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REPORT OF THE EXTERNAL TERMINAL EVALUATION OF THE UWI/USAID

PRIMARY EDUCATION PROJECT

Submitted by

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TABLE 1

NUMBER OF WORKSHOPS

Type of Workshop	Number Prescribed	Number Held: Language Arts	Maths	Science	Social Studies	To...
Regional	8	5	5	5	5	20
Territorial	72	63	56	28	35	1[illegible]
Local	252	108	96	48	60	31[illegible]

Note: Regional Subject Workshops: Held simultaneously in one territory each year, 1980-1983; held in different territories in 1984.

PREFACE

The external terminal evaluation of the Primary Education Project, funded by the United States Agency for International Development (USAID) and implemented through the University of the West Indies, Cave Hill (UWI), was coordinated by the International Council on Education for Teaching headquartered at One Dupont Circle, Suite 616, Washington, D. C. 20036 The Council, under the directorship of Dr. Frank Klassen, has a distinguished record of involvement in the evaluation of international education projects around the world.

The evaluation process began with a Planning Committee meeting in December 1984 in Barbados. Drs. Karl Massanari, Team Chairman, Paul Masoner, and Professor Errol Miller met with Project personnel to develop the evaluation plan and procedures. The three External Evaluators have had wide experience in evaluating international education projects.

Dr. Karl Massanari's professional experience has included serving as a director of teacher education and academic dean; participating in international education assignments in Poland, France, East and West Africa; and conducting evaluations of international education projects in South America, Central America, and in the West Indies. In addition, he was Associate Director of the American Association of Colleges for Teacher Education for 15 years, and Director of the national ERIC Clearinghouse on Teacher Education for 7 years.

Dr. Paul Masoner is currently a University Professor of Education at the University of Pittsburgh, Pennsylvania, and Senior Research Associate at the University's Center for International Studies. Dr. Masoner is also Dean Emeritus

of the School of Education at the University of Pittsburgh, and a former President of the American Association of Colleges for Teacher Education. His career has included numerous assignments as an evaluator of international education projects in South America and Asia. In addition, he is the current President of the International Council on Education for Teaching.

Professor Errol Miller is a Professor of Education at the University of the West Indies, Mona Campus, Jamaica. An experienced evaluator of educational projects in the Caribbean region, Dr. Miller formerly held positions as Permanent Secretary, Ministry of Education, Kingston, Jamaica, and Principal of Mico Teacher Training College in Jamaica. Currently he is also serving as a member of the Jamaican Senate.

The external evaluation on-site visit took place from May 20 to June 20, 1985. Unfortunately, Dr. Masoner was unable to participate in the visits and writing of the report due to serious illness. Dr. Massanari and Professor Miller visited the ten territories which participated in the Primary Education Project and wrote this report.

Mrs. Christine Massanari assisted the Team in summarizing and analyzing the data collected from 337 questionnaires developed by the Team for Chief Education Officers, Project Implementation Officers, Subject Matter Leaders, and Principals and Teachers of the 45 pilot Project schools in the participating territories.

Acknowledgements

The Team wishes to express its appreciation to the many persons who helped to facilitate our evaluation: CEOs, Ministry of Education personnel, territorial Subject Matter Leaders, Principals and Teachers of the Project's pilot schools, and Teacher Training College staffs.

Special recognition is due Dr. Leonard Shorey, Project Coordinator; Evie Davis Sheppard, Mathematics Specialist; Marjorie Brathwaite, Social Studies Specialist; Patricia Isaacs, Science Specialist; Claudith Thompson, Language Arts Specialist; David Carroll, Evaluation Specialist and the Central Office Support Staff.

Special recognition is also due the Project Implementation Officers in the territories who cooperated so graciously in providing information and in facilitating all of the details which made possible our visits in the field. They are:

Antigua	Charles Roberts
Barbados	Kenneth Agard and Donald Padmore (recently appointed)
Belize	Darrell Diaz
British Virgin Islands	Lucia Walters
Dominica	Lambert Telemacque
Jamaica	Trevor Turner (Coordinator of the Jamaican subcomponent)
Montserrat	Beth Romeo (and Mrs. Samuels who substituted for her at the time of the visit)
St. Kitts-Nevis	Cynthia Edwards
St. Lucia	Veronica Augustin
St. Vincent	Austin Nurse

The information which the above named persons provided in their responses to the Team's questionnaires and to the questions asked during the field visits were invaluable as the Team developed and wrote this Terminal Evaluation Report. Without this assistance and cooperation it would have been impossible to conduct the evaluation exercise.

The Evaluation Report follows.

Dr. Karl Massanari
Team Chairman

Professor Errol Miller
Team Member

GLOSSARY AND ABBREVIATIONS

The following is a list of abbreviations which are used occasionally in this Report. They are included here to assist readers in understanding the narrative, charts, and tables. In some cases, explanations of the terms are given.

BDD - British Development Division

BVI - British Virgin Islands, one of the participating territories

CARNEID - Caribbean Network for Educational Innovation and Development

CDB - Caribbean Development Bank under whose auspices the Primary School Construction/Rehabilitation/ subproject was conducted

CEO - Chief Education Officer, the chief technical/ professional Officer in each Ministry of Education; ten CEOs participated

CXC - Caribbean Examinations Council, under whose auspices the Secondary Curriculum Development subproject was conducted

OCOD - Organization for Cooperation in Overseas Development (Canada)

PAG - Project Advisory Group composed of the Chief Education Officers of the participating territories and which gave general direction to Project implementation

PAHO - Pan American Health Organization

PEP - Primary Education Project

PIO - Project Implementation Officer, one in each territory

PIU - Project Implementation Unit which gave direction to Project implementation in its territory

R & D - Research and Development Section of the School of Education, University of the West Indies Cave Hill

SMLs - Subject Matter Leaders - curriculum specialists in the participating territories

SMS - Subject Matter Specialists - curriculum speicalists who served on the Project Staff

SOE - School of Education, University of the West Indies

TESOL - Teaching English to Speakers of Other Languages

USAID - United States Agency for International Development

UWI - University of the West Indies - the Cave Hill Campus in Barbados, and the Mona Campus in Jamaica participated in the Project

Chapter 1

INTRODUCTION

This chapter provides the context for the Report of the External Evaluators. It includes sections on the educational setting in the Caribbean, the Primary Education Project, and internal and external evaluation.

The Educational Setting

Education in the Caribbean is in a period of transition - a transition focused on expanding educational opportunity and on improving the relevance and quality of the educational program. Evidence of the change is clear: increased enrollments in both primary and secondary schools, an emphasis on more effective teaching methods, modification of subject matter content to relate more directly to the ethnic and cultural background of children and youth and to Caribbean life, and a recognition of the importance of providing quality education to all youth through the secondary school. These as well as other positive actions contemplated are to a very considerable extent the outcome of the efforts of dedicated and motivated Education Ministries of the region; higher education institutions, especially the University of the West Indies; professional teacher educators; and, in the case of secondary education, the leadership of the Caribbean Examinations Council. Together these resources constitute a major and effective force in the movement to bring about educational improvement.

At the same time it is clear that there are a number of factors that present major difficulties in the successful achievement of goals that have been established. Among these are increased numbers of pupils at all levels of the educational system, arising both from increased birth

rates and from the expansion of educational opportunities to all children and youth. Together these increases place real burdens on both the educational facilities and the teaching staff, a present teaching staff that in most countries of the region includes a significant number of individuals untrained or inadequately trained for their roles. There is, as well, a severe shortage of teaching-learning materials available to both teachers and pupils and a need for an expanded inservice education program for teachers and other school personnel. Added to these constraints are the limited financial resources available to the governments of the region for the massive task of expanding and improving education in all the territories. In some cases, the limitations are severe.

It was in this setting in 1979 that the University of the West Indies (UWI), the Caribbean Examinations Council (CXC), the Caribbean Development Bank (CDB), and the United States Agency for International Development (USAID) entered into an agreement to undertake a regional project entitled Caribbean Education Development (Project Number 538-0029). This Project included three components: Primary School Curriculum Development, Primary School Construction/Rehabilitation, and Secondary Curriculum Development.

This report is concerned with only that portion of the overall Project which deals with primary school curriculum development. Entitled the Primary education Project*, this effort has been underway since December 1979 and terminates in 1985. A no-cost extension was approved for the Project by the funding agency, USAID, May 1984 to October 1985.

The Primary Education Project

Purpose

The basic purpose of the Primary Education Project according to the 1979 Project Paper was to improve the learning environment for the primary school age group (7-11 years of age) throughout the region. A related sub-purpose was to strengthen the School of Education of the University of the West Indies, a regionally supported institution, so as to enable that institution to extend and expand its ongoing assistance program to the territories in their efforts to improve their educational programs.

With regard to qualitative improvement to be addressed by the Primary Education Project, the major needs identified in the Project Paper were as follows

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*While the Primary School Curriculum Development Project was technically a sub-project of the Caribbean Education Development Project, in practical terms, it functioned on an independent basis and has been commonly known as the Primary Education Project. It is this term, or its abbreviation, PEP, which is used in this Report.

"1. *To provide teachers with revised syllabi and teachers' guides so they become aware of content requirements and of the wide variety of teaching approaches available to implement the syllabi.*

2. *To provide instructional materials (charts, posters, graphs, reading materials, etc.) for teachers and either provide for students or help teachers prepare for students workbooks, project exercises, and other materials to supplement and/or substitute for the more traditional textbook.*

3. *To strengthen the present teacher force through an inservice teacher training program that encompasses content knowledge, methods of teaching and testing, and ability to understand and use newly developed, more relevant and better quality syllabi, guides and instructional materials".*

It was also envisaged that training would be provided for school principals, headmasters/headmistresses and supervisors, as well as for territorial educational planners.

