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PROJECT COMPLETION REPORT

THE BAHAMAS

FIRST VOCATIONAL AND TECHNICAL EDUCATION PROJECT

(LOAN 1962-BM)

MAY 12, 1989

Latin America and the Caribbean Regional Office

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GLOSSARY

BHTC	-	Bahamas Hotel Training College
BSN	-	Bahamas School of Nursing
COB	-	College of The Bahamas
DNE	-	Department of Nursing Education
EEC	-	European Economic Community
HTC	-	Hotel Training Council
ITC	-	Industrial Training Center
MOE	-	Ministry of Education and Culture
MOF	-	Ministry of Finance
MOH	-	Ministry of Health
MOWU	-	Ministry of Works and Utilities
NITC	-	National Industrial Training Advisory Council
PIU	-	Project Implementation Unit
USDOL	-	U.S. Department of Labor

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(Tied Rate)

Office of Director-General
Operations Evaluation

May 12, 1989

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report: The Bahamas - First Vocational
and Technical Education Project (Loan 1962-BM)

Attached, for information, is a copy of a report entitled "Project Completion Report: The Bahamas - First Vocational and Technical Education Project (Loan 1962-BM)" prepared by the Latin America and the Caribbean Regional Office. Full evaluation of this project by the Operations Evaluation Department has not been made.

Attachment

A handwritten signature in black ink, appearing to be 'P. H. H.', is written over the word 'Attachment'.

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PROJECT COMPLETION REPORT

THE BAHAMAS

FIRST VOCATIONAL AND TECHNICAL EDUCATION PROJECT
(LOAN 1962-BM)

PREFACE

This is a Project Completion Report (PCR) on the First Vocational and Technical Education Project in the Bahamas, for which Loan 1962-BM, approved on March 26, 1981, provided US\$7.0 million for a project estimated to cost US\$18.4 million equivalent. The project was closed on June 30, 1988, two years later than anticipated, and cost US\$17.5 million equivalent. Lack of financing for one project facility necessitated its deferment to a subsequent project and a cancellation of the US\$0.45 million of the Loan proceeds originally allocated for furniture and equipment for that facility. At the time of final preparation of this PCR, the sum of US\$ 163,695.87 remained in the Special Account; cancellation of this final proportion was anticipated shortly.

A draft PCR was prepared in accordance with Section 3.6 (d) of the Project Agreement dated May 8, 1981. The final report represents a collaborative effort between the Bank and the Borrower, and is based upon a review of the Staff Appraisal Report and relevant loan documents, supervision and project progress reports, evaluations by the major technical assistance contractors, as well as a field visit to project institutions in November 1988. The Basic Data Sheet includes information not available when the PCR was initially prepared in late 1988, but the differences with the text are minor and do not affect the assessment of the project.

The draft report has been read by the Operations Evaluation Department (OED), and copies were sent to the Borrower and its agencies for comment in March 1989. No comments were received.

PROJECT COMPLETION REPORT

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FIRST VOCATIONAL AND TECHNICAL EDUCATION PROJECT
(LOAN 1962-BM)

BASIC DATA SHEET

	<u>Appraisal Estimate</u>	<u>Actual</u>
Total Project Cost (US\$ million)	18.4	17.50
Cost Underrun (%)	0	5
Loan Amount (US\$ million)	7.0	6.39
Amount Disbursed (US\$ million)	7.0	6.39
Amount Cancelled (US\$ million)	---	0.45/a
Date Physical Components Completed	12/30/85	06/30/88
- Number of Months After Loan Signing	55	85
- Percent Completed by Original Completion Date	100	77%
- Proportion of Time Overrun (%)	---	55%

Cumulative Estimates and Actual Disbursements by Years
(US\$ thousands)

	<u>FY</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
Appraisal Estimate		300	800	2500	6000	7000	-	-	-
Actual Disbursements		90	660	1600	3830	4300	5620	6370	6386
Actual as a % of Estimate		30	83	64	64	61	80	91	94

Other Project Data

<u>Item</u>	<u>Original Plan</u>	<u>Revision</u>	<u>Actual</u>
First Mentioned in files	-	-	01/24/79
Negotiations			02/09/81
Board Approval			03/26/81
Loan Agreement Date			05/08/81
Effectiveness Date			10/07/81
Closing Date	06/30/86		06/30/88
Borrower	Government of The Bahamas		
Executing Agency	Ministries of Finance and Education		
Fiscal Year of Borrower	January 1 - December 31		
Follow-on Project Name	Second Technical & Vocational Training Project		
Loan Number	Ln. 3004-BM		
Amount	US\$10 million		

Note: Loan payments are being met as scheduled.

/a The sum of US\$163,695.87 remained in the Special Account as of February 17, 1989. Cancellation of this final portion was anticipated shortly.

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MISSION DATA

Mission	Sent By	Date	No. of Weeks	No. of Persons ^{1/}	Staff Weeks	Date of Report
Sector	UNESCO	02/79	3.0	3(TE,GE,E)	6.0	03/06/79
Identification	Bank	05/79	2.5	3(EP,GE,TE)	7.5	06/28/79
Preparation	Bank	09/79	2.0	3(A,GE,TE)	6.0	10/17/79
Appraisal	Bank	02/80	2.0	5(GE,TE,E,A,NE)	10.0	03/02/81
Post Appraisal	Bank	05/80	1.0	2(A,GE)	2.0	06/13/80
Post Appraisal	Bank	06/80	1.0	1(A)	1.0	09/15/80
Post Appraisal	Bank	12/80	0.5	1(A)	0.5	12/16/80
Total					33.0	
Supervision I.	Bank	06/81	0.8	1(A)	0.8	07/12/81
Supervision II	Bank	09/81	0.8	1(TE)	0.8	10/02/81
Supervision III	Bank	02/82	0.6	1(TE)	0.6	03/01/82
Supervision IV	Bank	09/82	1.0	2(A,TE)	2.0	09/21/82
Supervision V	Bank	04/83	1.0	1(TE)	1.0	05/02/83
Supervision VI	Bank	10/83	1.0	3(A,TE,TE)	3.0	10/07/83
Supervision VII	Bank	03/84	1.0	2(A,TE)	2.0	04/05/84
Supervision VIII	Bank	05/84	0.8	1(FM)	0.8	06/13/84
Supervision IX	Bank	01/85	2.0	2(A,TE)	3.0	02/11/85
Supervision X	Bank	10/85	1.5	2(A,TE)	3.0	10/25/85
Supervision XI	Bank	05/86	1.0	1(A)	1.0	06/25/86
Supervision XII	Bank	05/87	1.0	1(A)	1.0	06/24/87
Supervision XIII	Bank	01/88	0.4	1(TE)	0.4	02/17/88
Total					19.4	
Project Completion	Bank	09/88	1.3	1(TE)	1.3	10/21/88

^{1/} A = Architect; E = Economist; EP = Educational Planner; GE = General Educator; TE = Technical Educator; NE = Nursing Educator; FM = Financial Management Specialist.

STAFF INPUT
(Staff Weeks)

<u>FY</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>	<u>TOTAL</u>
Pre-Appraisal	12.6	38.8	-	-	-	-	-	-	-	-	51.4
Appraisal	-	37.5	21.9	-	-	-	-	-	-	-	59.4
Negotiation	-	-	10.0	-	-	-	-	-	-	-	10.0
Supervision	-	-	1.8	4.2	6.6	9.2	6.8	6.8	5.1	1.1	41.1
Total	12.6	76.3	33.7	4.2	6.6	9.2	6.8	6.8	5.1	1.1	161.9

ALLOCATION OF LOAN PROCEEDS AND ACTUAL DISBURSEMENTS BY CATEGORY

<u>CATEGORY</u>	<u>ORIGINAL ALLOCATION</u>	<u>ACTUAL DISBURSEMENTS</u>
-----in US\$-----		
(1) (A) Equipment	2,810,000	3,036,410.07
(B) Furniture	500,000	191,164.73
(2) Manpower Database system	70,000 ^{a/}	0.00
(3) Consultants' Services (Prof. Fees)	970,000	93,279.66
(4) Project Administration	600,000	50,086.27
(5) Specialists' Services and Fellowships	1,350,000	2,866,768.22
(6) Unallocated	700,000	0.00
Sub-total	7,000,000	6,237,708.95
Special Account	-	148,595.18
Cancelled (Dec. 22, 1987)	-450,000	
Undisbursed as of Sept. 30, 1988 (Spec. Acct.)		<u>163,695.87/b</u>
TOTAL	<u>6,550,000</u>	<u>6,550,000.00</u>

^{a/} These funds were transferred to the Specialists' Services Category and an amount about equal to this was used to establish, in the Ministry of Education, the "supply side" of the Manpower Database System.

^{b/} To be cancelled. Total disbursements will be reduced to 86,386,304.13 when this amount is returned.

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FIRST VOCATIONAL AND TECHNICAL EDUCATION PROJECT (LOAN 1962-BM)

EVALUATION SUMMARY

Introduction and Project Objectives

1. This project was the first Bank assisted education or training project in The Bahamas; and the generally high level of success it has achieved in meeting its objectives has led to the approval of a second vocational and technical training project in December 1988. The major objectives of the first project were to: (a) increase the outputs of the vocational and technical education and training system; (b) improve the relevance and quality of training programs; and (c) strengthen the system's capability to make necessary adjustments to meet the evolving employment requirements of economic development.

