academy graduates was undertaken earlier in 1988. (Teape-Johnson). By its own admission, the study was flawed by design problems. The results of that study, however flawed, will be discussed subsequently. Within the study report, there was a recommendation that a properly structured complete tracer survey be mounted to narrow the range of uncertainty covering reported study results. This is a recommendation with which we strongly concur, but one which has yet to be implemented. The Evaluation Team is not clear whether this was due to the press of other business or to the feeling that current experience reflected too many implementation problems to be useful for future policy decisions. Perhaps it also reflected a lack of appreciation for assessments or analysis. It is our own view that H.E.A.R.T. need not and should not await the development of a sophisticated, fully developed management information system before it begins to implement the basic components of such a system, such as before and after test scores, placement rates, subsequent employment experiences, and cost information. Project cost data are collected, but they are not available in a form suitable for analysis. Moreover, data available from H.E.A.R.T. refer to H.E.A.R.T. programs. The initial project agreement called for H.E.A.R.T. to develop evaluation, monitoring, and analytical designs for the entire training system, not just for that part which was covered by its own operating mandate.

4.4.7. We are aware that significant technical assistance has been provided for the design of a management information system, and that much of that design is now being followed in the construction and implementation of the desired system. We note that this is a complicated undertaking, which can be expected to take one or two additional years before yielding useful results for policy. We believe that early experience from the US Department of Labor's Office of Youth Programs should have formed the basis for technical assistance regarding knowledge development, monitoring and evaluation for H.E.A.R.T's assessment and coordinating functions. We view lack of sharing of that experience, which includes listings of data requirements, format, and even computer coding, as a serious gap in the technical assistance provided. But more than this, we are concerned with what we perceive as an all-or-nothing approach. We feel that a great deal could have been, or still can be accomplished, while the management information system is being implemented. Tracer studies and cost analyses can be carried out independently of data analysis systems.

4.4.8. The provision of technical assistance, equipment, upgrading of facilities and instructors, has not been without the implementation problems noted previously, but results have been significant and positive. H.E.A.R.T. training facilities are a model. They are top of the line. The Ministry of Education has benefited significantly from project inputs, as their physical and financial base was so low to begin with. In that all the individual

institutions we have seen have substantial waiting lists, it is safe to say that the physical inputs to the project have permitted an expansion of the quality and quantity of basic skills upgrading in Jamaica.

4.4.9. Participant training, often provided in the U.S., is generally viewed as extremely positive. There appears to be a greater receptivity, as a result of that training, to the competency-based approach, a general appreciation of the goals of monitoring evaluation and feed-back, and an understanding of how to achieve them. Unfortunately, H.E.A.R.T. headquarters staff have not yet had time to avail themselves of these training opportunities to the fullest extent possible.

4.4.10. Instructor upgrading has shown some of the strengths and weaknesses of the project. Illustrations can be provided on numerous success stories -- instructors or program administrators made aware of alternative approaches to their responsibilities and motivated to implement them. In the final analysis, the problem becomes one of salary -- how the system can retain competent people in light of low Government salaries. Experience has shown that it is difficult to operate first-class training systems with second-class rates of pay. H.E.A.R.T., as a quasi-Government agency, has slightly more leeway than others on salary matters, particularly in terms of fringe benefits or perequisites. Compensation packages are subject to review and approval by appropriate public agencies, so the margin of flexibility is small and by no means sufficient to compete with domestic private-sector or overseas alternatives for technical talent. The problem is naturally worse in the Ministries of Education or Youth and Community Development.

4.4.11. We have reviewed the results of the Teape-Johnson pilot tracer study of 1987 and noted the conceptual problems with the sample design. The sample was weighted in favor of those who remained at the same residences subsequent to training. It is likely that employment histories differ between movers and stayers, and therefore the sample may not be representative of the experiences of all passed-through graduates. Nevertheless, the results show a 52% employment rate among those who participated in H.E.A.R.T. programs (academies, school leavers, etc.), which was above the 40% expectation listed in the original Project Paper. However, the definition of "employment" used in the pilot study is somewhat generous in that it apparently includes those in school or not actively seeking work. A more meaningful statistic is the number of respondents who later found employment within their field of training. The results were: Garmex, 33%, Portmore, 4%, and Stony Hill, 9%, which are low rates by any standard. Moreover, the apparent high overall placement rate is skewed by the Garmex results, but wage rates in the garment industry are rather low (on the average of J$95 per week according to the report). In all, we view these tentative results as suggestive of problems which require further analysis.

4.4.12. Data from the Ministry of Education are even shakier than those from the Teape-Johnson study. In 1988, principals from 7 technical high

schools were interviewed concerning placement rates among their school graduates. Results suggest that 65% of students who are graduated from industrial education programs find jobs, while 66% of business education graduates find jobs in business or industry. Without a properly structured control group as a point of reference, such results can at best be viewed as indicative. In summary, we are not able to determine project outcomes in any statistically reliable fashion. Given original project objectives, it is surprising that this should be the case after roughly five years of operation.

4.4.13. RECOMMENDATIONS: H.E.A.R.T. is now positioned to implement the kinds of monitoring, evaluation, and analysis functions which the Basic Skill Project was designed to address. The planning activities which were originally envisioned have become less necessary as the result of a project structure which places H.E.A.R.T. under the Office of the Prime Minister and subordinate to development objectives. Precisely because of that structure, and the uncertainty facing small, open economies attempting export promotion, there is a particular need to monitor progress toward policy objectives. We note the emergence of a management information system in H.E.A.R.T. (and a separate one within the Ministry of Education) and can only urge that such activities be accorded the priority we feel they deserve. We are somewhat concerned that such systems often become repositories for unused information, and recommend that provision be made for a strong analytical component to accompany data collection. We suggest, however, that additional technical assistance on policy analysis questions (perhaps in the form of overseas participant training) be contemplated for the future.

4.4.14. As a matter of urgent priority, we recommend the development of a full-scale properly structured tracer study to record future employment experiences of program completors and early leavers, with a subset of secondary school completors serving as a control group. We suggest that particular attention be paid to the subsequent earnings profiles of project completors, to serve as a check on whether programs are merely serving as feeders for low-wage industries. We further recommend that such tracer studies be accompanied by interviews of employers to elicit their opinions on productivity among project completors and recommendations for improving operations.

4.5 PROJECT COSTS

4.5.1. ISSUE: Costs and internal efficiency of the Basic Skill Training Project.

4.5.2. OBSERVATIONS: It is well known that institutionally-provided skills upgrading is inherently expensive, generally on the order of 2-3 times more costly that normal secondary education. Residential programs, such as most of the H.E.A.R.T. academies, are naturally more costly still. And since the programs contain a remediation component which is likely to grow in the future, it may be predicted that costs per trainee will continue to rise. It is important not to confuse high costs with inefficiency. Although inefficiency does raise average costs above the point of optimality, it is possible to have a perfectly efficient system which is simply expensive. We suspect that this is rather the case with H.E.A.R.T. It has taken on some inherently costly functions, even though it has been careful to keep those costs to the feasible minimum. In fact, certain activities necessary to ensure operating efficiency (such as monitoring and evaluation) further add to project cost levels (even while lowering average costs). Skill upgrading programs require high overhead supportive services, such as management and planning.