Target Group

The Project Paper envisaged that the principal beneficiaries of the Primary Education Project would be the estimated 18,000 pilot primary school students and their 450 teachers and 50 headmasters (plus 270 other headmasters receiving administrative training). The Plan called for each of the ten participating territories to identify 5 pilot primary schools to participate in the Project. Only nine territories actually participated in the mainstream of the Primary Education Project; Jamaica participated only in the administrators training component.

Anticipated Outcomes

The achievement of Project outcomes was to be accomplished through a series of regional, territorial, and local workshops. The Project Paper identified the following anticipated outputs:

"1. *New curriculum guides, in the language arts, science, mathematics and social studies, consisting of syllabi, teacher manuals and pupil workbooks which have been tested in the territorial schools and found to be teachable and relevant to the Caribbean region.*

2. *Additional teaching aids and materials related to the new syllabi and curriculum units and which will assist the implementation of modern methods.*

3. *A modified, refined model for the curriculum development process, including manuals for administrators which provide guidance for organizing and administering curriculum development projects.*

4. *A group of teachers and supervisors with experience and skill in curriculum development, testing and dissemination who will be able to continue such action after the close of the project.*

5. *Teachers trained to understand, select and use teaching strategies appropriate to the new curricula including appropriate materials and methods.*

6. *A group of teachers trained to develop, evaluate, use and disseminate modern intructional materials.*

7. *Teachers capable of using project work, continuous evaluation, and child-centered activity in the classroom in appropriate learning situations.*

8. *Headteachers, principals and supervisors with improved administrative skills.*

9. *Improved learning by students resulting from new teaching materials and methods being applied by teachers".*

Project Evaluation

Formative and summative evaluation were to be carried on in accord with an overall evaluation plan which was to be developed during the first year of the Project. The Evaluation Plan which was completed in June 1981 became the basis for both internal and external evaluation activities.

Internal Evaluation

There is evidence in quarterly reports, annual reports and evaluation reports that a continuing process of internal evaluation was underway during the life of the Project. There also is evidence that the findings of internal evaluation, particularly with respect to the conduct of workshops and integration of curriculum materials across subject areas, helped to modify Project implementation.

Several problems, however, limited the effectiveness of the internal evaluation process.

1. The untimely and tragic death of Mr. Frank Vincent, Evaluation Specialist, early in the life of the Project, meant that there was lack of continuity in internal evaluation activities. In adddition, the Project was without an Evaluation Specialist for about a year during which Mr. Vincent's replacement was secured.

2. The collection of needed baseline data was delayed because circumstances prevented the immediate beginning of Project implementation. The Evaluation Plan was not completed until 1981 and that was nearly two years after the official beginning of the Project. This delay created some problems in the collection of baseline data needed for making comparisons.

3. The third problem was related to the Evaluation Plan itself. As noted by the External Evaluation Team in its June 1981 report

"The work of the Evaluation Team during the three-week visit has given us an opportunity to critically review the Evaluation Plan itself, particularly with respect to the feasibility of its implementation given the restraints of personnel and budget. In doing so we are in a sense making observations about how realistic the expectations were in the basic Project Paper. There is no question about the comprehensiveness of the Evaluation Plan in relation to the expectations set forth in the Project Paper. The Team is convinced that the requirements of the Evaluation Plan, particularly those that dealt with Secondary rather than Primary outcomes of the Project, need to be modified to conform to what is realistically possible within the limitations of available personnel and budget. We view the Primary outcomes of the Project as the development of improved curriculum materials and training of teachers in their use, and ultimately the enhancement of pupil learning. Other outcomes we see as Secondary ... Giving major attention to the Primary outcomes of the Project alone will be an overwhelming task. The major thrust of the Project should not be distracted by requirements in the Evaluation Plan which deal with secondary considerations".

Internal evaluation during the life of the Project included the following activities:

1. Formative evaluation of each workshop and training activity
2. Reporting on teacher behavior by Subject Specialists and by teachers themselves
3. Conducting the 1983 regional workshop in Language Arts
4. General testing of pupil achievement in 1983 and 1984
5. Experimental testing of the importance of reading in performance on subject areas.
6. Conducting a study on teacher attitudes in Project and parallel schools
7. Survey of all PIOs and SMLs to assess their judgment of the success of the Project
8. Survey of pilot school teachers' views of the relative importance of various components of Project implementation
9. Analysis of the 11+ Common Entrance Examination results of the participating territories
10. Analysis of rates of absenteeism in Project and parallel schools

Overall, the internal evaluation aspect of the Project was not as strong as were the curriculum development and training activities. A considerable amount of data was collected and analyzed by the Evaluation Specialist during the later phases of the Project. However, in a few instances the interpretation of the data reflected a lack of understanding and familiarity with contextual factors in the

participating territories. Consequently, evaluation reports to the territories were not as useful as they might have been. In at least one case, they provided misleading information. It must be recognized, however, that the second Evaluation Specialist came aboard the Project midstream, and he had little opportuntiy to travel to the territories during his term of office.

External Evaluation

Two mid-project external evaluations were held during the life of the Project*. The report of the first evaluation was submitted in June 1981 and the second in June 1982. The Project Coordinator notes that *"the reports of previous evaluations were useful in helping Project Staff to see more clearly where greater emphasis might be useful and the kinds of structures that might well enhance the curriculum materials development."*

The terminal external evaluation was conducted May 21 to June 15, 1985 by Dr. Karl Massanari, Chairman, Gainesville, Florida, and Professor Errol Miller, University of the West Indies, Mona, Jamaica.

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*Membership on both of the mid-Project external evaluation teams was composed of Dr. Karl Massanari, Chairman, Dr. Joanne Whitmore, and Dr. Cordell Wynn. Both external evaluations included on-site visits in the participating territories and interviews with key Project personnel.

Planning meeting

A planning meeting for the terminal evaluation was held in Bridgetown, Barbados, at the Project Central Office on the Cave Hill Campus of the University of the West Indies and at Woodville Apartments, Barbados, December 11-14, 1984. Present were the above-named members of the External Evaluation Team together with Project Staff. Present also was Dr. Paul Masoner, University of Pittsburgh, also a member of the Team, whose subsequent illness prevented his participation in the May/June 1985 exercise.

The purpose of the meeting was to receive orientation to the Project; review selected documents and reports; review internal evaluation activities in progress; develop a design for the terminal evaluation; develop a schedule of activities for conducting the field visits and for writing the evaluation report; develop a schedule of activities for the team and Project Staff for the interim period between January and May 1985; develop questionnaires for the Project Staff, Chief Education Officers, Project Implementation Officers, Subject Matter Leaders, Principals and Teachers of the pilot schools participating in the Project, and for the head of the Jamaican component of the Project.

Plan for the Terminal External Evaluation

The design of the external terminal evaluation of the Primary Education Project is based on the requirements specified in the Project Paper No. 538-0029, and as these are reflected in the approved Project evaluation plan of 1980. In addition, account was taken of the requests of USAID in the following documents:

(a) "Final Evaluation in 1984" and

(b) "Project Evaluation Summary, Part II."

At the planning meeting, it was determined that the content of the external evaluation would cover the following areas

1. An assessment of the principal outcomes of the Project

a. The development and use of curriculum materials in four subject areas - language arts, social studies, science, and mathematics - and at four age levels, 7-8, 8-9, 9-10 and 10-11, at the primary level in the participating territories

b. The dissemination of curriculum materials developed in the Project with respect to the scope and coverage of such materials in each of the four subject areas and in each of the four age levels in the participating territories

c. The effectiveness and appropriateness of curriculum development and teacher training workshops held at the regional, territorial and local levels during the Project period

d. The impact of the curriculum and teacher training components of the Project on teacher behavior and pupil performance.

2. An assessment of other Project outcomes

a. The training of educational administratiors in Jamaica and in other territories

b. The training of educational planners

c. The development of health education curriculum materials in collaboration with the Pan American Health Organization (PAHO).

d. Unplanned developments and outcomes either at the level of the central Project Staff or in the territories.

3. An assessment of Project management.

4. An analysis of indicators of Project institutionalization within the University and in the territories.

5. An assessment of the impact of the Project on Primary education in the region generally, and on the eleven-plus examinations in each territory in particular.

6. A compendium of lessons learned from the implementation of the Project.

In conducting the external terminal evaluation of the Project it was agreed that the Team would do the following:

1. Examine Project files, documents, and reports.

2. Examine the curriculum materials (syllabuses, teachers' manuals, and instructional aids) produced by the Project.

3. Critically appraise the internal evaluation reports and their findings.

4. Make site visits in the participating territories and collect first-hand information by means of questionnaires and interviews.

5. Hold discussions with Project Staff

6. Compare the separate sources of information for consistency and congruence

7. Draft a preliminary evaluation report

8. Review the major findings with Project Staff and USAID personnel to correct any inaccuracies in the Team's findings

9. Revise the preliminary evaluation report accordingly.

For the record, the terminal external evaluation plan was approved orally by USAID personnel at the conclusion of a meeting between the Team and USAID on December 13, 1984. The Plan was approved in writing by the Project Coordinator in a letter dated December 14, 1984.