Implementation

2. Project implementation suffered delay during the first 19 months because of the lack of managerial attention on the part of the PIU coordinator, who was simultaneously implementing the on-going urban development project, and the lack of attention by Ministry of Health's liaison officer. However, in May 1983 the implementation of the Ministry of Education's (MOE) components were transferred from the Ministry of Finance to the MOE, a project coordinator was appointed with responsibility for only this project and implementation of the MOE components began to accelerate at an acceptable rate. The initial two year delay was never regained and the project required seven years for implementation instead of the originally estimated five years.

Project Results

3. The project was successful in attaining each of the three major objectives. The quantitative targets in outputs of the vocational and technical system were significantly exceeded. Especially noteworthy were the large increases in the in-plant training participation in courses conducted by the hotel training college. With very minor exceptions the quality of construction, furnishing and equipping of the five major new training facilities was very good, while that of the 11 new secondary school facilities were good. The qualitative improvements in the training programs are probably of much greater importance over the longer run than are the purely quantitative gains resulting from the new and upgraded facilities, equipment and training materials. Of equal importance are the concomitant improvements in the capabilities of senior staff and administrators in the planning, implementation and management of training programs. The project was fortunate in obtaining a major technical assistance contractor who was able to field a capable team of specialists.

4. In summary, the major areas of accomplishments in improving the quality of training programs and institutional capability in planning, implementing and administering the training system were in: (a) the development, validation and implementation of competency-based curricula in the COB, BHTC, ITC and BSN institutions; (b) improvements in testing and evaluation for the MOE, COB and BSN, and developing, field testing, and implementing occupational certification standards in welding, air conditioning, and refrigeration at the ITC; (c) student guidance and counseling for secondary students; (d) staff development for 106 key instructors, supervisors, planning personnel and administrators through programs abroad; and (e) in-service training programs.

Project Sustainability

5. There is no question of the sustainability of the project. All of the project institutions assisted under the project are basic education and training institutions whose roles in the economic and social development of the country will steadily increase. Further inputs into their continuing upgrading and expansion will be required. Recurrent costs financing of project institutions is not a significant problem. The Second Technical and Vocational Project under Loan 3004-BM provides further assistance in expansion, curriculum upgrading, facilities improvement and in education and training planning, particularly at the tertiary level, which will further strengthen the sustainability of the project.

Lessons Learned

6. There were several lessons learned, or once again confirmed, by Government and Bank personnel during project implementation which have implications for future projects. Among these, in training projects of this size and institutional diversity are: (a) a condition of effectiveness, and preferably much earlier, should be appointment of key PIU staff, including a coordinator, with no other major project for which he is responsible, an architect, and an equipment specialist; (b) to insure stability in financing for PIU staff, in many cases it may be essential for the Government to utilize project administration funds provided in the loan to pay salaries; (c) the Bank should be cautious, and if it is judged necessary, seek additional conditionality, when it enters into a loan agreement in which the Government plans to finance all construction costs from its own resources, as in such cases the Bank has less leverage in keeping civil works on schedule; and (d) appraisal reports should contain carefully calculated, and separately stated, cost estimates on such things as customs duties on imported goods, internal transportation and insurance costs of goods. Customs duties, and in many cases the costs of internal transportation and insurance, will be borne by the Government. They should be included in annual budgets for project implementation, but frequently are not.

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I. INTRODUCTION

Methodology of Report Preparation

1.01 The preliminary draft of this report was prepared by the Project Unit Coordinator and the senior technical staff of the Ministry of Education. It is based upon information gleaned from project implementation reports and notes (both formal and informal) periodically prepared by the Project Implementation Unit (PIU), Bank supervision missions, civil works architects and engineers, technical assistance consultants, and by senior managers of project institutions. A detailed list of these reports is attached as Annex 1.

1.02 The format and subject matter areas of this report are based upon discussions with Bank missions of March and April of 1988; and on Bank Guidelines for the Preparation of Project Completion Reports (PCR).

Focus of Report

1.03 The primary objective of this report is to describe and analyze the status (during the first four months after the Loan Closing Date of June 30, 1988) of implementation of components as contrasted to original plan, and to compare estimated costs and expected benefits at the time of appraisal with the actual costs incurred and benefits attained and/or currently expected. It specifically focuses on how well the project objectives were met; the consequences (good and bad) of decisions and actions taken/not taken in the course of project implementation; and the project contributions to strengthening of institutional capacity in the planning and deliverance of vocational and technical training. Special emphasis is placed upon lessons learned during project implementation and on formulation of recommendations, some of which could be applicable to similar projects, as to how the negative lessons could have been alleviated or prevented; and what further actions are required to assure that the continually evolving training needs of business and industry can be better met.

II. BACKGROUND AND PROJECT COMPOSITION

Socio-Economic Setting During Period of Implementation

2.01 Economic circumstances, as well as other unexpected events in The Bahamas having adverse economic consequences, resulted in a general slowdown in project implementation and some significant project changes due to severe competition for scarce public financial resources. The most serious

of these was that, as a result of a decline in the European Economic Community (EEC) assistance for The Bahamas during the 1981-85 period, the funds which were to finance the civil works cost of the new Hotel Training facilities did not become available. Consequently, the development of this component was deferred. The possibility of EEC assistance was not foreseen at the time of appraisal, but soon after implementation began such assistance became a strong probability. Consequently, the renovations with government funds to existing hotel training facilities was cancelled, and designs for the new facility were developed. Two other developments also caused delays in project implementation. The first of these was a series of fires, of unknown origin, requiring the replacement of all or major portions of five secondary schools including the entire administrative blocks and classroom/laboratory places for 700 students. A second factor was the largely unanticipated, in terms of medium and longer-term budgetary planning, increase in school participation rates of primary and secondary age youths. These circumstances resulted in a new priority assigned to construction and furnishing outside the project of five new schools having 3,520 student places with related administrative and service facilities. These conditions combined to require a total of about US\$7.72 millions in new capital expenditure in education (Annex 2) during the same period that the Government was committed to finance about US\$6.9 million of capital costs of civil works for the project.

Project Origin, Formulation and Justification

2.02 The project was identified and prepared during 1979 through a series of three missions and the combined efforts of the Government, the World Bank and UNESCO. It was appraised by the Bank during the period of February 1980 through December 1980, with four Bank field missions during 1980, and culminating with the Government's mission to the Bank for Negotiations in the second week of March 1981.

2.03 The major justification for the project lay in the Government's growing recognition, during the last half of the 1970's, of the need to accelerate the development of a properly skilled labor force.

Project Objectives and Composition

2.04 The main objectives of the project were to: (a) increase the output of the technical and vocational education and training system; (b) improve the relevance and quality of training programs; and (c) strengthen the education and training system's capacity to make the necessary adjustments in view of the evolving needs of the labor market.

2.05 To achieve the above objectives, the project included the following specific items:

(a) Construction or renovation, furnishing and equipping of:

(i) Industrial Training Center (renovated) to accommodate 500 trainees annually;

- (ii) Senior High School Vocational Training - 14 new and 5 renovated training shops in 12 schools to accommodate about 750 industrial students annually, with an output of about 300 trainees annually;
 - (iii) College of The Bahamas with new facilities to produce annual outputs of about: 90 new technicians from the Technical Studies Division; 100 from the Business and Administration Division; 15 new teachers from a new Technical Teacher Education Unit; and an expansion of the Library/Learning Resources Center for about 130 additional student places;
 - (iv) Hotel Training College with new facilities and supplemental equipment to accommodate an additional 120 full-time students at the Nassau, New Providence Campus, and to furnish and equip the Grand Bahamas Campus for upgrading its industry based instructional program for a continuing 1,000 per year; and
 - (v) Bahamas School of Nursing with accommodations for a total of 180 full-time students and 60 students in part-time upgrading courses.
- (b) Development of a National Manpower Data Base System - with project assistance in the development and installation of a master data file system.
 - (c) Technical assistance originally comprising about 75 man-months of specialist services and 489 man-months of fellowships and study-tours abroad.

Changes in Project Composition

2.06 While the project was generally implemented as originally planned, there were some modifications, mostly of a positive nature. These modifications were as follows:

- (a) As a result of the growing recognition for the need to improve education policies and the competencies of administrative, planning and instructional staff, the Government and the Bank agreed to increase the amount of loan proceeds allocated to specialist services and training/study tours abroad. The allocation was increased from an original US\$1.35 million contract with the U.S. Department of Labor (USDOL), to US\$3.07 million (including US\$0.21 million with a minor contractor) and the implementation period for this component extended to December 31, 1987 to permit a broader and deeper attainment of the overall project objectives (paras. 3.07-3.10).
- (b) Because of the lack of financing (para 2.01) for the civil works costs of the new training facility for the Nassau Campus of the Bahamas Hotel Training College (BHTC), this part of the

project was eventually deferred for a second Bank assisted project and the US\$0.45 million of loan funds allocated for furnishing and equipping of the new facilities were cancelled. To help offset the effect of the projected loss of graduates from full-time programs, the industry based (in-plant) program was increased from an originally projected 1,000 trainees annually to 2,500.