4.5.3. In assessing the cost of the Basic Skill Training Project, it is well to recall that they fall disproportionally to the Government of Jamaica. AID's contribution to the project is less than one-third that of the Government, and two thirds of the AID input is in the form of a loan which will later have to be repaid by the Government. Given the magnitude of Jamaica's external debt and the current burden of servicing that debt, it may be fairly questioned whether the current operational budget, which H.E.A.R.T. reckons to be on the order of J$100 million per annum, is sustainable for the longer term. To be sure, much of the H.E.A.R.T. budget, over half, in fact, is internally generated by the 3% payroll tax. While questions may be raised about this form of funding, the availability of this revenue has provided H.E.A.R.T. with a flexibility unattainable by other Government agencies. Costs may have increased in consequence, but effectiveness and efficiency have likely seen increased even more.

4.5.4. The Basic Skills Training Project and H.E.A.R.T. have been used by the Government of Jamaica to showcase Jamaican labor, in an effort to increase attractiveness to foreign investors. Such an objective virtually insures a relatively high-cost program, with quality inputs, high visibilty, and a large public-relations component. Under these conditions, costs, to a degree, are likely viewed as indicators of sincerity and not necessarily something to be minimized, given potential returns.

4.5.5. FINDINGS: The Evaluation Team was given access to internal, confidential data by H.E.A.R.T. Confidentiality need not be compromised by our assessment.

4.5.6. The data are regularly collected for administrative and management purposes. They are not entirely suitable for analysis in that headquarters activities are lumped separately from recurrent costs for academy or other program operations. Moreover, programs, and even certain facilities, have not been in operation sufficiently long to generate a reliable estimate of costs. It is difficult to apportion capital costs across program components.

4.5.7. Our chief finding regarding costs is that the entire H.E.A.R.T. operation is expensive, but that individual academies are surprisingly not. Even so, H.E.A.R.T. academy operational costs per trainee appear to be running more than 4 times those of the Ministry of Education's technical schools, as expected.

4.5.8. Current H.E.A.R.T. operating costs are low because depreciation and replacement costs are low. This reflects the newness of the system. Pressures can be expected from aging equipment within the next 10 years. At the moment, H.E.A.R.T. can afford to carry out preventive maintenance, but budgetary pressures may constrain this activity in the future.

4.5.9. An inherent problem with vocational training is the cost of changing programs or curricula. Both H.E.A.R.T. and the Ministry of Education are a bit saddled with expensive specialized equipment which will make it difficult, in the longer term, to accommodate changing market circumstances.

4.5.10. RECOMMENDATIONS: It appears that H.E.A.R.T. and the Ministry of Education are attempting to control operating costs, and while there is always room for improvement on such matters, the scope for improvement is limited or already in process. If costs are to be lowered further, alternative mechanisms for the provision of training will have to be found. Enlisting private-sector participation in a cost-sharing partnership would be one such mechanism.

4.5.11. Contractual arrangements would be another. One extra benefit of subcontracts, at least those with the private sector, is that they can assist in circumventing constraints on public salaries.

4.5.12. To insure that alternatives are given proper consideration, we feel that H.E.A.R.T.'s analysis unit, IS & R, might wish to suggest the kinds of data required for policy analysis of the efficiency of operations and alternatives. What is required are data on costs per trainee, per trainee hour, per completor, per placement, and lifetime income improvements per completor, all in relation to comparable control groups.

4.6 ALTERNATIVES FOR THE FUTURE

4.6.1. ISSUE: Project experience to date has suggested a number of alternatives regarding structure, organization, and operational characteristics of skill upgrading programs. The question is, which of these alternatives should be considered when structuring future project activities.

4.6.2. OBSERVATIONS: Among the many options to be confronted in any future project design, we would suggest that particular attention be paid to the following seven issues:

- -- Project funding
- -- Project objectives and structure (target population)
- -- Management, evaluation
- -- Expansion of private-sector role
- -- Methods of operation (contracts)
- -- Regional institutions
- -- Technical assistance

4.6.3. FINDINGS: Most of these issues have been mentioned in earlier sections of this report. As to the first, funding, we have noted that as the skills development system proceeds to its more operational phase, requirements are more likely to be for funds to cover operating costs, which is sometimes not easily supported by international assistance. For this reason, many institutions are shifting from project to program support, under the guise of support for structural adjustment activities. This provides flexibility for implementation and reduces management requirements from donor institutions, although program monitoring remains an important function. Carrying this concept further, we suggest that consideration be given to the possibility of channeling international and domestic support through a trust fund which would be under the control of Jamaican authorities. Revenue from the 3 percent payroll tax would also be included in the Trust Fund.

4.6.4. The payroll base of the training tax is troublesome, in that it serves to raise the price of labor relative to that of capital. Consideration might be given to replacing this tax with an equivalent revenue-generating tax on sales or value added.

4.6.5. The current project channels funds for the formal education sector through H.E.A.R.T. This seems to have caused some bureaucratic difficulties and delays. Mindful of the administrative burden of separate project agreements, we feel that consideration should be given this option as a way to reduce implementation problems within the bureaucracy; e.g., separate agreements between USAID and H.E.A.R.T. and between USAID and the Ministry of Education. We note that separate agreements need not preclude the monitoring of one agency's implementation progress by a second agency.

4.6.6. The second set of alternatives relates to project objectives and in particular, the target population. The Basic Skill Training Project has largely focussed on training for first-job entry. A

complementary set of activities, now emerging under both H.E.A.R.T. and the Ministry of Education programs, would be skill upgrading for the employed through after hours classes and work-release programs. This has the added advantage of involving the private sector more fully in the training system. We understand that steps are being taken in this direction.

4.6.7. As an alternative to specific occupational training now carried out under H.E.A.R.T., consideration could be given to more polyvalent skills development, with the objective of increasing job readiness while reducing the time requirement for specific on the job training for the newly hired. This approach would parallel that being pursued in technical schools, whose graduates are prized precisely because of their well-rounded backgrounds. Admittedly, Ministry of Education programs are longer than those in the non-formal sector, but we feel a better balance needs to be found between preparation for on the job training versus preparation for specific jobs. H.E.A.R.T.'s emphasis on attitudinal preparation shows an awareness of the problem, but carried to its logical conclusion, this awareness would imply less specific job training and more emphasis on general, polyvalent training for the work place.

4.6.8. Further to the question of the target population, we note that 15-17 year olds are not covered under current program activities, whereas they were under MYCD Youth Camps. From a training perspective, exclusion of the younger age group makes sense. If it is desired to cover 15-17 year olds, other program structures may be more appropriate than the current project.

4.6.9. Regarding the fundamental question whether H.E.A.R.T.'s role should be operational or coordinative, we feel the Government of Jamaica has already taken the decision in favor of the former. We are mindful that this could change in the future, in that the public-sector has no traditional comparative advantage in program operations. Should greater use of subcontracting with the private-sector emerge in the future, H.E.A.R.T. might be able to reassume its originally intended role of coordination, monitoring, facilitation and evaluation. For now, the evaluation function, while a key component of H.E.A.R.T. plans, is rather unclear since it is not considered good practice to have evaluation carried out by the same group which is being evaluated. We see a conflict between the evaluation and operational objectives of H.E.A.R.T. which extends beyond the mere need for a separate division for the operation of academies. The conflict is philosophical, not merely structural. This suggests the possibility that if H.E.A.R.T. is to continue as an operating agency, it may be necessary to use an outside agency for evaluation.