The External Evaluators followed the agreed-upon procedures in the approved plan. During the period March to May, 1985, questionnaires constructed by the Team were disseminated to:

9 Chief Education Officers (CEOs)
1 Coordinator of the Jamaica subcomponent
9 Project Implementation Officers (PIOs)
6 Project Staff members
Subject Matter Leaders in the 9 participating territories
Principals of the 45 pilot schools
Teachers of the 45 pilot schools

A summary of the responses to these questionnaires is included in Appendix A of this Report.

During the ten site visits, the Team interviewed the CEOs, the PIOs, Subject Matter Leaders, Principals and Teachers of three of the five pilot schools in each territory (questionnaires were received from all five Project School Principals and Teachers in each participating territory), Ministry of Education personnel, and in some cases Teacher Training College Staff.

The main body of the Report follows; it consists of chapters on organization and administration of the Project, principal Project outcomes, secondary Project outcomes and unplanned developments, generalized impact of Project outcomes on Primary education spread effect, lessons learned from implementation of the Project, a Project evaluation summary, and a look into the future.

Chapter II

ORGANIZATION AND ADMINISTRATION OF THE PROJECT

Background

The Caribbean Education Development Project with its three sub-Projects has pioneered new dimensions in development cooperation. The Project involves one large Aid Agency, the United States Agency for International Development; three regional intermediaries, the Caribbean Development Bank, the Caribbean Examinations Council and the University of the West Indies (UWI); and fourteen Caribbean countries. The unique aspect of this Project is the linkage of Caribbean countries to an agency of development cooperation through regional intermediaries created by Caribbean governments to serve various needs.

The very nature of the Caribbean poses logistical problems for development cooperation. The challenge is to find an effective and efficient mechanism for the delivery of assistance which minimizes the administrative costs per dollar loaned or granted. The bilateral model of dealing with each country separately cannot be cost effective. Yet dealing with Caribbean countries as a collective could cause problems for an international agency not versed in the nuances of the region. Although sharing the same language, a similar culture and a common history the English speaking Caribbean countries are widely dispersed geographically, politically pluralistic, racially mixed, and different in size and population with each country treasuring its own identity and sovereignty.

The Caribbean Education Development Project combines the financial resources of a large donor agency with the

expertise and network contacts of three regional service organizations in attempting to meet the needs of fourteen Governments seeking to improve the quality of their primary education systems

The experience gained through the use of this model should be of interest to all development cooperation agencies working in the Caribbean. It could be that this method of delivery of assistance has applicability beyond the field of education and could be a pattern for many regional projects expecially those involving the smaller Caribbean countries

Organizational Structure

Description of the Structure

The overall structure of the Primary Education Project as prescribed by the Project Paper vested responsibility for the Primary Education Project in the University of the West Indies (UWI) operating through its School of Education (SOE). The Dean of the School of Education was the Project Director. Direct management of the Project was the responsibility of the Project Coordinator named by UWI who reported directly to the Project Director/Dean The Project Coordinator was responsible for recruiting assigning, directing and monitoring the effectiveness of the Central Project Staff which consisted of four Subject Specialists, one each in Mathematics, Language Arts Science and Social Studies, an Evaluation Officer together with secretarial and support staff The Central Project Office was located on the Cave Hill Campus of the UWI.

The prescribed link between the central Project administration and the participating countries was through

the Project Advisory Group (PAG) comprising the Chief Education Officers of each participating country. The function of the PAG was to advise the Project Director on all aspects of the implementation of the Project.

At the territorial level the Project Paper prescribed a Project Implementation Unit (PIU) which was responsible for ensuring proper planning, implementation and evaluation of the Project within the territory. In each territory the PIU was appointed and chaired by the Chief Education Officer and its membership consisted of the Teacher Training College Principal and tutors of relevant subjects, the Principals and Teachers of the pilot schools, teachers with relevant subject expertise, the Curriculum Coordinator of the Ministry and an evaluation expert where available. SOE staff in Teacher Education were expected to participate as resource persons in PIU meetings.

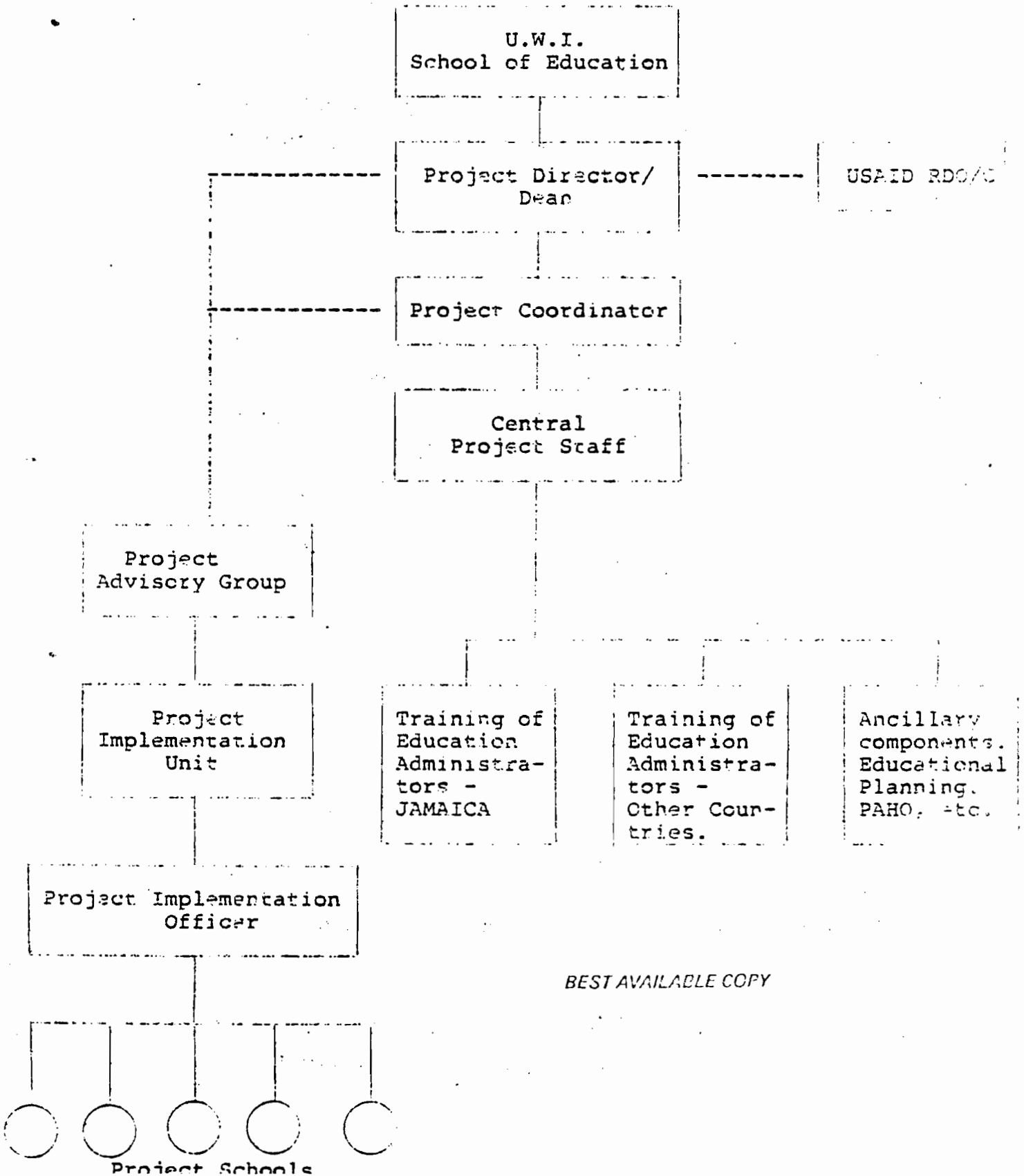
Executive responsibility for ensuring the implementation of the Project in each territory was assigned to a full-time Project Implementation Officer, (PIO), who reported to the Chief Education Officer and the PIU. Each PIO would work with the six Subject Matter Leaders appointed in each territory for the mounting of territorial and local workshops.

At the level of the five pilot schools in each territory participating in the Project efforts were expected to be coordinated by the Principal or Head Teacher who, together with the Teachers, would implement the Project activities at each school.

The organizational structure of the Primary Education Project can be shown diagrammatically as follows.

Chart 1

Organizational Structure of the Primary Education Project



Implementation

The Project organization was implemented as planned and prescribed in the Project Paper. There were no structural changes but all elements of the structure did not function as planned. (This will be discussed below in detail under Project Management.)

Strength of the Organizational Stucture

In the light of the implementation experience the strength of the Project structure seems to lie in the overlap between the organization of the central Project staff and the territorial Project staff. They were almost mirror images of each other. The Project Coordinator and the PIO had similar responsibilities but at different levels - one regional, the other territorial. The Subject Specialists and the Subject Leaders mirrored a similar relationship. So did the Project Advisory Group and the Project Implementation Unit.

This organizational arrangement gave the Project a regional and territorial back-up system, a kind of double assurance mechanism. If Subject Leaders were not functioning in a particular country the regional Subject Specialist could conduct territorial and local workshops at the request of the Project Implementation Officer. If on the other hand a Subject Specialist was not available for a regional workshop the Subject Leaders could provide some continuity until the situation was rectified. The structure of the Project minimized to some extent the disruptive effect of changes of

personnel and breakdown at either the regional or territorial level.

Appropriateness of the Structure

The fact that the Project was implemented as planned and achieved the prescribed objectives implies that the organizational structure was both sound and appropriate. It is also important to note that although the secondary sub-Project managed by CXC was orginally conceived with a different structure that sub-Project changed during its life to a structure closely resembling that of the Primary sub-Project. This seems to add further confirmation that the latter model of organization has the capacity to successfully deliver educational development designed on a regional project basis.