- (c) The timely donation, by the Grand Bahamas Port Authority, of a completely renovated building in Freeport for the use of the Bahamas Hotel Training College (BHTC), the Industrial Training Center (ITC), and the College of The Bahamas (COB) (Refer to para 3.05 and Tables 3.1 and Annex 4), enabled the BHTC to move from its inadequate facilities and to increase the projected output of the Grand Bahamas Campus. This output was expected to be 90 graduates from the campus based programs and 500 trainees from the industry based programs in 1988, and a projection of about 150 graduates from the campus based program in 1989. The ITC was also enabled to initiate campus based training in Freeport and produced an output of 85 in the 1987-88 year. The campus-based output will be further expanded under the new Bank assisted project.
- (d) Due to the inability to obtain full agreement on procedures and methodology between the administration of the National Insurance Board and the Ministry of Finance Computer Division, the project was unable to attain fully the objective of establishment of a National Data Base System. Consequently, the development of the "demand" side of the system was deferred to the new Bank-assisted project. However, the new "supply" side of the system, with accurate and regular reporting on student flows and entrants to the labor market, has been developed, equipped and staffed in the Ministry of Education and is operational.

III. PROJECT IMPLEMENTATION

Implementation Schedule

3.01 As detailed in Annex 2, and as discussed below, the project required about seven years for completion (loan signing to loan closing) instead of the five years originally estimated. The major causes of the delay were as follows:

- (a) The civil works component of the project was completely financed with funds outside the loan. Because of serious budgetary constraints (para. 2.01) and administrative problems, there were delays in the beginning of construction ranging from about 20 months in the case of the COB (para. 3.05) to about 48 months in the case of the Bahamas School of Nursing (BSN).

- (b) The reason for the long delays in beginning the design and construction of the BSN building was due to legal problems in the procurement of the construction site, and very slow administrative process in handling them by the Ministry of Health (MOH).
- (c) The substantial delays of about 24 months in the construction of the new shops and the refurbishment of existing ones of the secondary technical schools were due mainly to the lack of timely availability of budgeted funds; financial problems of the contractors; and further complications caused by delays in the Government's disbursement of funds to them.
- (d) The delays in procurement of furniture and equipment, with minor exceptions, were in response to the delays in construction and renovations.
- (e) The delays in implementation of the technical assistance component were due to: the poorly organized and staffed PIU during the first 22 months of project implementation in which no one was specifically assigned the responsibility for implementation; the unexpected length of time needed to arrange an acceptable contract with a qualified consulting institution and for the mobilization of individual specialists; a lengthy process of obtaining governmental approvals for planned staff development abroad; and the approximately 130% increase (para. 2.06 (a)) in the actual level of specialist assistance and study tours abroad.
- (f) The technical (industrial arts) teacher training program was not successfully implemented as planned. Although several male trainees originally enrolled in the opening class in 1984-85, all of them either changed to industrial technology majors or dropped out before completing the industrial and pedagogical course requirements. The two major reasons for this situation are: (a) the average annual replacement requirements for the total of only about 60 industrial arts teachers is five to six, which is not enough to attract the 12 students required for an economically feasible teacher training class; and (b) the demand for two year post-secondary industrial technology graduates is greatly in excess of the supply and salaries paid are much better than that paid for secondary teachers on an annual basis. Other extenuating factors are: (a) employed skilled craftsmen, who are attracted to teaching in the industrial arts programs, can obtain their pedagogical qualifications through part-time classes in the regular teacher training program at the COB; and (b) qualified expatriate industrial arts teachers find teaching in The Bahamas very attractive because of climate, cost of living, and tax free salaries.

Project Management

3.02 During the first 19 months of implementation, certain aspects of the project suffered from lack of managerial attention on the part of the Project Unit Coordinator. At this time the Unit was formally a part of the Ministry of Finance and it had the responsibility for both the Urban Housing Project and the Vocational and Technical Training Project. As the Urban Housing Project was already well advanced, it required virtually all the available time of the Coordinator. The problem was further complicated by a lack of attention by the liaison officer for the Ministry of Health's Department of Nursing Education component. This inattention was a result of a lack of available time due to heavy competing demand on his time within that Ministry.

3.03 By the time of the September 1982 supervision mission, the Bank's project supervision personnel became firmly convinced that significant changes in local project management were required. Consequently, the mission initiated frank discussions with the PIU Coordinator, the Financial Secretary of MOF, and the Deputy Permanent Secretary of MOE about how project management could be strengthened. In these discussions it was recommended that the responsibility for the management of MOE project components, representing about 88% of the total project, be assigned to the MOE itself. In May 1983 the responsibility for implementation of its part of the project was formally transferred to the MOE, a Project Implementation Coordinator was appointed, and the rate of project implementation of its components began to accelerate. Even though funds were provided under the loan, no funds were ever authorized by the MOE to employ an equipment procurement specialist. While the development of equipment lists, specifications and procurement proceeded with only small delays, it became increasingly more difficult for the PIU Coordinator to handle the work load as implementation advanced. This burden was especially evident in the delays in customs clearance and in the delivery and installation of equipment in training centers located in the Family Islands and in Grand Bahamas. Furthermore, the lack of an equipment specialist resulted in a few of the items of equipment (estimated value of about US\$100,000) requested not having adequate specifications to assure their desired quality and capacity. Because of the unanticipated delays in civil works completions and the corresponding long storage period required for the early arrived equipment, the unsuitability of some equipment items was unfortunately not discovered until late in the implementation cycle.

3.04 It is highly probable that many of the problems and delays in the construction and renovations of the secondary technical school facilities could have been significantly reduced had the PIU been permitted to employ its own supervision architect, rather than having to rely on the Ministry of Works and Utilities (MOWU) for this service.

Civil Works, Furniture and Equipment Procurement

3.05 Civil Works. Private architects used in the design of the COB and BSN and their resulting designs were very good. While the plans for the COB were produced with only about six months delay, they were still ready

by the time of loan signing. However, the designs for the BSN could not begin until a site was procured some 48 months later than originally scheduled. A private architect was employed to supervise the construction of the COB facilities and, after a delay of about 20 months because of poor coordination between MOE and MOWU regarding tendering, construction began and was completed in about three months less than scheduled. Once the site for the BSN was procured, the designs were promptly developed, the works were tendered and construction carried out with all being completed within a total of 24 months. The quality of construction in these two facilities was very good and they are aesthetically pleasing. In recognition of the significant roles which the BHTC, the ITC and the COB are playing in overall economic and social development, and upon the strong recommendation of business and industry leaders in Grand Bahamas, the Grand Bahama Port Development Authority donated a relatively new masonry building of 22,400 square feet on a 3.1 acre site and completely remodeled it for education and training use by these institutions. The appraised value of this facility, less furniture and equipment, is US\$2.7 million. The designs of the 11 new and six renovated shops and laboratories for the secondary technical programs were done by the architects of the MOWU, as was the supervision of construction. While the quality of works was generally good for the new buildings, the quality of the interior finish, including painting, in the renovated shops was only fair. The renovations of the training facilities at the ITC in Nassau were carried out by the staff and the trainees. Although the quality of the works is generally only fair, the training value and the savings in scarce financial resources probably justify this approach. Table 3.1, below, provides further details on the type and quality of civil works.

Table 3.1: STATUS AND QUALITY OF CIVIL WORKS BY INSTITUTIONS

Institution/Division	Type of Civil Works		Quality of Works by Type		
	New	Renovations	Structural	Finish	Mechanical
College of Bahamas:					
Ind. Technology	x	-	V.Good	V.Good	Good
Business Studies	x	-	V.Good	V.Good	Good
Library-Learning Resources	x	-	V.Good	V.Good	Good
School of Nursing:					
All Divisions	x	-	V.Good	V.Good	V.Good
Hotel Training College:					
Freeport Campus1/	x	-	V.Good	V.Good	Good
Nassau Campus2/	-	-	-	-	-
Industrial Training Center:					
Nassau Campus	-	x	Fair	F.Good	Fair
Freeport Campus1/	x	-	V.Good	Good	Good
Secondary Technical:					
New Shops/Labs (11)	x	-	Good	Good-9	Good-8
				F.Good-2	Fair-3
Renovated shops (6)	-	x	Good	Fair	Good

1/ Freeport Campus - a newly renovated building of 22,400 square foot on a 3.1 acre site with a total value of US\$2.7 million was donated by the Grand Bahama Port Development Authority for joint use of the ITC, the BHTC, and the COB education and training programs.

2/ Construction was to be financed by EEC funds and when it was found, late in the implementation period, that sufficient funds would not become available, the decision was made to delay new construction.

3.06 Furniture and Equipment. Procurement of furniture and equipment was carried out in accordance with Bank and Government guidelines. Virtually all equipment was procured through ICB, while most furniture was procured through LCB. Equipment lists and specifications were prepared by instructional staff of the participation institutions. The evaluation of tenders was carried out by selected senior instructional staff of the institutions. These activities were coordinated and supervised by the PIU Coordinator and the instructional staff received no extra compensation for these activities. While this procedure resulted in lower administrative costs payable from the loan allocations, and was good experience for the technical instructors, it had several limitations in regard to efficiency and effectiveness of project implementation. The complete process suffered as the result of the lack of an equipment procurement specialist (para.