4.6.10. The need to involve the private sector more fully in the provision of skills upgrading has been mentioned earlier in this report. Illustrations of how this might be accomplished (tax credits for firms whose employees pass proficiency tests, after-hours classes for employees of smaller firms, the use of instructors from the private sector) have all been provided. The intent is not merely to have the private sector support a greater share of costs, but to have the private sector actually provide more on-the-job training

(which incidentally implies a cost-sharing role); that is, to leverage and redirect ongoing private-sector training activities in a manner consistent with the social and economic needs of the country. H.E.A.R.T. has been rather good at incorporating private-sector opinions in the formulation of its program. The next step, it would seem to us, would be to involve the private sector more fully in the implementation of those programs and the utilization of their outputs.

4.6.11. Our views on the need for subcontracting arrangements have been expressed earlier. We favor such arrangements for a number of reasons such as flexibility, control, and payment by performance. We further note that subcontracts can be used to further private-sector participation in project formulation and execution.

4.6.12. The model on which the project was developed is primarily domestic in orientation, except for the overseas training component. Jamaica's small size makes it difficult to structure a widely-based training curriculum and supportive institutions. We assume that at some time in the foreseeable future, the Government will wish to consider cost-sharing arrangments with neighboring islands, particularly for costly or specialized training programs. This would suggest a regional component to the skills upgrading system, perhaps patterned after the University of West Indies model. We note that this was one of the original objectives for VTDI.

4.6.13. There are a number of options to be considered regarding future technical assistance to a project of this sort. The RCA/GE and Ronco components were AID-direct contracts. They could have been structured under host country contracts under the authority of H.E.A.R.T. H.E.A.R.T. does not favor the assumption of this managerial responsibility because of the highly technical nature of this technical assistance. But it is an option. There are others. To the extent that the objective is to provide institutional support, some exposure to other institutions which have experience in the operation of employment and training programs could be helpful. Some program staff have been given study tours of Job Corps centers in the United States and this has proven useful. The concept could be extended to the notion of "sister cities", in which a certain U.S. city with a significant experience in employment and training programs, such as Baltimore, Maryland, is used as a study laboratory for Jamaicans, with an interchange of program administrators between the two countries.

5. CONCLUSIONS

5.1. To anyone with even a nodding acquaintance of this project, its magnitude and complexity are readily apparent. A roughly US$60 million project in a country of 2.2 million people is a massive undertaking. The project design failed to anticipate a number of implementation problems and therefore attempted to deliver too much too soon. The design was also predicated on a number of questionable assumptions, including the belief that an external coordinating authority could be superimposed on the training bureaucracy and that it would have a measurable impact in a rather short time period. The project appears to be a supply-side solution to what were, at the time, essentially demand-side problems. We are struck by the centralized, institutional approach embedded in the design framework and note that while private-sector input was provided for by way of advisory committees, more active private-sector involvement in the actual provision of training was not considered in the design.

5.2. There were significant changes in the project environment during the implementation phase, notably a shift of operating responsibility for academies from MYCD to H.E.A.R.T. This shift was imposed by the Prime Minister and the Parliament, after extensive investigation by the Wells commission, with the presumed objective of improving operations prior to implementing evaluations of those operations. The centralization of operating responsibility within H.E.A.R.T. also served to minimize problems of coordination. The shift in operating responsibility created a conflict with H.E.A.R.T.'s monitoring and evaluation activities. Processes have been put in place, but there have been few identifiable outputs in terms of tracer study results on placement rates or cost data suitable for analysis. Thus, the primary project objectives have not been achieved. In that there is a potential conflict between operating and evaluating responsibilities (program operators should not be evaluating their own performance), some resolution needs to be accomplished as soon as possible.

5.3. The initial project structure, incorporating three separate agencies (H.E.A.R.T., MOE, MYCD), proved unworkable. There remains lack of clarity about organizational arrangements which should be covered by one or more project modifications.

5.4. The project has achieved a great deal. H.E.A.R.T. academies are showpieces, and the Ministry of Education has been greatly assisted by equipment and the renovation of facilities. Instructors have been upgraded, although not all have remained in the system or even in the country. Competency-based education modules have been devised and partially implemented. What has not been achieved is much of what was originally intended. Proficiency tests for trade areas, evaluations, and coordinating activities have all been delayed, although some are planned or underway. For the longer term, the problem will be to cover what are likely to be considerable and mounting operating costs.

6. RECOMMENDATIONS

6.1. It is highly probable that a decision to fund a new skill training effort will be dependent upon what is accomplished during the remaining months of the current project. Therefore, we recommend no substantive changes be made in the current project. Rather, we recommend that existing resources be focused on the following issues:

1. Implementing and operating a fully coordinated MIS and ensuring that a strong analytical component accompany data collection.

2. Implementing competency-based materials and performance tests in a controlled and monitored environment.

3. Coordinating data collection, analysis and documentation procedures to ensure accurate reporting of trainee information.

4. Improving counseling and placement functions.

5. Implementing the trainee performance testing program and accurately documenting and recording results.

6. Clarifying organizational arrangements i.e., who is in charge of developing curricula and competency-based instructional materials, field-testing them, and seeing that these materials are implemented as planned.

7. Implementing private-sector advisory councils at the technical high high schools.

8. Completing the upgrading and expansion of facilities and equipment as planned.

9. Conducting targeted tracer studies to help build a data base on placement of program completors.

6.2. We recommend that a one year extension of the current project be granted without additional funding. The remaining project resources should be used to complete planned technical assistance, participant training, and equipment acquisitions while at the same time investigating policy alternatives for future skill training activities. The former is necessary to cover delays in disbursements for technical assistance, overseas participant training, and equipment. To accomplish the latter, we recommend establishing a comprehensive data base. This will involve collecting and analyzing data about: training costs and benefits between the formal and non-formal sectors, relevancy of training as related to the demand side (employability of program graduates), employer views on likely future skill requirements, private-sector involvement in curriculum validation, and alternatives for meeting teacher shortages (direct grants to the private-sector or tax law reforms giving incentives to the private-sector for loaning teachers and/or in-plant training). The next 20 months should involve objective/analytic study of the relevancy, efficiency, and effectiveness of the existing skill training effort. The resultant data base will do much to put the training system in perspective and provide guidance for those who must decide whether or

not to support a follow-on project.

6.3 We feel that a new project should be funded to continue USAID support for skills development in Jamaica. What has been accomplished to date, we feel, is a beginning. If AID support is terminated at this time, that beginning may turn out to be little more than a false start. Mindful that sunk costs should be considered irretrievable and not allowed to influence future investment decisions, we are nonetheless persuaded by the fact that the development of a training system in Jamaica is about one-third the way to completion. To us, this implies that future investments should generate the same expected output for one third less cost. Moreover, we feel that the return to past investments can only be realized if the system is allowed to continue in operation, which we feel to be much more likely with continued AID funding than without. From the project's inception, it was never intended as a one-off activity. We see no reason to change this view at midstream.

6.4. We recommend future project activities be introduced on a phased, experimental basis by:

6.4.1. Placing greater emphasis on knowledge development with provision for feedback and modification (controlled experimentation).

6.4.2. Conducting experimentation to test the feasibility of providing a tax credit to all firms whose workers pass a certified examination devised by the H.E.A.R.T. Trust.