Project Management

Overall responsibility for the Project was vested in the UWI operating through its School of Education. For almost two decades the Research and Development Section of the School of Education at Cave Hill had given technical and developmental assistance to Eastern Caribbean territories in various areas and with respect to different aspects of their educational systems. The original identification of the needs and how they could be addressed through the Project came in part from this Section. However, the major responsibilities of the Research and Development Section were teacher training and teaching University courses.

Although the Section had given assistance to governments in primary and secondary education this was ancillary to its major mandate. The main thrust and focus of the Primary Project was within the scope of work the Section had done but it was tangential to its major mission.

After careful consideration the University decided that the mission of the Project was sufficiently different from that of the R & D Section to warrant it being given an organizational status equivalent to that of the R & D Section instead of being an additional responsibility within that Section. The central Project staff headed by the Project Coordinator was given what was the equivalent of departmental status within the SOE similar to that of the Inservice Programme and the R & D Section. The Project therefore had membership on the Campus Committee of SOE Cave Hill and the same reporting relationship to the Vice Dean and Dean as any other department within the SOE. As such the Project was fully integrated into the organizational structure of the UWI and its School of Education although its funding was from the USAID.

In retrospect and in the light of the implementation experience the decision of the University to incorporate the Project in the way it did, was basically sound. It ensured the integrity of the Project with respect to its mission and gave it the freedom to develop its own strategies and approaches without being hamstrung by any preconceived notions or traditions.

The University recognized that although it had, through the R & D Section, given some assistance to governments in

primary education it had never been required to address the needs of this sector of education directly and substantively as a major responsibility. Strategies developed in dealing with other sectors, say teacher training, might not have been appropriate for primary education. The successful implementation of the Project would seem to have vindicated this decision.

The decision of the University to give the Project departmental status equivalent to that of the R & D and Inservice Sections meant that the anticipated objectives for UWI capacity to service the region were accomplished by a different route than the one described in the Project Paper. The decision affected the initial response of the R & D Section to the Project. They interpreted the decision to mean that the Project had been taken away from the Section after it had laid the ground work for identifying the needs and conceptualizing how these could be met through a project. At the same time the University did not immediately rationalize all the details concerning the change in the conceptualization of how the Project would be integrated in the SOE. Hence while members of the Inservice Section were paid honoraria for work done in connection with the Project, members of the R & D Section were not. Had the Project been integrated into the R & D Section then this differential treatment would be justified but in the light of the change to full departmental status for the Central Project Staff, it was not. After recommendations made by the External Evaluation Team in 1981 this problem was resolved so that members of the R & D Section were also paid honoraria for work done. In some instances members of the Section adopted a cordial but "arms length" approach to the

Project. After these initial difficulties were sorted out, almost all members of the R & D Section contributed to Project implementation either directly in running workshops or indirectly through (advice to or) consultation with Project central staff.

From the beginning the Inservice Section contributed generously to Project implementation. The Head of Section who was also Vice Dean at that time - currently Pro-Vice-Chancellor, Office of University Services - was very instrumental in assisting the Project to overcome the inevitable start-up problems which confront every project in its initial stages. Members of this Section also contributed directly and indirectly to the implementation of the Project.

One of the great values of having the Project located in the University was that it was able to benefit from the knowledge, experience and insight of virtually all the talent that the institution had at disposal on the three campuses. This accounts for the sound theoretical bases of most of the strategies employed in the Project. In addition, the Project enjoyed strong support from UWI's Finance Office. The Project certainly assisted the University to increase and expand its service to Caribbean countries. It allowed the SOE to address the needs of primary education directly and substantively in a way it had not been able to do previously.

Project Director/Dean

The designation of the Dean of the SOE as the Project Director pre-empted any conflict of authority that might have arisen by virtue of the authority conferred by the Project, as against those conferred by the statutes of the University on the Head of the SOE.

The merging and amalgamation of these two roles made the reporting relationships of the Project personnel simple and clear. They also guaranteed smooth integration of the Project into the UWI structure and ensured that personnel at the highest level of the SOE structure were involved in resolving problems of implementation and in representing the Project internally and externally.

Both Deans of the SOE during the life of the Project gave close personal attention to Project matters and provided the kind of decisive leadership which enhanced the effective implementation of the Project. The Project Coordinator was given a free hand in the daily administration of the Project but at the same time the Project Director was kept in touch with the progress of implementation and attended to any matter referred to him by the Coordinator. There is absolutely no evidence or indication that during the life of the Project there was any conflict of loyalty, confusion in reporting relationships, breakdown in communication or uncertainty about authority which resulted in any untoward or negative consequence in the execution of the Project.

Special mention must be made of the late Professor Aubrey Phillips who was the first Project Director. He played a pivotal role in the various decisions related to the conceptualization, structure and implementation of the Primary Education Project. He also played a significant

role in providing the rationale and information on which the decision to extend the Project was based. The second Project Director, Professor Dennis Craig, not only had overall responsibility for the Project but also contributed significantly to the development of the Language Arts materials.

Project Coordinator

The role and function of the Project Coordinator were clearly and realistically conceived from the outset. This clear definition of function assisted the Project Director to identify and appoint to the post of Project Coordinator someone with the required capabilities, expertise and skills. The successful implementation of the Project is in no small measure due to the effectiveness and efficiency of the Coordinator, Dr. Leonard Shorey, his choice of personnel and the fact that he remained with the Project for its duration.

The Project was complex. It involved professionals in different subject areas working at both the regional and territorial levels. It required the participation of senior educational administrators in ten different countries. It included collaborative efforts with numerous regional and international agencies. It was located in an academic setting while being funded by a development oriented agency. The Project Coordinator had to creatively balance the interests and demands of these disparate entities and mould them into a meaningful whole.

The Professional staff were given the freedom to execute their responsibilities in a manner that was meaningful in their respective areas while at the same time being

monitored by the Coordinator to ensure that the job was done. An effective working relationship was established with the ten participating governments. The Project Office was well-managed and it developed useful linkages with several other educational agencies. The Coordinator developed and maintained good relationships within the University structure and with the funding agency.

In summary it is fair to say that the Project Coordinator executed his tasks with competence and efficiency and in some areas there was evidence of brilliance. His leadership set the tone and example for other Project staff and ensured the success of a properly conceived Project.

Central Project Staff

In addition to the Coordinator, the central Project staff consisted of the following:

1. A Curriculum Specialist, Language Arts
2. A Curriculum Specialist, Mathematics
3. A Curriculum Specialist, Science
4. A Curriculum Specialist, Social Studies
5. An Evaluation Officer
6. Senior Secretary
7. Junior Secretary
8. Office Assistant
9. Office Maid
10. Seasonal secretarial help as requested (needed)

It was envisaged that given a choice of three of four subjects, except for BVI which could only choose two, countries would have so chosen subjects that the work load would have been evenly divided among Subject Specialists in terms of the number of countries involved in developing and

testing the materials. That expectation was not realized. The breakdown of the choice of subject areas by countries was as follows:

Language Arts	- 9
Mathematics	- 8
Social Studies	- 5
Science	- 4

This choice of subjects by the countries posed initial problems for the Subject Specialists in Language Arts and Mathematics in terms of the number of countries they had to visit and assist in mounting territorial and local workshops. This problem was partially resolved by employing consultants to assist these Subject Specialists with some of their responsibilities. During the later stages of the Project, an assistant to the Mathematics Specialist was made available through funding from UWI/Cave Hill.

The Subject Specialists appointed in Mathematics, Science and Social Studies have continued in the job for the life of the Project. This has contributed stability and continuity to the development of the Project products in their areas. The Subject Specialists in Language Arts have undergone change hence there have been two persons performing this role substantively. The Language Arts Project process and products did not benefit from the same continuity as the others.

The Subject Specialists all executed their responsibilities as required by their job descriptions. They approached their tasks creatively but at the same time did not impose their expertise on their territorial colleagues. They managed to create the working climate in which participants were able to contribute their own ideas and participate as equals in

the decision-making process. The contribution of the Specialists to the curriculum process pioneered in the Project and the products resulting are enormous.

The internal evaluation suffered from the untimely death of the first evaluation officer, Mr. Frank Vincent. In the first instance there was a gap in the replacement principally because of the suddeness of his death. The current evaluation officer came into the Project more than half way through without the benefit of a smooth transition that would have facilitated adjustment. The fact that he was not a resident of the Caribbean and had no previous experience in the region did not ease the circumstances. Neither was it possible for him to visit all the countries involved. The net result of these circumstances was that the evaluation component was not as strong as the other components. Much data and information were gathered and analyzed. Some proved useful to the Subject Specialists and territories especially at the beginning of the Project. However the format and interpretation of the student achievement data, presented some territories with difficulties in using them to enhance the work of the pilot schools. Both Evaluation Officers gave technical assistance to territories in different areas of testing and evaluation. Belize received a great deal of assistance in the development of different National examinations.

The support staff of the Project Office were particularly efficient and conscientious. Materials were produced in accordance with deadlines, travel arrangements were handled effectively, and information was regularly and consistently transmitted to all the various regional and territorial participants.