3.05). The MOE PIU Coordinator, after his appointment, quickly became knowledgeable about procurement procedures as a result of considerable study of Bank procurement documents and thorough discussions with Bank supervision personnel. However, he did not have the kind of training or experience that would permit him to conduct comprehensive reviews of equipment specifications, with the technical instructors preparing them, to assure their clarity and technical accuracy. This deficiency resulted in instances (valued at about US\$100,000) in which the equipment received was not what was desired even though it technically met the written specifications. Unfortunately, most of this type of equipment, mainly for the COB and ITC, arrived long before the buildings were ready for its installation and had to be put in storage for up to 12 months. Consequently, by the time it was installed and the deficient specifications were realized it was too late to exchange it with the supplier. Furthermore, due to the long delays of time between the shipment of goods by the suppliers and the final delivery and installation in the training institutions, after many months of storage, the culpability for damage and/or loss could not be properly ascribed to the responsible party and, thus, the institution assumed the loss.

Education and Training Aspects

3.07 Despite the slow start in initiation of the overall technical assistance provided in support of the education and training aspects, implementation soon picked up momentum. As a result of the careful logistical control developed and exercised by the PIU Coordinator and the field coordinator for the major contractor, implementation moved quite smoothly throughout the greatly expanded program (para. 2.06 a and Table 3.2).

3.08 Curriculum and Materials Development and Evaluation. More than two-thirds of the 167 person-months of specialist assistance provided under the project was devoted to developing/upgrading these three areas with major emphasis on the education and training programs at the COB, the BHTC, the BSN, and the ITC, with minor emphasis upon the secondary schools. In addition to the curriculum materials developed by the specialists, a major vehicle for curriculum development and evaluation was the organizing and conducting of in-service workshops for instructional staff (para. 3.09). Such workshops, along with the upgrading of the competencies of key staff through training abroad, have helped assure the continuing development of curricula relevant to the needs of business and industry.

3.09 Staffing Recruitment and Training. The additional teacher needs for the project institutions were modest. Except for a few isolated instances, no significant problems have been encountered. The major reasons for this are that the competitive salaries, absence of income taxes, relatively low living costs, and excellent climate, make the vocational and technical teacher market very attractive to well-qualified extratriate teachers from Canada and England. Qualified technical personnel from business and industry also find part-time teaching in COB and BHTC attractive. In addition to 106 staff members receiving upgrading training abroad for an average of four months, in-service staff training was conducted by consultants, with assistance of local staff, for more than 120

persons from the MOE, the secondary schools, the COB, BHTC, BSN, and ITC. These were arranged and conducted over a three year period and many of the instructional and supervisory staff participated in two or more of the workshops. There were no problems experienced in the implementation.

3.10 Strengthening of Institutional Capacity in Planning and Management of Education and Training. The original project design provided for no specialist assistance in this critical area, and only contained fellowship training/study tours for three staff of the MOE Planning Unit and four department heads of the COB. No specialist assistance was provided for either planning or management except for the development of the Industrial Training Council. Due to the Government's growing awareness of the need for significantly greater staff competence in planning and management, the TA component of the project was greatly increased. Consequently, eight specialists provided about 30 months of full-time assistance in strengthening the skills of key planning and management personnel in the MOE and all of the participating institutional groups. In this regard several special workshops were conducted by the group of specialists for key planning, supervisory and management personnel from each of the participating institutions. Furthermore, the specialists helped plan, develop and, in several instances, implement policy changes in the participating institutions (Refer to Chapter V Project Objectives By Major Objectives for details).

Specialist Services and Fellowship Training

3.11 The original technical assistance plan called for the utilization of nine subject matter specialists for a total of 75 person-months, and fellowship training and short study tours abroad for 55 instructional and planning staff for a total of 489 person months. As a result of the Government's growing concern for the need to improve education and training policies and to upgrade instructional, planning and administrative staff, the technical assistance component was greatly expanded (Table 3.2). In summary the completed program included the utilization of 51 specialists for a total of 167 person-months and provide fellowship training and short study tours abroad for 106 instructional planning and administrative staff for a total of 440 person-months. The Government and the participating institutions consider, with only minor exceptions, that the greatly expanded technical assistance program with the major contractor was a significant success. The only exception in the technical assistance program was with one individual specialist from a minor contractor whose work, because of strong personality conflicts, was relatively ineffective. As a result of the four and one-half years for implementation of the technical assistance program; the careful logistical control exercised by the PIU Coordinator and the major contractor; and because much of the routine curriculum content development work by the specialists was done at their home bases; the number of specialists in the country at any one time did not cause any significant logistical problems.

Fulfillment of Loan Covenants and Policy Changes

3.12 Although slowed in execution, largely as a result of the aforementioned delays in project implementation, each of the three loan covenants were implemented in an acceptable manner. A National Advisory Committee on

Industrial and Technical Education and Training (Section 3.03a of Loan Agreement) was created and officially recognized by the Government as a legally organized advisory committee under the chairmanship of the Permanent Secretary of MOE. Its membership consists of 20 people, of whom seven are from government and 13 from large and small industrial/service firms. A monitoring and evaluation system (Section 3.03b) has been developed and is operational in the Industrial Training Center. Terms of reference and conditions of service for specialists (Section 3.04a) were prepared and acceptable to the Bank and criteria for selection and placement for fellowships were acceptable and found to be highly beneficial in the implementation of the greatly expanded program. A number of policy changes, including several not originally planned, resulted from the expanded technical assistance program. These policy changes are discussed in Chapter V, Project Outcomes by Major Objectives.

Implementation Progress Reporting

3.13 Twenty project implementation reports were prepared by the PIU and TA contractors during the seven years of project implementation. These reports, along with the information obtained during the supervision missions, adequately served as the basis for Bank supervision of project implementation.

Adequacy of Operational Budgets and Counterpart Funding

3.14 Discussions with administrators, teachers and students at 10 of the 12 secondary school institutions and at all of the other project institutions did not reveal any significant problems with the adequacy of the consumable supply or general maintenance budgets of project institutions. However, funds for more major repairs and renovations of buildings have been inadequate in two institutions. In one of these, the ITC, the problem has been largely alleviated by staff and students carrying out most of the renovations. As the Government financed the total costs of civil works construction and renovation, the lack of loan funds to help reduce the amount of local funding requirements for major renovations was a significant drawback to project implementation in one of the secondary schools and a minor problem in the ITC. The major reason for this shortage of local funds was discussed in para. 2.01.

Project Accounting and Auditing

3.15 Project accounting was carried out by Ministry of Finance accountants and has been satisfactory. Audit reports have been regularly sent to the Bank, with only moderate delays from time to time. No significant problems in this regard have been encountered.

Table 3.2 SPECIALIST ASSISTANCE AND STAFF TRAINING ABROAD

Area of Assistance	<u>No. of Persons</u>	<u>Total Months</u>
<u>Long Term Specialists:</u>		
Project Director and Advisor to the Ministry of Education (8/83 - 6/87) and (6/87 - 12/87)	2	53
Specialist Advisor in Education Testing and Evaluation (3/85 - 12/86)	1	21
Specialist/Advisor in On-the Job Training (1/85 - 6/86)	1	18
Specialist/Advisor in Industrial Technology (9/85 - 9/86)	<u>1</u>	<u>12</u>
Sub-Total	5	104

Short-Term Specialists:

Business and Industrial Technologies	3	9.7
Educational Testing	4	0.5
Program Evaluation	9	8.8
In-Service Admin.	3	1.0
Agriculture	2	1.3
Media Development	2	1.2
Maritime Program	1	1.0
Entrepreneurship	1	1.7
Manpower Data Base System	2	2.3
Cooperative Education	1	2.3
ITC Program Development and Certification	3	6.2
Nursing Education Program Development & Evaluation	7	12.7
Career Development Unit	2	1.0
Building Trades, Mechanical and Electrical, Masonry, Plumbing, Motor Vehicles, Metal Fabrication	6	13.7
Sub-Total	<u>46</u>	<u>63.4</u>

Staff Training Abroad:

<u>Type of Program</u>	<u>Participants By Program and Institutions</u>					
	<u>MOE</u>	<u>MOH</u>	<u>COB</u>	<u>BHTC</u>	<u>ITC</u>	<u>Totals</u>
Long-term (1 year or more)	1	0	6	0	1	8
Workshops & Conferences	18	1	22	5	6	52
Short-term (1 week - 1 yr)	25	14	8	6	4	57
Visits/Consultations	11	5	6	0	1	23
Total Participants	55	20	42	11	12	140
Total Individual Persons	41	19	30	9	7	106

Bank Role in Implementation

3.16 The relationship between the Bank's staff and the staff of the country implementation agencies has been very good throughout the identification, preparation, appraisal, implementation and completion stages of the project cycle. The Government has expressed its appreciation for the Bank's expeditious advice, evaluation and approval of implementation documents and assistance in the development and maintenance of smooth working relationships between technical assistance specialists and implementation agencies/institutions. The Bank's supervision staff were especially commended for their willingness to make on-the-spot decisions while on missions in the country and to refer only to the Bank those matters requiring higher levels of approval. This helped to minimize delays and accelerate project implementation. The only negative aspects of Bank supervision were the too frequent changes in the identities of supervision mission members, however unavoidable, which resulted in four different technical educators during the period of the last quarter of CY81 through the first quarter of CY85. Also there was no technical educator on either of the two missions during CY86 and CY87, during which time only an architect was available for field missions. Bank disbursements were made in a timely manner, as a result of the use of Procedure III and by the use of the Special Account during the latter part of the implementation period.