6.4.3. Providing separate funding for the H.E.A.R.T. Trust and the Ministry of Education.

6.4.4. Providing for greater use of subcontracting among public agencies and the private-sector.

6.4.5. Giving greater consideration to the absorptive capacity of participating agencies.

6.4.6. Developing and administering a full-scale properly structured tracer study to record employment and earnings.

6.4.7. Finding alternative mechanisms for lowering training costs such as enlisting private-sector participation in a cost-sharing partnership.

6.4.8. Promoting a "shared use/shared time" facilities and equipment program involving the technical high schools, academies, and private-sector work sites.

6.4.9. Placing greater emphasis on development and implementation of open-entry/open-exit skill training using the competency-based format (with experimental control group evaluation and proficiency tests).

APPENDICES

A. Evaluation Scope of Work

B. Project Paper Logical Framework

C. Project Identification Data Sheet

D. Documents Consulted

E. Individuals And Agencies Contacted

F. Data Reliability Matrix

G. Abbreviations

H. Academy Placement Rates

I. Implementation Status of Technical Assistance to the Ministry of Education

J. Summary of Ministry of Education Cost Data

SCOPE OF WORK - EVALUATION

BASIC SKILLS TRAINING PROJECT

I. Activities to be evaluated

In response to a request from the GOJ to assist in its economic recovery program, the Basic Skills Training Project was developed and a Project Agreement signed by the GOJ and USAID on August 5, 1983 for US$13.4 million ($4.9 million Grant and $8.5 million loan). The GOJ contribution is to be the equivalent of US$46.544 million. The current PACD is August 1, 1989.

The goal set for this 6-year project is "to establish a trained human resource base that will facilitate the GOJ's economic recovery program and improve the productivity of the nation". The project's purpose is "to assist the Government of Jamaica (GOJ) to establish an improved skill training system responsive to the GOJ's economic policies and labour market needs".

The Project design consists of three components: the Human Employment and Resource Training (H.E.A.R.T.) Trust, formal Technical/Vocational Skills Training implemented through the Ministry of Education (MOE) and Non-Formal Technical/Vocational Skills Training implemented through the Ministry of Youth and Community Development (MYCD). Subsequent to the signing of the Project Agreement there have been several amendments to the Amplified Project Description attached as Annex I. Among these were amendments to add the Social Development Commission (SDC), a statutory body under the MYCD as an implementing entity for day to day operations of the academies; and the decision that two academies, Garmex and Kenilworth should train in the production skills for the garment and sewing apparel and data entry industries.

USAID inputs into the Project consist of approximately $4,900,000 for technical assistance and $8,500,000 for participant training, equipment (basic and innovative), renovation/construction. The GOJ contribution of $46,544,000 funds construction/renovation, personnel and research support.

The USAID Mission and the GOJ propose to undertake the first external evaluation of the Project at this time. To satisfy the requirements of this evaluation it is proposed that each component be evaluated.

II Purpose of Evaluation

The purpose of this Basic Skills Training Project evaluation is to determine if the skill training system assisted through the Project is responsive to the GOJ's economic policies and labor market needs.

The findings and recommendations of the evaluation will be used by USAID and the GOJ to:

a) determine if the Project purpose and goal are still valid and what accomplishments are expected to be achieved by the current Project Assistance Completion Date;

b) assess the results derived from project inputs and to determine if the mix and quantity of project inputs should be changed if the Project is extended for one year to August 1, 1990;

c) assist in identifying future activities and/or follow on efforts requiring USAID assistance in the area of skills training.

III. Background:

The Project Paper describes a focussed and internally integrated approach to meeting the long and short term training requirements of Jamaica's private sector.

Project activities focus on three organizations/activities. These are: (1) assistance for the institutional development of the Human Employment and Resource Training (H.E.A.R.T.) Trust, which is, among other things to, regulate, evaluate, fund, promote and coordinate new and existing skills training programs included in the GOJ's desired skills training system; (2) upgrading and expansion of non-formal skill training programs and services within the Ministry of Youth and Community Development (MYCD); and (3) upgrading and expansion for formal technical level skill training services and programs within the Ministry of Education (MOE).

1. H.E.A.R.T. Trust

The Trust was established by legislation in September, 1982. It is a statutory body attached to the Office of the Prime Minister and is managed by an Executive Director reporting to a Board of Directors composed of ten members from the public sector and ten members from the private sector.

AID-financed inputs concentrate on assisting the institutional development of those parts of the Trust concerned with planning, policy-making, coordination, and monitoring and evaluation of skill training activities through inputs of technical assistance and participant training and equipment for approximately $2.2 million. GOJ funds are used for operational expenses, employee salaries, equipment and supplies and research support equivalent to $2 million.

In the ProAg the H.E.A.R.T. Trust is assigned responsibility of supervising and coordinating the overall implementation of the Basic Skills Training Project.

2. Non-Formal Component

Ministry of Youth and Community Development (MYCD) The non-formal skill training component addresses a need to upgrade and expand the facilities, equipment, institutional technology and management necessary for delivering a flexible, comprehensive and expanded program of non-formal skill training. Responsibility for this activity rests with the Ministry of Youth and Community Development (MYCD).

The MYCD's Non-Formal Education Division (NFED) is responsible for policy-making, planning, quality control and general technical and professional advisory services to the H.E.A.R.T. academies. The Vocational Training Development Institute (VTDI) is responsible for competency- based curricula development and training of instructors for non-formal skill training academies.

Under this component AID assists with the establishment of four H.E.A.R.T. academies developed along the lines of the job corps centers in the U.S. Subsequent to signing of the ProAg the Prime Minister decided that the MYCD would be responsible for the implementation of only two academies; the other two would be run by the H.E.A.R.T. Trust.

The Social Development Commission (SDC), though not included in project activities at the outset, in 1986 was appointed by the Prime Minister as the agency responsible for operating the two academies assigned to the MYCD, i.e. Portmore and Stony Hill. The Social Development Commission (SDC) is a statutory body which was established by the MYCD in the early 1960s to operate residential youth camps aimed at providing vocational skill training. However, after a commission of enquiry in June, 1988, the Prime Minister decided that the H.E.A.R.T. Trust should take on the responsibility to operate the four H.E.A.R.T. academies assisted through the Project.

AID's financial input is approximately $1,784,000 for technical assistance and $5,100,000 for participant training, basic and innovative equipment, and renovation to one H.E.A.R.T. academy. Specifically, training and TA includes: in-service training for VTDI personnel in management, testing, monitoring/inspecting, tracer studies and curricula and materials development and adaptation. In addition AID funds were to be used through the VTDI to develop a Training Materials Resource Centre (TMRC) responsive to the training needs of the private sector.

The GOJ will contribute the cost of construction/renovation of H.E.A.R.T. academies and other facilities, local personnel and research support.

3. Formal Component

Ministry of Education (MOE) - The MOE is the official agency of the GOJ responsible for the operation of the nation's formal education system. The formal technical high schools which are assisted by the Project fall under the aegis of the MOE which runs these schools through its Technical/Vocational Unit (TVU). This unit is responsible for curricula and operations of these schools.

Graduates from the technical high schools are at the skilled craftsmen or technical level and many continue their education, or go into middle management or higher skill levels in the private sector. Technical School graduates form an essential link between highly skilled professional and semi-skilled and unskilled workers, and they are an important force in Jamaica's economic revitalization and growth.