Project Advisory Group

The Project Advisory Group met annually as planned. In addition to the Project Director, Project Coordinator and the CEOs of the ten participating countries the meetings were attended by the Dean, Vice Dean of the SOE Cave Hill, representatives of USAID, and the Registrar CXC who was also the Project Director of the Secondary sub-Project. From all accounts it would seem that the PAG functioned as planned. More, the PAG (with PIOs meeting) proved a very important forum for identifying problems and seeking/finding solutions. Two examples can readily be given:

1. It was at one of these meetings, that (with the help of USAID personnel) a "formula" was at last found to meet travelling costs for PIOs.

2. It was the PAG/PIO meeting in 1984 that gave the backing needed to seek extension of the Project.

The Project Paper required that the link between the implementation of the Project at the territorial level and the central regional Project administration should be the CEO working through the PAG. The CEO would be briefed by the PIO and PIU for each PAG meeting. The Project Office proposed and USAID approved an annual PIO meeting which would coincide with and immediately precede the PAG meeting. Following the PIO meeting and before the formal PAG meeting there was a one-day joint PIO/PAG meeting. This in fact meant that the PIO who had executive responsibility for implementation was present with his CEO to report and reflect upon the progress of the Project and also could have an input in the resolution of problems.

This considerably strengthened the advisory functions of the PAG and also the links between the central Project Office Project Coordinator and the work in the different countries.

The PIC and PAG meetings took place over a four-day period. These meetings became the focal point of decision making for the Project. They brought together the critical personnel implementing the Project, namely the Project Director, Project Coordinator, Central Project Staff and PIOs. Associated with them were the Vice Dean, SOE, Cave Hill, the CEOs, and representatives from USAID. All relevant issues could be discussed and decisions could be taken because all of the important persons with authority to act accordingly were present. These meetings became the focal point of decision making, planning and problem resolution.

Project Implementation Unit

Although each territory established a Project Implementation Unit with the composition specified in the Project Paper, it does not appear that the PIUs functioned effectively in most instances or that they performed the role envisaged in the Project Document. The PIU was charged with the responsibility for ensuring the proper planning, implementation and evaluation of the Project within each territory. Its chairman was the CEO. The PIU was expected to resolve problems relating to curriculum and materials revision and to advise the CEO in order for him to represent the territorial position to the PAG and Project Director. SOE personnel on their regular visits to the territories were expected to act as resource persons at PIU meetings. There is no evidence that this took place on a regular basis. While some PIOs functioned more effectively than others it would appear that by and large the PIU functioned to

disseminate information concerning the Project especially those decisions taken at PAG/PIO meetings and at best it functioned as an advisory body, but its role in some territories, e.g. Belize, was none-the-less significant.

There is little evidence that any PIU functioned as the territorial management committee for the Project. Executive decision making was typically done by the CEO acting on advice from the PIO. In several instances the PIO carried the brunt of the management function concerning all aspects of the Project in the territorial setting. This appeared to be by mutual consent since in several instances the Project was seen as the "baby" of the PIO.

Project Implementation Officers

The concept of a full-time Project Implementation Officer charged with the overall management of the Project in each territory was one of the innovative aspects of the Project structure. It can also be identified as one of the key reasons for the success of the Project. In the light of the experience of this Project any large or complex regional Project which ignores this element of project organization would be doing so at its own peril.

All of the Ministries concerned made good choices of PIOs. By and large they were Principals of Primary or Secondary Schools, or recently retired Education Officers. Obviously the Ministries examined the job description of the PIO carefully and selected persons who, in their judgment, were capable of executing those functions. The persons chosen vindicated the decision of their respective Ministries.

Certainly every PIO whom the External Evaluation Team found in place in each territory had performed his or her job competently and efficiently. In some instances the level of efficiency achieved was exemplary. The degree of commitment and dedication displayed was commendable.

Even in instances where an individual had reason to be disgruntled over a salary issue there was abundant evidence that this had in no way affected his commitment or level of performance as the PIO. In some instances the PIU became redundant because of the smooth and efficient manner in which the Project was implemented and the frequency and regularity with which the PIO met the Project Principals, Subject Leaders and CEO. In numerous instances PIOs went beyond the call of duty in ensuring that tasks were satisfactorily performed. In some cases PIOs doubled as Subject Leaders.

The most serious constraint placed on the work of the PIOs was the provison for travelling. The remuneration initially prescribed by the Project was totally inadequate even after USAID had made all the concessions that were permitted by its mandate. Criteria and limits set for reimbursing travelling in the USA are not applicable to the Caribbean. The condition of roads, cost of fuel and oil and repair are totally different. It may be that USAID needs to review and revise its policy in this area. Ministries of Education attempted to pick up some of the slack by paying mileage to the PIO over and beyond the allowance paid by the Project. However, most governments have regulations imposing limits on mileage payable per month. Because PIOs were not designated travelling officers, as Education Officers are, they could not be allowed the limits permitted to such officers. The net result was a limit to PIO travelling. This was particularly inhibiting where Project schools were far flung.

Subject Matter Leaders

All territories chose two subject leaders in each subject area as required. Subject Matter Leaders were drawn from among Curriculum Officers in Ministries of Education, principals of primary Schools, Teacher Training College tutors and class teachers in the primary schools. In most territories one of the Subject Leaders was from the Ministry or Teacher Training College and the other from the primary school system, either principal or class teacher. From the reports of the Subject Specialists it would appear that in most instances the Ministries chose reasonably capable persons. In some territories there was no turnover of Subject Leaders over the life of the Project, e.g. St. Vincent. In other territories there was almost a complete turn over of Subject Leaders, e.g. St. Kitts-Nevis.

All Subject Leaders functioned as participants in regional workshops, as resource persons and organizers in territorial and local workshops. This aspect of the Subject Leaders' responsibility was uniformly executed as conceived by the Project planners.

The visits of Subject Leaders to schools to assist classroom teachers in interpreting the Project occurred regularly and systemmatically in some countries and irregularly and infrequently in others. This largely depended on the arrangements made by the Ministry to replace the Subject Leader, and on the availability of remuneration for travelling. Some countries did not make use of the provsion to replace Subject Leaders. Where this happened the quality of Project implementation was adversely affected.

Pilot Schools

The entire super-structure of the Project was predicated on the assumption that at the level of the pilot schools the Principals and the Teachers could be successfully mobilized to participate in the Project. It would appear that overall this assumption proved to be correct. Some Principals it would appear were more enthusiastic than others, some more cooperative than others, but by and large the level of participation was sufficiently high to ensure success. In some instances the Teachers were more cooperative than their Principals. Notwithstanding all the variations within and between schools in each territory the degree of participation, the sense of ownership and the level of identification with what has been produced are particularly strong among those Principals and Teachers who remained in their posts for the duration of the Project.

In the visits to the pilot schools in all the countries members of the Evaluation Team found evidence that Teachers were using the Project materials in their classes in the subjects pilot-tested in their territory. By and large the Teachers and Principals of the pilot schools were good ambassadors of the Project in their countries.

Implementation in the Field

The Project was implemented almost completely as planned. The prescribed regional, territorial and local workshops were held. In some cases, the number exceeded what was prescribed in the Project Paper. There were some variations in the timing of workshops and the particular dates on which these were held. These variations and changes enhanced Project implementation since they were the result of the

experience the Project staff had in conforming to the projections of the Project Paper

The Subject Specialists visited the territories as required by the Project Paper. They made school visits and assisted with local workshops. The Project Coordinator visited the territories periodically and also at special request to resolve some urgent problem. There can be no question that the central Project staff managed and implemented the Project in an effective manner.

The baseline data that were required to be collected in the first year were collected. It formed the basis of the curriculum development activities in each subject area. The Project more or less kept to its dates in terms of start up and completion. The only serious problem that interrupted Project implementation was that of the delivery of paper during the dissemination phase. (This will be discussed in Chapter 3).

In analyzing all the information available concerning implementation in the territories it would appear that the Project was implemented as planned in six of the ten territories. These are Barbados, Belize, British Virgin Islands, Jamaica, Montserrat and St. Lucia. In these territories all elements of the Project design functioned as planned. Subject Leaders attended regional workshops, participated in territorial workshops, helped with local workshops, visited schools regularly and related the content of local workshops to their observations on the visits. Subject Leaders were replaced in their schools and some arrangements were made where teachers attended workshops. The PIOs monitored the progress of the Project regionally, initiated actions locally and kept the Ministry informed of all developments.

In the other four countries some aspects of the Project design did not work or were undermined by local conditions. In Antigua the Project schools were wary to use the Project materials fully instead of the Antiguan national curriculum because they feared that common entrance and other assessments would not make allowances for the fact that the Project material was different in many respects. The net result was that they used the materials mainly as supplementary material and taught the Project material as demonstration lessons at the request of visiting Project personnel.

In Dominica, St. Vincent and St. Kitts-Nevis most Subject Leaders visited infrequently and were not replaced in the substantive duties when they visited schools. The exceptions would be Subject Leaders who were Education Officers in Dominica or St. Vincent or Teacher Training College tutors in St. Kitts-Nevis whose responsibilities included school supervision. In addition the geographic location of some Project Schools in Dominica and St. Vincent contributed significantly to the infrequency of visits.

In St. Kitts-Nevis although geographic location was not problematic the turnover of teachers in the school system, including Project classes, meant that teachers had to be constantly trained or, conversely, that Project classes were taught by teachers not oriented to the material

Weakness of Project Design

The three major weaknesses of the Project implementation design can be identified as follows:

1. The times when workshops were held invariably disrupted the schools. In systems like Barbados and B.V.I. where a system of supply teachers exists the Ministry of Education minimized the effect of the disruption by providing teachers and picking up the cost. Countries having no such system had to either close schools, send home the Project class students, double up classes or have the headteachers man some of the classes of the absent teachers. St. Kitts used their Principals to man classes. This meant that the Principals did not attend the workshops with their class Teachers. These Project schools therefore lost an important source of supervision and support.