IV. PROJECT COSTS AND FINANCING

Project Costs - Estimated and Actual

4.01 The total final costs of the project, as shown in Table 4.1 below, was US\$17.52 million, which was about 5% below the appraisal estimate of US\$18.40 million. A comparison between the estimated and actual costs by category reveals a number of differences.

Financing and Disbursement - Estimated and Actual

4.02 At appraisal the loan of US\$7 million was estimated to finance 38% of total project costs of US\$18.4 million and Government would finance US\$11.4 million equivalent to 62%. As shown in Table 4.2 below, the loan actually financed 37.4% of total project costs and the Government financed 62.6%.

4.03 As shown in Table 4.3 below, cumulative disbursements from the loan lagged seriously because of a number of reasons, many of which were outside the control of the Government, and nearly all beyond the control of the second PIU which assumed responsibility about 19 months after loan signing. The major reasons for the delays in project implementation and the corresponding delays in disbursements were due to causes discussed in paragraphs 2.01 and 3.01 to 3.05. An additional problem, contributing to delays and/or frustrations in implementation, was the frequently lack of timely funds to cover the Government's financial obligations for such things as customs duties, storage costs and in-country insurance on furniture and equipment, internal transportation costs of consultants, and other such costs not specifically identified as to amount in the SAR.

Table 4.1: TOTAL ESTIMATED AND ACTUAL PROJECT COSTS_{a/}
(US \$million)

<u>Category of Expenditure</u>	<u>Estimated</u>		<u>Actual</u>		<u>Difference As a % of Appraisal</u>
	<u>Amount</u>	<u>% of Total</u>	<u>Amount</u>	<u>% of Total</u>	
Civil Works <u>b/</u>	12.02	65.3	9.60 <u>c/d/</u>	55%	- 20%
Furniture and Equipment	3.88	21.1	3.52 <u>e/</u>	20%	- 9%
Manpower Data Base System	0.08 <u>f/</u>	0.4	-	-	-
Technical Assistance	1.50	8.2	3.02 <u>g/</u>	17%	+101%
Project Administration	0.92	5.0	1.38 <u>h/</u>	8%	+ 50% <u>i/</u>
Total Costs	18.40	100	17.52	100%	- 5%

a/ Including contingencies.

b/ Government financed 100% of site preparation and construction and 30% of professional fees.

c/ Civil works costs were drastically reduced because of much lower inflation rates resulting in a savings of US\$1.28 million on COB construction alone, plus US\$0.22 million on ITC and US\$1.56 million on Sec. Schools for a total savings of US\$3.06 million. A further cost reduction of US\$1.52 million was a result of the construction of the BHTC building being deferred to the Second Training Project.

d/ Includes the Freeport Education and Training Complex donated to the Government by the Grand Bahama Port Authority, with an estimated value of US\$2.7 million, for the joint use of the COB, BHTC, and the ITC project institutions.

e/ As a result of delays in the construction of new facilities for the Nassau BHTC, its equipment allocation of US\$0.45 million was cancelled from the loan.

f/ These funds were transferred to the technical assistance category and an amount about equal to this was used to establish in the MOE the "supply side" of the Manpower Data Base System.

g/ Due to increases in specialist assistance from 75 to 167 person months.

h/ Estimated on the basis of full time equivalent staff-years of project personnel plus other operating expenses.

i/ These cost overruns were brought about by the extended implementation period.

Table 4.2: FINANCING AND DISBURSEMENTS
(US\$Million)

	<u>Appraisal</u>	<u>Estimate</u>	<u>Actual</u>	
	<u>Amount</u>	<u>% of Total</u>	<u>Amount</u>	<u>% of Total</u>
Government	11.4	62.0	10.97 ^{a/}	62.6
Bank	<u>7.0</u>	<u>38.0</u>	<u>6.55</u>	<u>37.4</u>
TOTAL	18.4	100.0	17.52	100.0

^{a/} Included a donation of civil works having a value of US\$2.7 million.

Table 4.3: CUMULATIVE ESTIMATES AND ACTUAL DISBURSEMENTS BY YEAR
(US\$Thousands)

	<u>FY</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>a/</u>
Appraisal Estimate		300	800	2500	6000	7000	-	-	-	
Actual Disbursements		90	660	1600	3830	4300	5620	6370	6550	
Actual as a % of Estimate		30	83	64	64	61	80	91	94	

^{a/} to date

Unit Capital Costs and Space Allocations

4.04 All new construction was built to the specified space standards. All deviations in the costs of the major civil works contracts were due to changes in the projected rates of inflation. Unit base costs of major new construction were estimated at US\$470 per square meter. Unit base costs plus price increase contingencies were estimated at US\$950 per square meter. Actual contract unit costs, including price increases were about US\$710 per square meter for the COB, which was delayed 18 months, and those for the BSN were US\$900 as it was delayed for 48 months. These reductions were due almost entirely to a greatly reduced rate of inflation in construction costs.

V. PROJECT OUTCOMES BY MAJOR OBJECTIVES

Quantitative Increases in Output of System

5.01 The availability of the new facilities at the COB, the BSN, the new Education and Training Complex at Freeport, the new shops in the secondary schools, combined with the renovations of facilities in the secondary schools and the ITC shops in Nassau have enabled a significant expansion of training opportunities. The projected and actual annual enrollments and outputs of these new or renovated training facilities are summarized in the table below and are detailed in Annex 4.

**Table 5.1: PROJECT AND ACTUAL ENROLLMENTS
AND OUTPUTS BY INSTITUTION
(1987-88)**

<u>Institution</u>	<u>Enrollments</u>		<u>Outputs</u>		<u>% Difference</u>	
	<u>Projected</u>	<u>Actual</u>	<u>Projected</u>	<u>Actual</u>	<u>Enrolled</u>	<u>Outputs</u>
ITC	400	563 <u>a/</u>	500	515 <u>a/</u>	+ 41	+ 3
BHTC	1930	3474	1900	3450	+ 80	+ 82
BSN	240	144 <u>b/</u>	126	81 <u>b/</u>	- 40	- 36
COB	750	1111	205	269	+ 48	+ 31
Sec. Tech. Programs	750	3757 <u>c/</u>	300	1017	+ 400	+ 239

a/ Annual enrollment and output figures would have been about 50% higher if training programs had remained at three to six months in length as planned, rather than the current 10 months.

b/ Reduced by Government decree due to associate degree nursing program being established at the COB. The combined enrollments and outputs of the two programs are greater than the projected ones. Both programs are now planned to be merged.

c/ Figures are for technical majors only and do not include about 8,700 students taking some courses on an exploratory or supplemental basis (Annex 4).

5.02 A review of the enrollment and output data as detailed in Annex 4, and discussions with training administrators and with business and industrial managers show that upgrading of employed workers through institutional part-time and in-plant training programs is still a high priority. Courses of this kind remain a high priority for the two ITC campuses and for the COB industrial technology programs.

Qualitative Improvements in the System

5.03 The qualitative improvements in the education and training system accomplished by the greatly expanded technical assistance component (paras. 3.07 - 3.09) were probably of greater medium and long-term importance than were the more obvious gains resulting from the new and upgraded facilities, equipment and training materials. Detailed outcomes of the technical assistance component are presented in Annex 5, and are summarized below. Those having their major effect on the strengthening of institutional planning and management of education and training are discussed in the next section of this report.

5.04 The more significant qualitative outcomes of the project were in the areas of: (a) competency-based curricula; (b) testing, evaluation and certification; (c) student guidance and counseling; and (d) staff development.

5.05 Competency-Base Curricula. (In which daily instruction materials for individual students clearly state the specific objectiveness of the lesson; the exact technical knowledge and practical skills, as required in the labor market, which the student must be able to demonstrate at the end of the lesson; the level of performance required; and the detailed steps in attaining the required level of knowledge and skills.) The development, validation and implementation of competency-based curricula was carried out by specialists and senior teachers for the COB, BHTC, ITC, and BSN training programs. Although no competency-based materials were developed for the secondary technical programs, the supervisory staff and the technical committee were instructed in the techniques. (The second technical and vocational training project provides for significant curriculum development inputs at the secondary levels.) A cooperative education program was jointly developed and implemented between the COB and local businesses. Most importantly, both the philosophy and techniques of competency-based education and training--matching instructional content to skills requirement of the labor market--have been well established in the education and training system.

5.06 Testing, Evaluation and Certification. Educational testing broadly performs three significant functions: the evaluation of student and system performance; feed-back for improving future student and system performance; and the certification of the quality of student outputs to prospective employers. Each of these functions has been significantly enhanced by the project. Within the MOE several basic achievement and placement tests were improved and norms were established. At the COB the mathematics placement tests were revised and validated, revision of English placement tests was initiated, and a "career testing" program was field tested. At the ITC, standards for occupational certification were developed by specialists, senior instructors and industry for the welding, refrigeration, and air conditioning trades, and have been tested and accepted by industry. All programs were evaluated at the BSN, leading to the adoption of competency-based curricula.