The component of the Project consists of:

- Renovation of seven existing Technical High Schools and upgrading four existing High Schools to the Technical High School level;

- Training is being provided in the management of Technical High Schools and instructional laboratories;

- A 3-year training program for teachers for the Technical School system at the College of Arts, Science and Technology (CAST); and

- Private Sector Advisory Committees for the schools to assist in the development of curricula, occupational counseling and placement.

USAID funds provide inputs of $1,393,000 for technical assistance and $3,000,000 for participant training, equipment, construction and renovation. The GOJ contribution of approximately $3,000,000 funds renovation/construction of the technical schools, cost of local personnel and research support.

Project Management: To manage the Project, a Project Management Committee (PMC) was appointed by the Prime Minister from members of the components of the Project and USAID with the Director of the H.E.A.R.T. Trust as chairman.

A prime contractor, RCA, was hired in August 1984 under an AID direct contract to provide technical and management assistance to all components of the Project. Under this contract four long term advisors and 398 person months of short term T.A. provided technical assistance to the Project. Since June, 1988 long term contractors have been reduced to one.

RCA is responsible for purchasing approximately $2,000,000 of "innovative" equipment, which refers to any equipment introduced into the training environment.

An AID direct contract was signed with RONCO, a PSA in 1984 to procure basic vocational skills training equipment. The Project has experienced difficulty in some off-shore procurement with this PSA. However, steps are being taken to correct the problems that occurred and a new PSA (Manoor) was hired in May, 1988.

Prior Evaluation/Reviews: The USAID and the GOJ undertook two internal reviews of the Project in 1985 and 1986 to assess implementation status. The reports from these reviews will be available as source documents. The proposed evaluation will be the first external review of the Project.

IV. Statement of Work

The contractor will examine the extent to which the purpose of the Project has been achieved, focussing on the results and accomplishments of the Project and the extent to which each component is contributing to this purpose. This should be done by critically examining each component and ascertaining the extent to which project inputs are impacting on the activities of participating GOJ organizations as follows:

1. H.E.A.R.T. Trust

(a) Has the institutionalization of H.E.A.R.T. as a National Training Board, inclusive of inter agency agreements between the Trust, the Ministry of Youth and Community Development and Ministry of Education been achieved?

Institutionalization may be measured by the following:

(i) Have Private Sector Advisory Boards been developed and do they provide demand side information to H.E.A.R.T. and the academies? How is this information used by H.E.A.R.T.?

(ii) Does H.E.A.R.T. undertake long term policy planning and provide occupational counselling and placement of students who graduate from the H.E.A.R.T. academies and technical high schools?

(iii) Does H.E.A.R.T. have an Internal Evaluation System for monitoring the activities of the skills training system and evaluating the results of these activities in terms of meeting skill training needs at reasonable costs? How does this system function?

(b) How did the inputs of technical assistance, participant training and equipment impact on the activities of the organization? Raw data was gathered by two contractors (Nerbonn and Blank) on this.

2. Non-Formal Component

(a) Did this component address the need to upgrade and expand facilities, equipment, institutional technology and management necessary for delivering a flexible, comprehensive and expanded program of non-formal skill training?

The contractor will measure these activities by addressing the following:

(i) Is there an intra-agency agreement between the Ministry of Youth and Community Development (MYCD), Non-Formal Education Division (NFED), Social Development Commission (SDC) and the Vocational Training Development Institute (VTDI)? What does this agreement provide for? Is the agreement being implemented? What are the outputs achieved through this agreement?

(ii) What are the functions of these agencies? Does the NFED develop policy options, forward plan, provide quality control, and general technical and professional advisory services? Does the SDC manage the H.E.A.R.T. academies? Does the VTDI prepare new competency based curricula and modify and upgrade existing curricula; and train instructors for the H.E.A.R.T. academies?

(b) How did the inputs of technical assistance, participant training and equipment impact on the activities of the organization? Raw data was gathered by the two contractors (Nerbonn and Blank) on this.

3. Formal Component

(a) Did the Ministry of Education (MOE) focus on the need to upgrade and expand facilities, equipment, management and instructor training necessary for delivering a viable, flexible, and expanded formal program of technical level skill training?

The Contractor will measure this achievement by addressing the following:

(i) Did the MOE implement the long term plan for the renovation and expansion of the seven existing technical high schools and the upgrading of four schools?

(ii) What does the Technical/Vocational Unit within the MOE do? How are its operations impacting on the technical high schools?

(iii) Do the technical high schools have Private Sector Advisory Committees? What do these committees do? How often do they meet? What do they provide to the technical schools and how is it used?

(b) How did the inputs of technical assistance, participant training and equipment impact on the activities of the organization? Raw data was gathered by the two contractors (Nerbonn and Blank) on this.

Based on findings, the contractor will provide conclusions and make recommendations for:

a) amending the current Project

b) any proposed follow-on activities

V. Methods and Procedures

In order to collect data that has not already been gathered for the analyses and recommendations, the Evaluation Team will research major documents and files available at USAID, H.E.A.R.T. Trust, MOE and CAST, MYCD, (SDC, VTDI, NFED) and conduct interviews with key personnel at those institutions, RCA staff, advisory committees and past students of the academies and technical schools. Major documents include, but are not limited to:

- the Project Paper
- the Project Agreement
- Project Implementation Letters
- Contractors' Reports
  Internal Evaluation/Review 1985 and 1986
  Nerbonn and Blank Reports

These documents are available at USAID and RCA Offices. A briefing for the contractors will be held after arrival in country to review the evaluation scope of work.

This evaluation is expected to be conducted over a four week period to commence on/or about September 12, 1988. A six day work week is authorized. The Contractor will conduct an interim briefing ten days after arrival in country. A debriefing will be held the day before departure.

VI. Evaluation Team

The evaluation should be conducted by two evaluators from an IQC firm, of which one should have a solid background in both formal and non-formal technical/vocational education and training with experience and working knowledge of the operation of vocational educational institutions in developing countries. The other member of the team should be a management system specialist preferably with evaluation experience, who will function as team leader with responsibility for ensuring a coordinated and comprehensive report.

The Evaluation Team will work with GOJ counterparts in each of the three components, i.e. the H.E.A.R.T. Trust, the MOE and the MYCD. The team will also work with RCA, and the Director and the Project Officer in the Office of Education and Human Resources of USAID.

VII. Reporting Requirements

The end product of the evaluation will be in the form of a comprehensive written report which will include an Executive Summary (See Appendix C), Project Identification Data Sheet (See Appendix D), Table of Contents, Body of the Report and Appendices as needed.

The body of the report should include discussion of: (1) the purpose and study questions of the evaluation; (2) the economic, political and social context of the Project; (3) the team composition and evaluation methods (one page maximum); (4) evidence/findings of the study concerning the evaluation questions; (5) conclusions drawn from the findings, stated in succinct language; and (6) prioritized recommendations, based on the study findings and conclusions, stated as actions to be taken for revision of the current Project if necessary and a prioritized outline of any proposed follow-on activities.

The Appendices should include a copy of the evaluation scope of work, the logical framework matrix of the PP, a list of documents consulted, and individuals and agencies contacted. Additional appendices may include a brief discussion of study methodology and technical topics, if necessary.

At least three days before departure from Jamaica the contractor shall provide a draft of said report to USAID and conduct an oral debriefing the day before departure.

The final completed report shall be submitted within three weeks of receipt of USAID and GOJ comments on the draft report.