2. The development of and introduction of the materials were introduced on a phased basis over four years - Year 1, 1980, Year 2, 1981, Year 3, 1982, and Year 4, 1983. The major Project resources were focused each year on the grade level being introduced, attention was only paid to previous grade levels when revised materials were produced.

   This approach assumed a certain stability of staffing that did not obtain in several countries and schools. Because the Project had little resources available for consolidation of work done and introduced at previous grade levels the turnover of teachers had a significant effect on continuity in Project classes experiencing a rather heavy turnover of teachers.

3. The printed Project materials especially those for pupils were only provided during the year of introduction. This posed problems for Teachers wishing to use them in the succeeding year especially because some Teachers thought fresh supplies would have been

forthcoming each year. Project material was therefore always in short supply after the year of introduction. Some schools used diverse means to secure additional supplies including fund raising for paper, ink and duplicating equipment. Nevertheless this was a constraint on Project implementation at the Project class level.

Any future curriculum project using this Project as its model would need to devise means and strategies for overcoming these weaknesses.

Financial Management

The Project was well-managed. The University's Finance Office, Cave Hill, created a special projects section which took responsibility for all special projects with the Primary Project being the main one. On the whole salaries were paid to territories - for PIOs - promptly and regularly.

Three problems arose in the financial administration which had implications for Project implementation. These were as follows:

1. Travelling expenses provided for PIOs were totally inadequate. The rates for mileage were prescribed on the basis of US standards which are totally irrelevant in the Caribbean where the cost of gasoline, motor oil repairs and the condition of roads are vastly different from the US. Although a compromise was found it was not entirely satisfactory. In some territories the Ministry of Education tried to make up the difference between what was provided by the Project and the actual cost to the PIO. However this supplement was subject to

Government regulations which classify officers for travelling purposes and place limits on the number of miles that can be travelled each month. Because the PIOs' posts were not permanent they could not travel as much as, say, Education Officers. It is a tribute to several PIOs that they travelled on Project business at times when they were not compensated. For future projects in the Caribbean involving local travel USAID may wish to develop some variation of its general policy which would be more appropriate to the Caribbean.

Surely it is inconsistent for the Agency to have Project policies which are counter productive to the acheivement of Project goals.

2. Inter-island travel for central Project staff was also an area of contention. Given the structure of the Project the central Project staff were employees of the University. Hence their terms and conditions of service should be the same as for all other staff of the University. Nevertheless in travelling to the territories it was the USAID per diem rates and not the UWI rates that applied. In other words they were being treated as if they were directly contracted to USAID. It would appear that this problem arose because all elements of the relationship between donor agency and the regional intermediary had not been fully thought out and rationalized. It is clearly undesirable for employees of the same institution belonging to the same category and executing similar tasks under similar conditions to be compensated differently. This is certainly an area to be resolved in the development of the strategy of regional institutions implementing projects funded by international agencies.

3. One territory in the beginning did not support its claims for reimbursement with the required vouchers. When the need for these supporting vouchers was pointed out they were not supplied immediately. The Finance Office pressured the Ministry of Education to secure compliance. The territory supplied the vouchers, the matter was resolved and as far as the External Team was able to probe it did not appear that this had any untoward effect on Project implementation in that territory.

This incident raises an important point in financial administration of projects in this new regional model of project management. In a number of projects involving direct bilateral agreement between governments and funding agencies, governments are required to include the funding for the project in its national budget for the particular Ministry charged with the implementation of the project. That Ministry proceeds to implement the project according to the budget provided and in accordance with the financial arrangements of the particular country. At the end of the financial year, upon the submission of a statement of funds disbursed by the Government Treasury, the funding agency reimburses the Government to the limit of the amount agreed for the Project. In this situation government is not required to submit vouchers.

In several projects where funding agencies make advances to institutions those advances must be accounted for with supporting vouchers. The question, in this new project model involving regional institutions and national governments is, what system of financial accountability is appropriate, desirable and consistent. It would appear that this is another area

that needs to be reexamined and discussed by all the partners concerned: USAID, regional institutions and Governments.

The position taken by the Ministry of Education in the particular incident cited above is not without merit. The Ministry stated that the Project expenses were included in the Government Budget for that Ministry. In expending the funds they had to submit all the vouchers to their Treasury and comply with all the relevant financial regulations. Having satisfied these requirements they thought that reimbursement to their country would be on the basis of a financial statement from the Treasury certifying that the funds had been expended for the purposes for which they had been provided.

The position taken by the Finance Office, UWI, in requiring vouchers was totally consistent with the Project requirements. That office could not be faulted in requiring compliance. The point being made here is that in any future projects employing the same strategy of a regional intermediary as the link to native government some further thought should be given to the basis on which funds will be disbursed and reimbursed.

From the outset the Project funds were carefully and conservatively managed. This accounts for the fact that the extension could be financed by a reorganization of the original budget without the provision of any additional funds. Provisions for inflation, contingencies and consultants, to a lesser extent, were sparingly used.

Ancillary Components

Ancillary but important to the overall Project objectives was the training of educational administrators. In Jamaica this took a different focus and approach than in the countries participating fully in the other Project components. Not only was this component effectively implemented during the life of the Project but other ancillary components as well. These can be listed as follows:

1. Training of education planners in collaboration with CARNEID, Educational Policy and Planning Division of UNESCO, and UWI, School of Education..

2. Development of primary readers on health topics in conjunction with PAHO.

3. Dissemination of Science materials in non-Project countries by the British Development Division.

These ancillary components helped to spread the influence of the Project while at the same time forging linkages with other regional agencies. That educational planners in the Ministries of Education should know of the Project and its objectives may have some long term implications for the use of the materials after the cessation of the Project. In addition linkages between CARNEID and UWI could also have long term implications.

Generalized Regional Project Model

Taking into account the success of the Project it would appear worthwhile to represent the Project structure in a

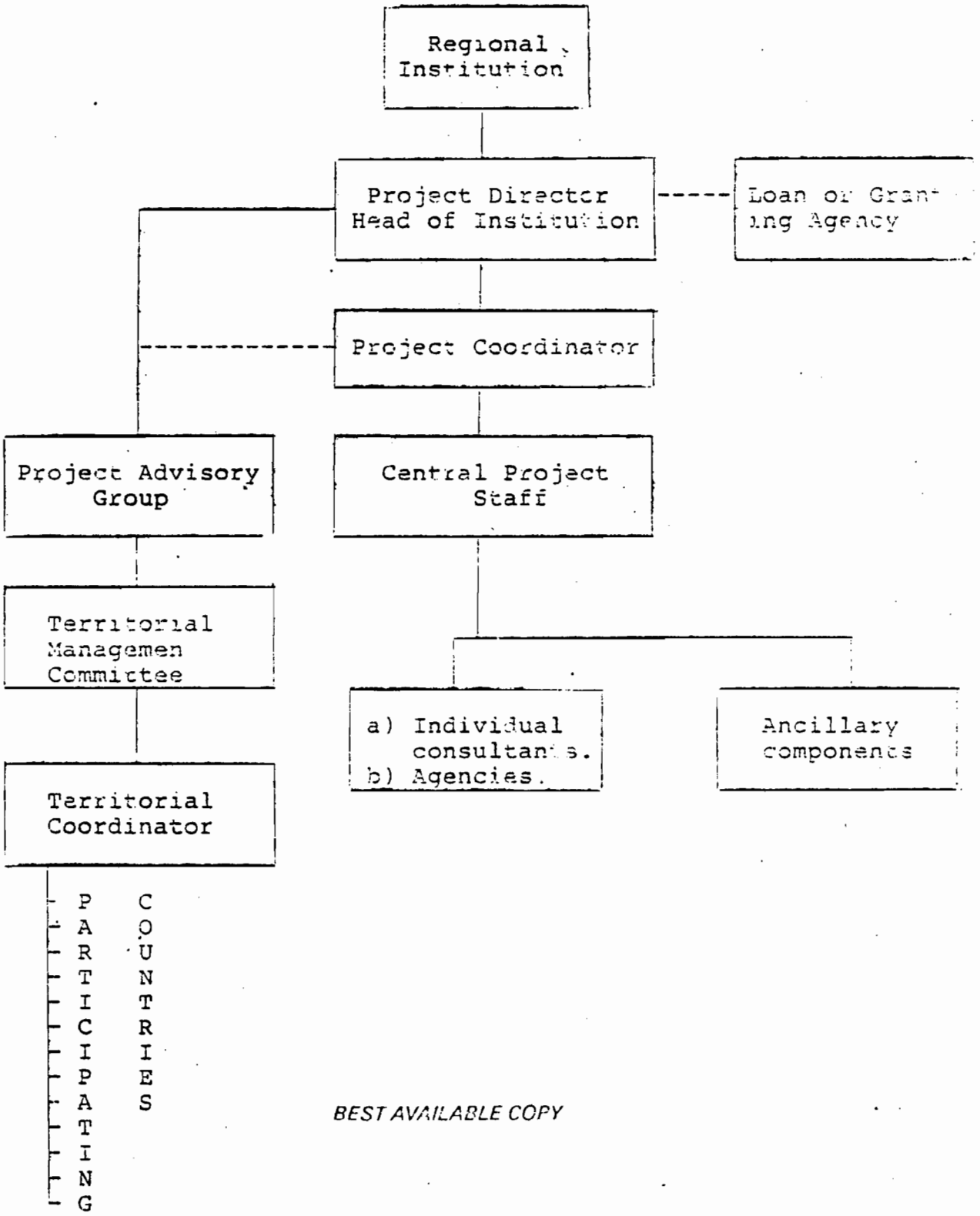
generalized required format which could be of use to donor agencies, governments or institutions contemplating regional ventures. The Regional Project Model is shown in Chart 2 below

The major difference between this Generalized Regional Project Model and the one developed similarly out of the secondary sub-Project is whether the Project will be administered by the Regional Institution directly or through a Management Committee. Where the Project is administered directly then there is need for an Advisory Group composed of representatives from the participating countries. Where it is done indirectly through a Management Committee comprised of the territorial participants then both the management and advisory functions are combined.