5.07 Student Guidance and Counseling. The activities of the Special Services Division (SSD) and the Learning Resources Unit (LRU) of the MOE were both upgraded with expatriate technical assistance, resulting in the development and implementation of a Career Guidance Unit within the SSD, and of a Career Information Unit within the LRU. Staff were assigned and trained through specialist assisted in-service training activities.

5.08 Staff Development. The project outcomes for staff development should not be measured only by the staff-months of participation through in-service and training programs abroad but, more importantly, by the improved capability of the Bahamian education and training staff in sustaining the improvement to the system brought about through the project. Because of the breadth of staff development activities offered, the Government, the principal technical assistance contractor, and Bank supervision staff feel confident that the training system improvements can and will be sustained. By expanding and modifying the project's original staff training plan, a "critical mass" of adequately trained and motivated staff has been developed with a commitment to effective technical and vocational education and training in The Bahamas.

Strengthening Institutional Capability in the Planning and Management of Vocational and Technical Training.

5.09 Improved physical facilities, equipment, materials, curricula and instructional personnel are not sufficient, alone, to improve educational efficiency and effectiveness. Concomitant improvements in the planning and management of educational programs and of the system are also essential. The project contributed positively, through both formal and informal activities, to this most essential of education and training inputs. Key personnel at the support staff, instructor, supervisor, planning and medium and higher administrative levels participated in training activities directed at improving their capabilities in the performance of their assigned roles in planning and management.

5.10 Among the more immediately identifiable of these improvements are: (a) the coordination of the nursing training programs at the BSN and the COB, with clearly defined areas of theoretical and practical training assigned to the respective institutions and a planned integration of the two; (b) all planning and administrative procedures at the COB were evaluated and improved; (c) a comprehensive class/shop management system was adapted and implemented at the ITC; (d) the capabilities of key staff of the BHTC, the ITC, the COB, the BSN, and the national technical directors of the secondary technical programs received both in-service and training abroad in planning, implementation and management of training programs; (e) development and implementation of a business and industry needs assessment system and a student follow-up system at the BHTC; (f) individual training program advisory committees were expanded and improved at the ITC and COB; and (g) a National Advisory Committee on Industrial and Technical Education and Training was legally created, officially gazetted, membership appointed by the Minister of Education, and is functioning as planned.

Recurrent Costs Implications

5.11 Discussions with administrators, teachers and students at 10 of the 12 secondary schools and at all of the other project institutions did not reveal any significant problems with the consumable supply budget in the first full year (1987-88) of operation of the expanded and/or upgraded training system. Unit recurrent costs of the project institutions or programs are shown in the following table.

5.12 The above unit recurrent costs are comparable to those of the major countries of the Caribbean, especially those of Jamaica, Barbados, and those Eastern Caribbean States where tourism is a major economic sector.

**Table 5.2: UNIT RECURRENT COSTS OF PROJECT INSTITUTIONS/PROGRAMS
(US\$/Student 1987-88)**

<u>Institution/Program</u>	<u>Unit Costs</u>
Secondary Technical Programs	1,220 a/
Industrial Training Center	3,670 b/
Hotel Training College	3,300 c/
COB Technology Programs	NA

a/ Includes industrial, foods-clothing, and business programs.

b/ Includes US\$1,630 training stipend, which is planned to be restricted to only the more needy trainees in the near future.

c/ Cost recovery activities reduce this by an estimated 10%.

VI. LESSONS LEARNED AND RECOMMENDATIONS

Lessons Learned

6.01 The principal lessons learned or again confirmed, with implications for future education and training projects, as a result of experiences during project implementation and the preparation of the PCR are summarized below. Recommendations regarding some of these are presented in para. 6.02.

- (a) In a project of this scope a condition of effectiveness should be the appointment and assignment to a PIU key full-time staff members, such as a Coordinator, an Architect, an Equipment Specialist, and adequate secretarial assistance to promptly initiate project implementation. Participating institutions should also have formally assigned one or more training program administrators, on a part-time basis, to work closely with the PIU Coordinator in the implementation of the goods and services aspects of the project.

- (b) The PIU should be physically located under "one roof", preferably within or near the headquarters of the executing ministry, and the Coordinator should be vested with the full authority necessary, in accordance with the Loan Agreement and Bank-Government procurement regulations, to efficiently implement the project.
- (c) The Government should utilize, if necessary, the project administration funds provided in the loan to pay the salaries of the key full-time staff, support personnel, and to supply the needed goods and services for effective operation of the PIU. (The Government chose to finance these services from non-loan funds). This would help eliminate the inevitable delays in implementation resulting from inadequate staffing and support supplies and services.
- (d) The acquisition of building sites by the Government should be a condition of loan effectiveness to assure timely implementation of civil works and the installation of furniture and equipment.
- (e) When all the costs of construction are financed outside the loan, the Bank has little or no leverage in preventing or reducing the length of delays in the availability of funds.
- (f) The lack of timely budgetary provisions of funds to cover the Government's financial obligations for such things as custom duties on imported furniture and equipment, storage costs and in-country insurance of goods, internal transportation for consultants, and other such costs not specifically identified as to amount in the Bank SAR, are a source of frustration to PIU and participating institutional administrators and staff, and often result in significant delays in implementation.
- (g) While there are certain advantages in contracting large technical assistance contracts to a single firm, these may be more than offset by significant reductions in efficiency when the contract requires three or more years in implementation, a full-time field coordinator, and a part-time coordinator and considerable overhead costs at the home office of the contractor. In this project about 35% of the total costs of all expatriate specialist services were used for the 53 months of the field coordinator services out of a total of 167 person-months for all specialist services.
- (h) The effectiveness of Bank supervision was inevitably reduced by the lack of a desirable level of continuity of Bank staff, particularly technical educators, and the lack of an architect or a technical educator on certain supervision missions at about three critical points in project implementation.
- (i) While the annual outputs for skilled workers and technicians increased slightly more than planned under the project, the estimated annual demand increase was much greater. The

estimated demand, during the major portion of the 1990's, for these types of trained manpower is expected to be more than double the current output. These prospects, coupled with the ready acceptance of graduates in the labor market and the continuing growth in the tourism, construction and commerce/service sectors, clearly indicate the need for continuing emphasis upon the upgrading and expansion of such training programs.

- (j) The value of cooperative planning of the Project Completion exercise by the Government-Bank-project institutions, within a time span of four to six months before the Loan Closing Date, was clearly manifested in this project. A series of meetings, totaling less than eight staff-hours of Bank mission personnel during three Bank missions concerning the new project, were conducted and directed at planning the project completion exercise for the first project, the content of the report and the responsibilities and roles of the participating groups. The end result was that the Project Completion field mission required only seven Bank staff-days (not including travel) and the draft PCR and Annexes required only 10 staff-days to prepare.
- (k) Bank supervisory staff should not be reluctant to recommend changes in project execution when circumstances indicate it is strongly advisable.

Recommendations

6.02 Based upon the lessons learned by the Government and the Bank, the following recommendations are made:

- (a) In order to help ensure timely project execution, project design should insist that the PIU responsible for implementing education and training projects must be adequately staffed with full-time key personnel, should be adequately budgeted with financing under the loan if necessary, properly housed, and should not have simultaneous responsibility for non-education projects.
- (b) The Bank should be exceedingly cautious on entering into agreements in which there are major civil works, but in which no loan funds are used to help finance the costs of civil works. If Bank financing for civil works is not requested, remedies to ensure adequate counterpart financing should include agreement on specific budgeted shares, annual expenditure monitoring, or co-financing agreements with other financiers.
- (c) In an attempt to ensure adequate budget for such items as custom duties on furniture and equipment, which are not eligible for financing from the loan, and for storage costs and insurance on goods awaiting completion of civil works, and for

internal transportation costs for consultants and similar costs that are frequently not financed from the loan, the project SAR should specifically calculate the amounts of each and present them as line items for Government financing.

- (d) In order to help ensure efficient use of resources for technical assistance, appraisal missions should carefully evaluate the requirements for specialists' assistance in terms of: the numbers of individual specialists; the time and scheduling of each individual within the country; numbers in country at the same time; activities, if any, to be carried out by different specialists which require coordination by a principal contractor; and the ratio of total person-days required of each specialist to the number of those days he must be in the country (keeping in mind that most curriculum development work, after a relatively short exploratory-analytical visit to the country, may be effectively developed at the specialist's home base, after which he returns to the country for discussions, modifications as required and to assist in initiating its implementation). On the basis of such an evaluation a recommendation should be made as to the following options: (a) the deployment of a small group of specialists not requiring a field coordinator, and considerable overhead costs at their home base; (b) or the use of individual specialists; or (c) provision of several small groups and/or individual specialists and a field coordinator under a general contractor.1/

1/ This process was carried out in the appraisal of the Second Technical and Vocational Training Project for the Bahamas, and recommendation (a) was made and accepted by the Government.