PP LOGICAL FRAMEWORK

1. Synopsis of the Logical Framework

a. Project Goal

The goal of this Project is to establish a trained human resource base that will facilitate the GOJ's economic recovery program and improve the productivity of the nation.

b. Project Purpose

The purpose of this Project is to help establish an improved skill training system responsive to the GOJ's economic policies and labor market needs.

c. End of Project Status

By the end of the Project, the following conditions will exist:

- a functioning GOJ agency (the H.E.A.R.T. Trust) ensuring better coordination among skill training institutions, as well as increased private sector participation in directing skill training activities;

- a more nearly adequate supply of appropriately trained skilled, technical and supervisory level personnel to meet Jamaica's requirements;

- a more comprehensive, flexible skills training system capable of removing human resource bottlenecks in the short and long term, and providing appropriate skill training and related services to the employed, unemployed and underemployed;

- a capability, through the Trust for assisting private establishments, including PVOs, train new employed or experienced workers; and

- improved employment placement ratios from public sector training institutions.

d. Project Outputs

At the end of the Project, the GOJ should have the technical and managerial capability to propagate, manage, and update a program of skill training relevant to Jamaica's changing skill requirements. Specific project outputs include the following:

- approximately 21 H.E.A.R.T. Trust staff trained in the United States and Jamaica;

- approximately 9000 employed workers with upgraded skills;

- approximately 2500 new workers trained for new investors;

- support for approximately 143 private sector organizations, private voluntary organizations and trade associations;

- approximately 21,000 persons trained at the semi-skilled level;

- establishment of a functioning central Instructional Materials Production Center at VTDI;

- updated curricula and instructional materials for approximately 20 courses;

- established standards and proficiency tests for approximately 20 trades;

- four new H.E.A.R.T. Academies established and in operation;

- ten technical high schools upgraded;

- approximately 630 instructors upgraded;

- management systems upgraded for the MYCD, the MOE, and the H.E.A.R.T. Trust;

- increased training and employment of women in the skilled trades; and

- a better understanding of the policy, organizational and procedural changes that are required to improve the Jamaican skill training system.

2. Project Focus

The Project aims at improving skill development in areas that have an important impact on skill shortages and productivity. The Project will strengthen the GOJ's ability:

- to equip entry-level workers with skills required by employers;

- to upgrade the skills of employed workers;

- to respond to company or industry specific training problems; and

- to build a self-sustaining, technical and managerial capacity to respond to the private sector's training needs in an innovative and flexible manner.

The fundamental objectives of the Project are consistent with the four priority areas established by U.S.A.I.D. for delivering developmental assistance, i.e. policy dialogue and reform, strengthening of the

private sector, institutional development, and technology transfer and research. The Project will support policy reform through a new GOJ agency, the H.E.A.R.T. Trust. The Project will direct much of its support toward improving private sector skill training and/or directing skill training to meet private sector needs, including establishing a special fund for stimulating skill training in the private sector. In addition, substantial project resources will be directed toward developing the major GOJ institutions involved in skill training, transfering educational technology to those institutions, and conducting relevant research.

3. Project Design

a. Overview

The Project is designed to achieve its objectives by focusing on four basic components:

- the H.E.A.R.T. Trust,
- the H.E.A.R.T. Trust Revolving Loan/Grant Fund,
- Non-formal Skills Training, and
- Formal Skills Training.

These components are interrelated and mutually supportive, and together they represent an internally consistent thrust compatible with the GOJ's overall efforts to develop a sound skill training program. Detail is provided below concerning each of the principal components of the Project.

b. Components

(1) The H.E.A.R.T. Trust

The H.E.A.R.T. Trust (H.E.A.R.T., or the Trust) component is concerned with policy formation, integration and coordination of all skill training activities. It is also charged with increasing the role of private sector participation in skill training activities, and strengthening the placement of skill training graduates in productive employment.

The Trust was established by legislation in September, 1982. It is a quasi-autonomous 'statutory body' attached to the Office of the Prime Minister. The Trust is managed by an Executive Director reporting to a Board of Directors composed of ten members from the public sector and ten members from the private sector. The Trust is funded from a 3% payroll tax on all firms with a yearly payroll of more than J$87,000 per year (the estimated tax revenue from the payroll tax is J$30 million per year).

The Trust's function is:

- to develop, encourage, monitor and provide finance for employment training;

- to provide employment opportunities for trainees;

- to induce or assist skilled Jamaicans living abroad to return to Jamaica; and

- to promote employment projects.

Although the Trust has the authority to execute all activities necessary to implement a comprehensive skill training system in Jamaica, the Trust will not directly undertake an operational activity unless it is a vital service that no other agency will or can perform. The primary responsibility of the Trust is to formulate policy, set guidelines, fund, monitor, evaluate and coordinate skill training activities in Jamaica.

Since the Trust is still in an embryonic stage of development, its operation has not been worked out in full detail. Several major Trust programs are under development, however, including a scheme for placing recent school leavers in employment, and the funding and development of H.E.A.R.T. Academies (residential youth camps for training skilled workers). A complete description of the H.E.A.R.T. Trust can be found in the Technical and Institutional Analyses (Sections II, A and C).

Some of the planned activities of the Trust are outside the purview of A.I.D's assistance, as provided through this Project, e.g. inducing skilled Jamaicans living abroad to return to Jamaica. Although A.I.D. supports the general objectives of the Trust, A.I.D. financial inputs will concentrate on assisting the institutional development of those parts of the Trust concerned with training. In order for the Trust to develop a capability to execute its mandate, a secretariat has been created with the responsibility for planning and policy-making, coordination, and monitoring and evaluating skill training activities. The secretariat has five major divisions, i.e. Finance and Planning, Administration and Data Processing, Projects Development, Monitoring, and Training, and when fully staffed will employ approximately 20 professionals.

A.I.D. grant funding will be used to provide the services ($600,000) of a specialist in Vocational-Technical Education Administration, who will act as the Project Team Leader. A.I.D. will also provide grant funds to

finance 78 person-months of short-term advisory services ($780,000), and loan funds for long and short term participant training ($264,000) in such fields as management information systems, planning and research, monitoring and evaluation, placement, and specific training problem areas. In addition, A.I.D. will fund office equipment and vehicles ($112,000).

OUTLINE OF BASIC PROJECT IDENTIFICATION DATA

1. Country: JAMAICA

2. Project Title: Basic Skills Training Project

3. Project Number: 532-0083

4. Project Dates: ....

   a. First Project Agreement: August 5, 1983
   b. Final Obligation Date: FY-- (planned/actual?)
   c. Most recent Project Assistance Completion Date (PACD): Aug. 1 1989

5. Project Funding: (amounts obligated to date in dollars or dollar equivalents from the following sources)

a. A.I.D. Bilateral Funding (grant and/or loan)	US$ 4,900,000	(G)
[illegible]	US$ 8,520,000	(L)
c. Host Country Counterpart Funds	US$ 46,544,000	
Total	US$ 59,964,000	

6. Mode of Implementation: (host country or A.I.D. direct contractor? Include name of contractor.) G.E. (RCA)

7. Project Designers: (organizational names of those involved in the design of the project, e.g., the Government of Sri Lanka, USAID/Colombo, and the International Science and Technology Institute (ISTI)). Government of Jamaica (GOJ) and USAID

8. Responsible Mission Officials: (for the full life of the project)

   a. Mission Director(s): William Joslin
   b. Project Officer(s): William Charleson/Audrey Tomlin

9. Previous Evaluation(s): None

DOCUMENTS CONSULTED

A Review of RCA/GE Inputs in the Non-Formal Skills Training Component of the Basic Skill Training Project. Lorraine Blank. August 26, 1988.