Apart from that difference the models are remarkably similar.

Chart 2

Generalized Regional Project Model



Chapter III

PRINCIPAL PROJECT OUTCOMES

Introduction

This chapter deals with the principal outcomes of the Project. Secondary outcomes and unplanned developments are dealt with in Chapter IV. Principal outcomes are related to the major objectives which inspired the formulation of the Project in the first place.

The long-term goal of the Project as described in the Project Paper is *"to enable the human resources of the Caribbean to achieve their full potential"*. Verifiable indicators of goal achievement are reduced unemployment levels, increased productivity and lower birth rates. Noting that the target group of the Project was 7 to 11 year old children, the Team is of the opinion that any judgment concerning the long-term goals would be entirely premature.

The immediate purpose of the Project was to improve the quality of the learning environment for primary school age children. The Project planners envisaged that at the end of the Project the following conditions would exist (Project Paper, Appendix J):

"1. *Pupils achieving learning objectives.*

2. *Improved syllabi, teachers' manuals and other instructional materials used by teachers.*

3. *Teachers applying new instructional methods i.e. increased use of child-centered activities.*

4. *Teachers covering a broader, more enriched content.*

5. *Teachers utilizing more frequent classroom testing as part of the evaluation process.*

6. *Teachers creating materials for use by students.*

7. *Headteachers, principals and supervisors supporting the curriculum development process and supporting the facilities improvement process."*

If these conditions were translated into a simple check list requiring a "yes" or "no" response to each item then it would have to be recorded that the Project succeeded in creating these conditions in the Project schools. Two much more difficult questions to answer would be to what extent each condition exists in each Project school and to what degree each has been institutionalized.

The anticipated Project outputs are as follows (Project Paper, Appendix J):

"1. *New curricula consisting of revised syllabi, teachers' manuals and pupils' workbooks in four subject areas.*

2. *Additional teaching aids and materials related to the revised curriculum units in each subject area.*

3. *A modified, refined model of the curriculum development process.*

4. *Teachers and supervisors with experience and skill in:*
   - *Use of new instructional material*
   - *New methods*
   - *Content*
   - *Testing*
   - *Curriculum development.*

5. *Headteachers and principals trained.*

6. *Project Advisory Group.*

7. *Project Implementation Unit."*

Taking into account the above, the principal Project outcomes - which will be discussed in detail in this chapter - are defined as follows:

1. The modified, refined model of curriculum development process produced by the Project.

2. The curriculum products in Mathematics, Language Arts, Science and Social Studies.

3. The dissemination of these products.

4. The impact on teacher behavior.

5. The impact on student performance.

The Model of Curriculum Development Process

Prescribed Guidelines and Supporting Mechanisms

The Project Paper prescribed the guidelines which the curriculum development process should follow. The prescribed guidelines could be set out as follows:

1. Deliberate and systematic collection by each subject specialist of the syllabi, teachers' manuals and teachers' and pupils' materials used in participating territories at the time of the commencement of the Project.

2. In-depth study of these base-line materials by Subject Specialists and territorial officials.

3. Drafting revised syllabi resulting from study.

4. Testing the revised syllabi in territorial and local workshops to receive feedback and to orient teachers in new approaches.

5. Testing the revised syllabi in pilot schools in each country to receive feedback.

6. Revision of draft syllabi based on feedback from workshops and pilot schools.

7. Core syllabi produced used as the basis for devising teacher and pupil materials in support of new content and methodology.

8. Testing of materials in workshops.

9. Testing materials in pilot schools.

10. Revision of materials based on feedback.

11. Final products produced after revision.

The Project Paper not only established the guidelines for the curriculum development process, it also prescribed the mechanisms which would undergird and support it. They were:

1. Subject Matter Specialists collecting and studying base-line data from which they prepared working papers for regional workshops. These Subject Specialists also participated in territorial and local workshops and made regular visits to pilot schools.

2. Regional workshops involving Subject Specialists, territorial Subject Leaders and Caribbean consultants had the responsibility to produce the syllabi and materials.

3. Territorial and local workshops served the dual purpose of orientation of teachers as well as providing feedback on the products of the regional group.

4. The pilot schools were the principal sites of field-testing.

Assumptions

Both the guidelines and the mechanism prescribed by the Project Paper made a number of assumptions implicitly which need to be stated explicitly. These are:

1. That all territories had syllabuses, teachers' manuals and teaching/learning materials in the schools in the four subject areas.

2. That countries were at different stages of development of their primary systems.

3. That subject leaders and Project teachers were sufficiently knowledgeable and trained that while they would learn through participation in Project activities they could also contribute significantly to the desired Project products.

4. That there would be a high level of stability of Project participants at regional, territorial and school levels.

5. That territories would choose three of the four subjects in such a way that the resulting workload for subject specialists would be more or less equal.

6. That the structure of the primary systems in the different territories was more or less the same.

In addition to these implicit assumptions the Project Paper was silent on a number of issues. There is no way of telling whether this was deliberate or not. Notwithstanding this, however, having given the regional workshop the responsibility to produce the curriculum materials that would be tested, the Project Paper was silent on how decisions would be made. It had nothing to say on the role and authority of the Subject Specialist as a decision maker. It was silent on how the curriculum development and inservice training functions would be separated.

The general impression is that while the Project Paper deliberately provided some guidelines for the curriculum process to follow, it left certain areas open for interpretation with the hope that some modified or new variant for a curriculum model would emerge. To understand the dynamics of what emerged during the life of the Project it is necessary to comment on each of the assumptions, as well as on areas of silence.

Base-line data on syllabi. The observations of the mid-term 1981 External Evaluation Team concerning the syllabi, manuals and materials in use in the territories which were collected as base-line data by the subject specialists should serve as sufficient commentary on the validity of the assumption of the Project planners. *"Some territories submitted no syllabi, some territorial syllabi comprised only a brief list of topics; some territories had well developed syllabi. Generally, base-line syllabi were found lacking in scope of content, sequencing of learning experiences, provision of objectives, and guidelines for instructions. With very few exceptions tests and instructional aids were not included; a variety of teaching methods was not included. Although time did not permit an extensive systematic evaluation of syllabi against specific criteria, subject matter specialists did engage in a deliberate, methodical collection and analysis of syllabi to determine a common core of content among territories and strengths/ weaknesses in existing content and practices."*

Stages of development. From the comments of the 1981 External Evaluation Report it is clear that the assumption of stages of development was valid. At the commencement of the Project some territories had no national syllabi, while

national syllabi, while others had well developed syllabi and yet others fell at some point on the continuum between these two extremes. The variation was not only among territories but among the four subject areas. Syllabi where they existed tended to be for Maths and Language Arts, and in Science to a lesser extent. Syllabi in Social Studies were either non-existent or little more than a list of topics. This variation in syllabus development was totally consistent with the fact that primary education has been focused traditionally on literacy and numeracy. In recent years, with growing emphasis on science and technology, some attention was given to Science at the primary level. Social Studies on the other hand is a relatively new subject for the primary level and has not been the focus of special attention.

Level of Training. The assumption about the level of competence and training of Subject Leaders was more or less valid. Some Subject Leaders had not only the basic academic and professional training but previous training, exposure and experience in curriculum development. Most were inexperienced in curriculum development but had the basic academic and professional training allowing them to contribute as they were learning the process by doing.

Generally Ministries of Education chose Subject Leaders carefully; only a very small number were unsuitable. On the other hand, the assumption about the level of training of teachers was not valid. Several countries had teaching forces of which nearly two-thirds were unqualified. Some teachers not only lacked professional training but also basic academic competence - displaying serious gaps in knowledge of content.

Stability of Project personnel. The Project planners assumed that Project personnel would remain more or less stable throughout the life of the Project. While this was mainly true of the Central Project staff it was less true of PIOs and Subject Leaders and almost invalid for Principals and Teachers. In some territories the rate of turnover at all levels was a major constraint on Project implementation.

Choice of Subjects by territories. The assumption that territories would choose three of the four subjects in such a way that the work load of Subject Specialists would be roughly equal did not prove to be correct. The choice of subjects by territories was as follows:

Language Arts	-	9
Mathematics	-	8
Social Studies	-	5
Science	-	4 *

The Language Arts and Mathematics specialists had much greater work loads by virtue of their commitments to territories than those in Social Studies and Science. Although as early as 1981 the External Evaluation Team warned of burn out by personnel in those areas, full-time assistance was not forthcoming until much later in the life of the Project.

Common primary systems. The assumption that the primary systems would have common structures was not entirely valid. Some systems ended primary education at age 11,

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* Please note that Grenada sent teachers to the first Regional Workshop in 1980 and had opted for Language Arts, Mathematics and Science.

others at age 12. Some systems termed the successive cohorts - "grades" others "standards", others "classes", and others "Juniors". In some systems promotion was automatic while in others it was strictly based on merit. These differences made it difficult to either age reference or grade reference the material produced so that ambiguous situations would not be created in some territories.