THE BAHAMAS
First Vocational And Technical Education Project
Record Of Project Progress Reports Submitted

(By Year)

1. 1981 Appointment/Selection of Consultants, Specialists & Fellowship Candidates (Report Form II) as of June 30, 1981.
2. Project Progress - A Building Works (Reporting Form IV A) as of June 30, 1981
3. Project Progress - A Building Works (Reporting Form IV A) as of September 30, 1981
4. 1982 Project Progress - A building Works (Reporting Form IV A) as of March 31, 1982
5. Quarterly Progress Report - World Bank - Technical & Vocational Education Project (ref. EDU/A/5003) for the quarter ending December 31, 1982
6. 1984 Project Agreement between the Commonwealth of the Bahamas and the United States Department of Labor for Technical Cooperation in Vocational & Technical Education (ref. EDU/A/6093). February 11, 1984 - May 10, 1984
7. Project Progress Report (ref. EDU/A/5003). February to September 1984
8. Project Agreement between the Commonwealth of the Bahamas and The United States Department of Labor for Technical Cooperation in Vocational & Technical Education, August 11, 1984 - November 10, 1984
9. 1985 Project Agreement between the Commonwealth of the Bahamas and the United States Department of Labor for Technical Cooperation in Vocational & Technical Education, February 11, 1985 - May 10, 1985
10. Project Agreement between the Commonwealth of the Bahamas and the United States Department of Labor for Technical Cooperation in Vocational & Technical Education, November 11, 1985 - February 10, 1986
11. 1986 Project Agreement between the Commonwealth of the Bahamas and the United States Department of Labor for Technical Cooperation in Vocational & Technical Education, February 11, 1986 - May 10, 1986
12. Progress Report (Ref. EDU/A/5003) for the period ending February 28, 1986

13. **Project Agreement between the Commonwealth of the Bahamas and the United States Department of Labor for Technical Cooperation in Vocational & Technical Education, May 11 - August 10, 1986**
14. **Quarterly Report of Work Activities in the Bahamas, by Pat Jones, Period Covering February 10, 1986 - May 10, 1986**
15. **Quarterly Report of Work Activities in the Bahamas, by Pat Jones, Period Covering May 11, 1986 - August 10, 1986**
16. **Project Agreement between the Commonwealth of the Bahamas and the United States Department of Labor for Technical Cooperation in Vocational & Technical Education, (Ref. EDU/A/6093) August 11 - November 10, 1986**
17. **Status Report, Plan of Action for Future Activities of Technical Assistance Agreement, by Dr. Nila Tritt, August 28, 1986**
18. **Status Report, Plan of Action for Future Activities of Technical Assistance Agreement, by Dr. Nila Tritt, September 30, 1986**
19. **Project Agreement between the Commonwealth of the Bahamas and the United States Department of Labor for Technical Cooperation in Vocational & Technical Education, November 11, 1986 - February 1987**
20. **Project Completion Report on Technical Cooperation in Vocational and Technical Education by the U. S. Department of Labor During 16 May 1983 - 31 December 1987.**

Annex 2

THE BAHAMAS

First Vocational and Technical Education Project

Project Completion Report

Unanticipated Capital Expenditures in Education Sector During

Project Implementation Period of 1981-1987

1. During the Calendar Years of 1981-87 there were a number of external factors which had largely unanticipated and highly significant economic consequences outside of those within the project. Among the more costly of these in terms of their capital expenditure requirements were:

- (a) the loss of all or major portions of five secondary schools from fire, including the entire administrative blocks and 20 classrooms and laboratories, with a total of 700 student places; and
- (b) the largely unanticipated financial consequences, in terms of medium and longer term budget planning, of increased participation rates of primary and secondary students, resulting in high priority for five new primary schools with a total of 101 classrooms and related administrative and service facilities with a total of 3,520 student places, and extensions to existing primary and lower secondary schools of 95 classrooms and laboratories with a total of 3,325 student places.

2. These 7,545 new student places required a capital investment during the 1981-1987 period of about \$7.22 million for construction and about \$0.50 million for equipment, furniture and books, for a total of about \$7.72 millions. As the Government was financing all of the construction costs of the project, the competition for funds between the project and these largely unanticipated costs were intense.

THE BAHAMAS
First Vocational and Technical Education Project
Estimated and Actual Implementation Schedules

	CY 1980	1981	1982	1983	1984	1985	1986	1987	1988
Estimated-EEEE (Qtrs)									
Actual-AAAA (Qtrs)									
<u>Civil Works-New:</u>									
College of The Bahamas	EE	EEEE AA	EEEE	AAAA	AA				
School of Nursing		EE	EEEE	E		AA	AAAA	AA	
Tech. School Shops/ Labs-11			EE	EEEE	EEE A	AAAA	AAAA		
Hotel Training-Freeport)									
(Not in original estimate)						AAA	AAAA	A	
Industrial Training- Freeport)									
Hotel Training-Nassau		E	EEEE	EEEE	E				
(Deferred for Education II Project)									
<u>Civil Works-Renovations:</u>									
Technical School Shops-6			EE		A	AAAA	A		
Industrial Training- Nassau		EE	EEE	EEEE	EEEE	AA	AA	AA	AA
<u>Furniture & Equipment:</u>									
		EEEE AA	EEEE	EEEE AAAA	EEE AAAA	AAAA	AAAA	AAAA	AA
<u>Technical Assistance:</u>									
		EE	EEEE	EEEE AAA	EEE AAAA	AAAA	AAAA	AAAA	

THE BAHAMAS
First Vocational and Technical Education Project
Projected and Actual Annual Enrollments and Outputs of Training Program

Institution/Program	Annual Enrollmentsa/		Annual Outputsa/		% of Difference	
	Projected	Actual	Projected	Actual	Enrolled	Outputs
<u>Industrial Training Center</u>						
Nassau Campus:						
Industrial Skills	280	293	350b/	264	+ 5%	- 24%
Secretarial & Business	60	40	75b/	38	- 33%	- 49%
Other Courses	60	135	75b/	128	+125%	+ 71%
Freeport Campus:						
Industrial Skills	-	95	-	85	-	-
Total	400	563	500	515	+ 41%	+ 3%
<u>Hotel Training College</u>						
Nassau Campus: (New Providence)						
Full-time Courses	330	239c/	300	220	- 27%	- 27%
Part-time Courses	100	140	100	140	+ 40%	+ 40%
In-Plant Courses	1000	2500	1000	2500	+150%	+130%
Freeport Campus: (Grand Bahamas)						
Campus Based Courses	-	95	-	90		
In-Plant Courses	500	500	500	500	0%	0%
Total	1930	3474	1900	3450	+ 80%	+ 82%
<u>School of Nursing</u>						
Registered Nurse Program	180	104	72	44	- 42%	- 39%
Advanced Nursing	60	40	54	37	- 33%	- 31%
Total	240	144d/	126	81	- 40%	- 36%

(Table Continued)

Institution/Program	Annual Enrollments		Annual Outputs		% of Difference	
	Projected	Actual	Projected	Actual	Enrolled	Outputs
<u>College of Bahamas</u>						
		FT	PT			
Technology Div.	200	128	81	90	74	+ 5%
Business Div.	500	570	332	100	195	+ 80%
Ind. Arts Teacher Trng.	15	-	-	15	-	- 48%
Total	715	698	413	205	269	+ 48%
<u>Secondary Technical Program</u>						
Industrial Arts	750	2380	300	360	+217%	+ 20%
Home Economics/ Food Sciences	-	2239	-	220	-	-
Business and Office	-	6563	-	320	-	-
Agriculture Marine Science	-	1275	-	117	-	-
Total	750	12457 ^{a/}	300	1017	+1561%	+257%

a/ Actual outputs based on 1987-88 academic year and in case of a few new programs or campuses, the 1988-89 projected enrollments based on February 1988 term figures.

b/ Annual enrollment and output figures are lower than projected because all programs are 10 months in duration, rather than the originally planned 3-6 months for most programs.

c/ Reduced enrollment from project because the EEC funds for construction did not become available; and decision made to delay new construction to a second Bank assisted project. To offset this reduction in full time trainees, the in-plant training program was increased by about 1,500 per year above projections.

d/ Nursing enrollments reduced, by government requirement, due to the organization of an associate degree nursing program at the College of the Bahamas. It is planned that the two programs will be merged into a single program.

e/ These enrollments include about 8,700 students taking some technical courses as exploratory courses or supplemental courses, but who were not considered as technical majors.

THE BAHAMAS

Project Completion Report

First Vocational and Technical Education Project

Detailed Summary of Technical Assistance Activities of Major Contractor

INTRODUCTION

1. The U.S. Department of Labor (DOL) was the major technical assistance contractor, providing about 90% of all specialist services and arranging all of the training abroad. The DOL provided 104 staff-months of long-term and 63 staff-months of short-term advisors; and 440 months of staff development for 106 instructional, planning, and administrative staff. A minor contractor provided 21 staff-months of specialist services. A detailed summary of the activities and results of the DOL contract, with each of the participating institutions, is presented as follows.