A Review of The Ministry of Education Component of the Basic Skill Training Project. Mary Nerbonne. August, 1988.

A Review of the H.E.A.R.T. Trust Component of the Basic Skill Training Project. Mary Nerbonne. November, 1988.

Internal Review Report: Basic Skill Training Project. October, 1985.

Internal Review Report: Basic Skill Training Project. November, 1986.

Executive Summary. Report on Review of the Vocational Technical Development Institute. H.E.A.R.T. Trust. no date.

Schedule of Technical Assistance for VTDI. RCA/GE. October, 1984-March, 1987.

Progress Report on Consultant Activities. Tracy Harrington. August, 1987.

Final Report on Consultancy. Tracy Harrington. December, 1987.

Curriculum Development Manual: Draft Copy. Harrington and Peart. 1988.

Report on Graduate Tracer Survey. Prepared for the H.E.A.R.T. Trust by Teape-Johnston Limited. September, 1987.

Country Development Strategy Statement-Jamaica. USAID/WA. 1988.

Project Paper-Basic Skill Training. USAID/WA. 1983.

Request for Proposal. Basic Skill Training Project #532-0083. USAID/WA. February 22, 1984.

RCA Proposal: Volume 2 - Technical Proposal RCA 146-84K. April 20, 1984.

Project agreement document(s). Basic Skill Training Project.

Project implementation letters (P.I.L.). Basic Skill Training Project.

The Human Employment and Resources Training Act 1982. Document No. 13-1982.

H.E.A.R.T. Report: 1982-1984. Human Employment and Resource Training Trust. 1985.

Minutes of the Project Management Committee meetings.

H.E.A.R.T. Placement Unit Statistical Update. August, 1987-August, 1988.

Financial records. Basic Skill Training Project.

Promotional/marketing literature. H.E.A.R.T. Trust.

Curriculum materials in automotive, garment construction, food service and catering, and entreprenuerial education and life skills.

Trainee screening instruments used at Garmex.

Thesis on "Government's Involvement in Technical Vocational Education in Jamaica 1957-1985." Verica Bennett, University of West Indies, 1988.

Development of Secondary Education in Jamaica, Unesco, Paris, 1983.

Equipment lists for academies and technical high schools.

Building blueprints for the new construction at Herbert Morrison Technical High School.

Project correspondance files at both USAID/J and RCA/GE.

INDIVIDUALS AND AGENCIES CONTACTED

Attendees at AID/Jamaica Orientation and Debriefing

Ms. Audrey Tomlin
Dr. William Charleson
Mr. Myron Golden
Ms. Ruby Baker
Mr. L. Coronado
Mr. M. Gweshe

Project Management Committee Members

Dr. the Hon. Joyce Robinson	- Chair
Dr. William Charleson	- Director, O.E.H.R., USAID
Mrs. Audrey Tomlin	- Program Specialist, USAID
Dr. Alfred Sangster	- President, CAST
Dr. Craig Clauser	- Chief of Party, RCA/GE
Mrs. Lorna Parkins	- Manager, Administration, RCA/GE
Dr. Jennifer Cadogan	- Director, NPED, MYCD
Mr. Karl Lewin	- Private Sector Representative
Mr. Lloyd Brown	- Budget Officer, Ministry of Finance
Mr. Arlie Dyer	- Actg. Asst. Chief Education Officer
Mr. Hector Lawrence	- Principal, VTDI
Mr. Headly Brown	- Actg. Deputy Managing Director, H.E.A.R.T.
Mr. Stanly Dunwell	- Director of Projects, H.E.A.R.T. Trust
Mr. Van Hitchener	- Director of Training, H.E.A.R.T. Trust
Dr. Jeffrey Gayle	- Director of Academies, H.E.A.R.T. Trust
Mr. Courtney F. Gordon	- Actg. Director of Finance, H.E.A.R.T. Trust
Mrs. Joyce McKenzie	- Deputy Director of Projects, H.E.A.R.T. Trust
Miss Marlett Dobson	- Recording Secretary

Significant Others

Mr. Ben Francis	- Principal, Vere Technical High School
Ms. Monica Stimpson	- Principal, Stony Hill Academy
Mrs. Lorraine Blank	- Consultant/Research Associate
Ms. Mary Nerbonne	- Consultant/Research Associate
Mr. Moses Peart	- Training Division, H.E.A.R.T. Trust
Ms. Nora Davis	- H.E.A.R.T. Trust
Ms. Verica Bennett	- Ministry of Education
Ms. Sheryl Dash	- Social Development Commission
Mr. Steadly Webster	- Private Sector
Mr. Allan Morris	- CAST
Mr. D. Christian	- CAST
Mr. N. McFarlane	- CAST
Mr. C. Thompson	- CAST
Mr. M. Muchette	- VTDI
Mr. H. Lurch	- VTDI

Brief visits with students at both academies and technical high schools.

Impromptu conversations with employers and employees at worksites.

Academies/Schools/Ministries Visited

H.E.A.R.T. Academies

Garmex
Kenilworth
Portmore
Stony Hill
Runaway Bay

Technical High Schools

Dunoon
Herbert Morrison
Marcus Garvey
Vere

Ministry of Youth and Community Development

Vocational Technical Development Institute
Social Development Commision

Ministry of Education

Technical Vocational Unit

College of Arts, Science and Technology

DATA RELIABILITY MATRIX

Data Type	Availability	Reliability
Training costs	Financial statements	Questionable
Placement rates	One tracer survey	Highly questionable
Demand for workers	Government surveys	Questionable
Student registrations	Registration reports	Acceptable
Student dropout rates	0	0
Employer views on future job needs	0	0
Former student views on their training programs	0	0
Employer views on training program graduates	0	0

ABBREVIATIONS

CAST	College of Arts, Science and Technology
GOJ	Government of Jamaica
HEART	Human Employment and Research Training
JIDC	Jamaica Industrial Development Corporation
MOE	Ministry of Education
MOIC	Ministry of Industry and Commerce
MYCD	Ministry of Youth and Community Development
NFED	Non-Formal Education Division
PIL	Project Implementation Letter
RCA/GE	Radio Corporation of America/General Electric
SDC	Social Development Commission
USAID	United States Agency for International Development
VTD	Vocational Training Division
VTDI	Vocational Training Development Institute
VTU	Vocational Technical Unit

ACADEMY PLACEMENT RATES

STONY HILL

Number of Respondents.....97

Employed.....53%

Self-Employed.....02%

Unemployed.....45%

Felt Training was a benefit.....88%

Employed in Field of Training.....18%
This figure represents a percentage of those employed. Nine percent of all Stony Hill respondents are employed in their field of training.

Average Income
Females.....$111.00
Males.....$120.00

PORTMORE

Number of Respondents.....140

Employed.....24%

Self-Employed.....06%

Unemployed.....69%

Felt Training was a benefit.....89%

Employed in Field of Training.....15%
This figure represents a percent of those employed; 3.6% of all respondents are employed in their field of training.

Average Income (weekly)
Females.....$102.00
Males.....$143.00

GARMEX

Number of Respondents.....1131

Employed. 98%

Self-Employed.....Less than .01%

Unemployed.....02%

Self training was a benefit.....96%

Employed in field of training.....33.4%
This figure represents a percent of those employed; 33% of all respondents are employed in their field of training.

Average Salary
Females.....$97.00
Males.....$93.00

Source: Teape-Johnson Tracer Studies

NOTE: The above figures differ slightly from those presented in the original consultants report as the coding errors and double counting of respondents that occurred in that report have been eliminated.

IMPLEMENTATION STATUS OF TECHNICAL ASSISTANCE TO THE MINISTRY OF EDUCATION

Person Months Completed	Name of Consultant / Description of Services/Work Products	Implementation Status
TEACHER TRAINING (Total time allocated: 18 person months)		
0.5	L. DeBARTOLIS - Seminar Leader	Implemented
1.0	L. DENNY - Seminar Leader	Implemented
1.0	B. FRANCIS - Seminar Leader	Implemented
0.7	B. FRANCIS - Administration & Management Specialist; Admin. of In-Service Education	Implemented
0.5	A. NELSON - Seminar Leader	Implemented
1.8	F. JOHNSTON - Instructor Training Specialist	Implemented
0.34	N. MING - Advisory Committee Specialist	Not Implemented
0.9	R. KNOTTS/L. COMBS - Workshop Instructors	Implemented
8.2	SEMINAR LEADERS: M. AMBITT C. BROWN S. DUNCAN J. SMITH Q. NEMBHARD G. GAYLE	Implemented
3.0	R. A. PEYNADO - Specialist in Construction; Instructor in summer courses, to strengthen technical teacher training program at C.A.S.T.	Implemented
3.0	M. RICHARDSON - Specialist in Construction; Instructor in summer courses, to strengthen technical teacher training program at C.A.S.T.	Implemented
20.9		
MANAGEMENT (Total time allocated: 21 person months)		
9.0	A. ALEXANDER - Management Specialist; Development of MIS	Implemented
9.0		
UNUSED TECHNICAL ASSISTANCE:		
12.0	D. FRANCIS - Vocational School Education MIS Specialist (Consultancy to begin 12/19/88)	

IMPLEMENTATION STATUS OF TECHNICAL ASSISTANCE TO THE MINISTRY OF EDUCATION

Person Months Completed	Name of Consultant Description of Services/Work Products	Implementation Status
CURRICULUM (Total time allocated: 15 person months)		
8.3	J. LYNCH - Automotive Curriculum Writer	Implemented
3.5	E. I. WHITE - Home Economics/Food Preservation Curriculum Development	Implemented
3.5	F. SAMUELS - Home Economics/Fashion Design Curriculum Development	Implemented
2.65	M. J. GRIEVE - Curriculum Implementation And Evaluation Specialist	Implemented - To be continued
17.95		
MATERIALS DEVELOPMENT (Total time allocated: 15 person months)		
4.4	A. ALEXANDER - Management Specialist	Implemented (Incomplete - due to consultant illness)
3.5	E. HALL - Home Economics	Implemented
4.0	E. MORRISON - Entrepreneurship	Implemented
11.9		
PROJECT DEVELOPMENT (Total time allocated: 12 person months)		
UNUSED TECHNICAL ASSISTANCE:		
6.0	CONSULTANT TO BE ANNOUNCED - Work Experience, Placement, and Tracer Study Specialist	
6.0	CONSULTANT TO BE ANNOUNCED - Vocational/Technical Program Standards and Evaluation Specialist	

SUMMARY OF MINISTRY OF EDUCATION COST DATA

Technical Assistance

A total of 59.75 person months of short-term technical assistance have been provided to the Ministry of Education (MOE) component of the BSTP (See Table I). The cost of all technical assistance charged to the MOE (59.75 person months) is US$745,990 (excluding home office, G & A, and fixed fee costs). Approximately twenty-four (24) person months of technical assistance remain to be used.

Of the 59.75 person months of technical assistance provided to the MOE, 0.34 person months have not been implemented. As the estimated average cost of local technical consultants is US$3,300 per person month, this "lost time" represents a financial loss of approximately US$ 1,100 (or approximately 0.14%) to the project. (For further details on the amount of technical assistance provided in particular areas, see Table I.)

Participant Training

Table II summarizes the overseas training provided to MOE, C.A.S.T. and Technical High School staff. A total of 9.25 person months of short-term training and 48 person months of long-term training (i.e., 57.25 person months in all) have been provided to project staff on the MOE component of the BSTP. Of the eighteen (18) participants, one individual (representing 0.5 person months) has retired from MOE since receiving training. At an average rate of US$2,648 per person month of training, the departure of this individual from the project represents a loss of approximately US$1,324 (or 0.87 of the total participant training expenditure).

Equipment

Funds in the amount of US$900,000 were budgeted for innovative equipment for the MOE component of the project.

Of this total, US$570,773 have been spent. (For information regarding expenditures for particular institutions within MOE, see Table III.) According to the Assistant Chief Education Officer in charge of this project at MOE, there have been no major problems in the delivery of equipment. Early on, equipment arrived which did not meet specifications, but those items have been replaced. Other missing and non-working items have either been replaced (and their replacements covered by insurance), or received in subsequent shipments.

Table 1

SHORT TERM TECHNICAL ASSISTANCE PROVIDED TO THE MINISTRY OF EDUCATION

All figures in person months:

	Person Months Allocated	Implemented	Not Implemented	Implementation Status Unknown	Total T.A. Expended	Unused T.A.
TEACHER TRAINING	18.0	20.56	.34	---	20.9	NA
MANAGEMENT	21.0	9.0	---	---	9.0	12.0
CURRICULUM	15.0	17.95	---	---	17.95	NA
MATERIALS DEVELOPMENT	12.0	11.9	---	---	11.9	.1
PROJECT DEVELOPMENT	12.0	- 0 -	---	---	- 0 -	12.0
TOTALS.....	78.0	59.41	.34	- 0 -	59.75	24.1

TOTAL TECHNICAL ASSISTANCE EXPENDITURE: $745,990.00

Table II

PARTICIPANT TRAINING AT THE MINISTRY OF EDUCATION

SHORT-TERM (PERSON MONTHS/# PARTICIPANTS)	9.25/14
LONG-TERM (PERSON MONTHS/# PARTICIPANTS)	48.00/ 4
TOTAL PERSON MONTHS/# PARTICIPANTS	57.25/18
TOTAL COST	$151,610.00
AVERAGE COST PER PERSON MONTH OF TRAINING	$ 2,648.00
NO LONGER CONNECTED TO THE PROJECT (PERSON MONTHS/# PARTICIPANTS)	0.50/1*
ESTIMATED LOSSES DUE TO DEPARTURE OF PARTICIPANT TRAINEES FROM PROJECT	$ 1,324.00
% OF PARTICIPANT TRAINING EXPENDITURE LOST:	0.87%

* One individual who received participant training has retired from MOE. All other training recipients are still connected to the project and employed by the MOE, C.A.S.T. or a Technical High School.

Table III

EQUIPMENT PROVIDED TO THE MINISTRY OF EDUCATION

	Cost of Basic Equipment	Cost of Innovative Equipment
TECHNICAL HIGH SCHOOLS	NA*	$520,930
TECHNICAL VOCATIONAL UNIT (TRAINING MATERIALS RESOURCE CENTER)	NA	$ 34,450
COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY	NA	$ 15,493
TOTAL		$570,773

* Expenditures were made in this equipment category, but not through GE/RCA. Another contractor, RONCO, was used for the procurement of basic equipment.