A. MINISTRY OF EDUCATION (MOE)

Secondary School Improvements:

2. DOL activities to improve the secondary schools took place in the following major areas:

- (a) Staff Development -- In-service activities were provided both on-site and off-shore for school faculty and administrators, and ministry administrators in the major areas designated for improvement in the secondary schools. Personnel were selected who were perceived to have the opportunity and potential for providing leadership for continued improvements in the secondary schools programs.
- (b) Curriculum Development -- Curriculum development was addressed in terms of a competency-based and management-system approach. In-service workshops were conducted to describe this approach with additional workshops for implementation in writing Competency Analyses, Instructional Analyses, Performance Objectives, Lesson Plans, Student Evaluation and Classroom Management Systems.
- (c) Guidance and Counseling -- The Special Services Division (SSD) has the responsibility for providing the Guidance and Counseling services for the Ministry of Education. Therefore, this division sponsored, as a part of the Technical Assistance Project, workshops and in-service activities in a number of diverse areas,

with special emphasis in selected areas of: Cooperative work experience; student motivation/attitudes in vocational development; decision making; test construction; instructional aids; classroom management; student placement; career counseling; drug prevention; and career testing. Specialists/Advisors conducted in-service workshops to help implement the establishment of a Career Guidance Unit which had been in the planning stages for some time. Materials and equipment were purchased for the Unit.

- (d) Testing and Evaluation -- Long- and short-term specialist/advisors assisted in the development of new forms of the Mathematics and English Placement tests to evaluate competencies of secondary schools students as a placement function within the COB. Staff development workshops, conducted in the country and overseas, emphasized selected activities for immediate use in the program. For example, workshops were conducted on testing and evaluation procedures for instructors in the Business and Technologies Division where emphasis was placed on test outline development, item writing, and test and item analysis techniques.

- (e) A Student Data Records System was developed as a part of the National HRD Base described in the next section.

National Human Resources Development (HRD) Data Base

3. DOL personnel conducted surveys and wrote recommendations for the development and implementation of a National HRD data base system. A Computer Center was established, equipped and staffed at the MOE headquarters building. The staff received in-service training in the Paradox Data System. Paradox Data System in-service training was also provided by specialist/advisors and the center staff to employees of MOE, other ministries, private and public schools, the National Insurance Board, and personnel from other ministries. In addition, the center staff received in-service training in the Volkswriter Deluxe and Volkswriter 3 word-processing system. The computer center staff then provided training for headquarters staff and administrators. DOL wrote specifications for, and managed procurement of, micro-computers and peripherals, including software.

Assistance to the Family Islands

4. In-service training was provided for Family Island personnel by specialist/advisors in cooperation with MOE personnel and District Education Officers. The Family Islands included were Grand Bahamas, Abaco, Exuma, Eleuthera and Andros.

Learning Resources Unit (LRU) and Special Services Division (SSD)

5. Personnel from the LRU and the SSD were included in MOE in-service training activities. Studies were conducted to establish the scope of operations of these units. These studies resulted in providing specialist/advisors to recommend procedures for the establishment of Career Information and Career Guidance services

in the respective units. Recommendations were provided for purchasing materials and equipment as well as for providing special in-service training to make the career guidance section operational.

B. COLLEGE OF THE BAHAMAS (COB)

Business and Administrative Studies (BAST).

6. Specialists/advisors worked with each program head and division chair to review curricula, identify needs, and develop plans of action. Associate Degree requirements were reviewed. The program in Secretarial Sciences was revised. The coordinator was provided off-shore training in program development and administration. Three in-service workshops were developed and implemented in computer utilization, methodology, and teaching techniques. Specialist/advisors reviewed computer needs, advised on hardware and software needs and assisted with identification of faculty technical skills needed to utilize hardware and software. Programs were identified and data were acquired for expanding the BAST Division to a 4-year program. Program Advisory Committees were organized for each curricular area.

Industrial Technologies Division

7. The DOL major involvement was with this division and is highlighted below:

- Three DOL specialist/advisor teams reviewed technology programs and made recommendations for improving curricula, articulation, equipment, instructional aids, scheduling, and student selection.
- Long-term academic programs were arranged for six Bahamians: one in Electronics Engineering, three in Electrical Engineering, and two in Electronics.
- Two short-term staff development activities were conducted for the Division Chair.
- All curricula were reviewed in detail for technology degrees and competency lists were developed for each area.
- Liaison was provided among educational agencies, business, and industry on technology requirements for selected occupations.
- Program Advisory Committees were established for each curricular area.

Sciences Division

8. Major activities in this division were:

- Liaison was provided with MOE science personnel and programs.
- In-service training was coordinated by DOL specialists and conducted by college staff for secondary and elementary science teachers.
- Short-term staff development was provided for three science teacher educators who work in secondary school T/V support programs.
- Short-term staff development was provided for instructors of Natural Sciences in methodology and computer applications in the sciences.

Agriculture

9. COB cooperated with MOE, DOL specialists, and the national program advisory committee to review and revise the agricultural curriculum to meet current needs.

Guidance and Career Counseling

10. Career counseling needs were identified, including job descriptions, interaction with job placement activities, testing, facilities and software; liaison was provided with other education units involved with guidance and counseling; in-service workshops conducted by the COB for other educational units were coordinated; two short-term DOL specialist/advisors taught the administration and interpretation of selected career tests. Those tests were added to the program. Four short-term staff development activities were also provided.

Library and Media Services

11. Specialist/advisors studied and advised on facilities, operations, expansion, and computer and software needs; reviewed library and media services and developed a plan of action for improvements; provided liaison with other educational units involved with media development; provided short-term staff development for six staff in media development of print and non-print materials; and provided short-term staff development for the Director of the Library and Media Services.

Cooperative Education

12. Another major activity of DOL was in helping to plan, develop and implement this program in The Bahamas by providing: a long-term specialist/advisor and a short-term specialist/advisor to study, develop, field test, revise, and implement a Cooperative Education program at college level; staff development for the Cooperative Education Program Director; short-term staff development for three administrators to review U.S.-based Cooperative Education programs; liaisons with Counseling and Guidance Services for development of Cooperative Education office; and leadership in the development of a Cooperative Education and Job Placement Advisory Committee.

Administrative Services

13. In-service workshops were conducted for administrators including a special retreat to initiate and promote comprehensive review and planning by Department Chairs and Program Heads resulting in improved articulation among elements of the total program. Specialists/Advisors also conducted short-term staff development for administrative staff relative to their job responsibilities.

Teacher Education

14. DOL specialists conducted short-term staff development activities for teacher educators in their areas of responsibility; and also coordinated liaison activities with MOE personnel including in-service workshops.

Computer Utilization

15. Two DOL specialist/advisors were provided to advise and assist in in-service activities, training and development; the development of a computer utilization policy with the assistance of COB personnel and the Advisory Committee; and in the development of a computer in-service curricula.

C. BAHAMAS HOTEL TRAINING COLLEGE (BHTC)

16. The DOL provided the following services for the BHTC:

- Conducted short-term staff development in selected areas for all administrative and teaching personnel.
- Provided short-term DOL specialist/advisors to develop and implement business and industry needs assessment, a student follow-up system, and to review curricula and make recommendations regarding curricula offerings.
- Provided short-term specialized development activities in U.S. for five staff members. Those activities were in the areas of student registration/recordkeeping, management and entrepreneurship training, and special courses in food preparation.
- Conducted in-service workshops in priority areas identified by the staff in cooperation with DOL specialists/advisors.

D. MINISTRY OF HEALTH (Bahamas School of Nursing - BSN)

17. Major services provided by the DOL were:

- Provided staff development for all nursing educators in their teaching specialty.

- Conducted in-service workshops in areas identified by the staff in cooperation with DOL specialists/advisors.
- DOL specialist/advisors coordinated development of performance-based curricula in the MOH/BSN and COB nursing degree programs, and coordinated field testing of materials to be revised, and implemented.
- DOL specialist/advisors evaluated nursing programs offered through the MOH/BSN and the COB.

E. INDUSTRIAL TRAINING CENTER (ITC)

Program Improvements

18. Three DOL specialist/advisory teams studied the needs for technically trained individuals in The Bahamas. Although the existing curriculum was based on the philosophy and technique of matching competencies needed in the labor market with those taught in the curriculum, information obtained from the studies was considered for each program area. Specialist/advisors conducted workshops for program improvements which ranged from industrial contacts to professional development and classroom management. On-site and overseas staff development was provided for the Center.

Curriculum Development

19. Activities were conducted on a group and individual basis in each program area for selecting, writing and delivering instructional materials.

Faculty Evaluation

20. As a part of the Classroom Management System, a program evaluation document was developed and administered to each faculty member. Center administrators and DOL specialist/advisors evaluated each faculty member and made recommendations for program improvements. The faculty was provided time to attend seminar sessions to address problems identified by the evaluation process.

Certification

21. The ITC administration supported the efforts to develop certification-type examinations for each program area. After consultations with Advisory Committees and the Ministry of Works, Welding, Air Conditioning, and Refrigeration were selected as target programs to set the format and certification standards for other program areas. Basic and Journeyman Welding and Level I Air Conditioning, and Refrigeration Certification examinations were developed, and field-tested. The Basic Welding Certificate examination was approved by the Ministry of Works and review was begun on the other examinations.

Placement and Job Development

22. DOL specialist/advisors supported the efforts of the Job Placement Officer through Advisory Committees and industrial contacts. Cooperative efforts were provided to the Ministry of Employment and Immigration in the establishment of the building trades apprenticeship programs. One-year pre-employment graduates of the Center can be given special consideration and assistance to participate as apprentices.