Decision-making in regional workshops. In keeping with the prescribed guidelines the regional workshops in all four subject areas became the decision-making bodies in the production of revised syllabi, teachers' manuals and teaching and learning materials. In the absence of any clear directions on how decisions should be made each workshop adopted the convention that decisions would be reached on consensus based on the pragmatic criterion of what worked in the classroom. This convention was more the "logic that was used" than the written agreement. It seemed to have evolved out of practice. There is no evidence that it was a negotiated compromise which was then carefully articulated and written down as law.

Role of Subject Specialists. The status of the Subject Specialist emerged as "primus inter pares". The expertise and the experience of the Subject Specialist certainly made his or her opinion something to be listened to by workshop participants. However, this opinion did not prove decisive if it could not overcome the anecdotal veto of the practicing teacher who said "I tried it and it did not work in the classroom". The colleagues of the Subject Specialists at the regional workshop were practicing classroom Teachers, Principals, Teacher College tutors and Curriculum Officers in Ministries of Education. Each had a different perspective to contribute.

Inservice training. While regional workshops formulated the strategies and literally produced the materials, they became the major focus of criticism and revision. Local workshops on the other hand were used mainly for orientation of teachers and inservice training.

Synthesis. The curriculum development process that emerged during the Project was a function of three factors.

1. The guidelines and mechanism prescribed by the Project Paper.

2. The realities that existed in the schools and territories despite what the Project planners had assumed.

3. The strategies and procedures adopted by Project personnel in the absence of any prescribed directions.

The dynamic synthesis of these three factors produced a new model for curriculum development in the Caribbean.

The Participatory Model of Curriculum Development

The general curriculum development model pioneered worldwide in the late 1950's and 1960's was the development of materials by an expert or group of experts or, conversely, based on some body of empirical research. The materials are then field tested in classrooms on a pilot basis with feedback from teachers. They are then revised on the basis of the field experience before being put in their final form.

The typical products of this process are teachers' manuals, pupils' textbooks and pupils' workbooks in addition to a

syllabus whether identified explicitly or included implicitly in the organization of the material. The Primary Project had all of the characteristics of a typical curriculum development exercise.

The point of departure was the decision-making function and the authority structure that determined what the content and methodology would be. Although University researchers did contribute ideas and insights drawn from a body of theory and empirical findings, their word was not final. Neither was the decisive word of experts from the curriculum units of Ministries of Education suitably supported by Ministerial authority. Both University researchers and Ministry experts were equal partners in the decision-making process with the colleagues from the schools - principals and teachers. This model accorded the practitioners from the schools - principals and teachers - an equal voice with that of the experts and the researchers. Normally principals and teachers report their field experience but the final decision on how that field experience is to be interpreted and incorporated is entirely the decision of the researchers or the experts. As such the practitioners are mainly advisors. In this model the practitioners were also decision makers.

It is fair to say that the Project has developed a participatory model of curriculum development which has demonstrated a number of positive features. These can be summarized as follows:

1. A sense of ownership of the materials by Subject Leaders, Principals and Teachers.

2. A commitment to the materials as demonstrated by continuous daily use in the Project classes.

3. A display of initiative by Teachers and Principals to fund raise in order to be able to overcome shortfalls in supply.

4. Internalization of the processes and strategies as demonstrated by Teachers producing their own extension to the materials provided in order to meet particular situation needs.

5. Pride and satisfaction in having participated.

The Team is of the opinion that the central Project staff under the direction of the Project Coordinator did not deliberately set out to create a new approach to the development of curriculum materials. Rather it seems to have evolved out of the situation. The Project Coordinator gave each specialist a free hand to determine what should be done. The Project Paper was silent on the decision-making structure. The Subject Specialists had no legal basis on which to impose their will. In any case given the diversity of the countries this would have been inappropriate and out of place. On the other hand the voluntary participation of each territory was important since the territories could not be forced to do what they were convinced was irrelevant or meaningless in their respective situations. The result of all of these interactions was the Participatory Model. It is an excellent approach with much to recommend it. It certainly satisfies the expectation that at the end of the Project a modified, refined model of the curriculum development process should have been developed.

Curriculum Products

The curriculum products produced by the end of the Project included revised syllabi, teachers' manuals, teachers' resource materials and pupils' materials as required by the Project Paper. These materials were produced through the regional, territorial and local workshops prescribed. The number of regional and territorial workshops held complied with the requirements of the Project. The number of local workshops exceeded the Project target. All Project specialists performed the duties and responsibilities stated in their contracts. Using the strictest criteria the Project achieved the targets for curriculum products using the prescribed workshop mechanism. Table 1 below shows the number of workshops specified by the Project Paper as against the numbers that were actually held.

TABLE 1
NUMBER OF WORKSHOPS

Type of workshop	Number Prescribed	Number Held				
		Language Arts	Maths	Science	Social Studies	Total
Regional	8	5	5	5	5	16
Territorial	72	63	56	28	35	182
Local	252	108	96	48	60	360

Note: Regional Workshops: Held similtaneously in one territory each year, 1980; held in different territories in 1984.
Territorial Workshops: 7 such workshops in each territory taking the subject
Local Workshops: 12 Workshops per subject in each territory taking the subject

Is it necessary to comment on the curriculum products in each subject area, the opinions of Ministry officials, teachers, PIOs, subject leaders and teachers about these materials as well as the judgments of the two mid-term external evaluation teams and ourselves.

Language Arts

Language learning is one of the principal foci of primary education. Most territories had existing syllabi when the Project commenced. The task of the Project was not to create something where nothing existed but rather to evaluate what existed and chart a new course if this was warranted.

To appreciate the task that was set for the Language Arts group one needs to take into consideration the wide variety of language situations presented by the participating countries. At one end of the language continuum is Belize which has a multilingual situation. There are Maya, Ketchi, Garifuna and Spanish speaking groups in the society. All speak an English-based creole. All are required to learn standard English at school. Along the continuum are countries like Antigua, Montserrat, St. Kitts and Barbados with English-based creoles. At the opposite end are Dominica and St. Lucia with a French-based creole. While all countries speak a creole dialect, and all require Standard English in schools there is a rich diversity of language situations which by definition would focus on different problems.

It is not surprising, therefore, that from all reports the Language Arts workshops at both the regional and territorial levels had a lot of arguments and found it difficult to make decisions. Arrival at consensus would of necessity be a slow process given this wide variety of language situations.

To further appreciate the situation the traditional approach to the teaching of English in the Caribbean ignored the fact that the majority of primary school children spoke some variant of the creole. That approach taught English to the

primary child as if his natural language was Standard English. The illogic of this approach was rooted in the relationship between language and social stratification in Caribbean society. The creole was always regarded as illiterate and improper and therefore never permitted in school

Although second language approaches to the teaching of English in the Caribbean have been discussed since the early 1960's and a dialect to dialect language-teaching model for Caribbean schools has been developed, tested and used in some schools since 1967, many schools in several Caribbean countries have persisted with the traditional approaches. The dilemma faced by the Project from the outset was whether it should develop the materials on the traditional lines with which teachers were familiar or on second language approaches which were more appropriate but with which teachers were unfamiliar. It adopted the latter approach. While these approaches have been used in Jamaica, Guyana and Trinidad and Tobago for some time, through this Project the Eastern Caribbean, Belize and Barbados have now adopted similar language teaching strategies.

To further compound the problem of the Language Arts group all territories chose this subject. This meant that the work load was beyond the capacity of a single specialist. He was not able to give all the attention required by all the countries at the commencement of the Project.

In the judgment of the External Evaluation Team the combination of the fundamentally new approach taken by the Language Arts material, the unmanageable work load of the Subject Specialist and the diversity of the language situations in which these new materials had to be tested created the dissatisfaction that greeted the first versions

of the curriculum products in this subject. It is a tribute to the flexibility of the decision-making process that was established by the Project that the wide variety of criticisms that were made of the original versions could have been systematically integrated into the revision so that the final product could have widespread acceptance. The format for the revised materials was based on Kerr's curriculum model under the leadership of the new Language Arts Specialist.

The Language Arts materials finally produced consist of the following:

1. Core Curriculum Outlines for each of the four year groups 7-11+ years.

2. Integrated Language Arts Schemes for each of the four year groups.

3. Teaching/Learning Experiences - Teachers' Manuals - for each of the four year groups.

4. Teacher's Resource Booklet (Reading) for 6-11 year olds.

5. Pupils' Materials for 7-9, 9-10 and 10-11 year olds.

The format in which the teachers' materials are put out does not make them "user friendly". Teachers have to consult the Core Curriculum Outline for syllabus topic, the Teaching/ Learning Experiences for teaching strategies and the integrated Scheme for teaching sequence. Notwithstanding this difficulty, the curriculum products in Language Arts may yet make the most far reaching and fundamental contribution to primary education of all the curriculum products.

The elements of the approach used by the Language Arts materials which are new to many schools are the emphasis on listening and oral expression, the acceptance of the dialect in classes as the starting point of instruction in Standard English, and its insistence on the mastery of structures familiar to the children before new structures are taught.

Mathematics

The Mathematics group faced only one problem of note at the beginning of the Project, namely, that 8 territories chose that subject. This put a tremendous strain on the Subject Specialist to cope with the resultant workload. Mathematics at the primary level focuses on numeracy which is one of the principal goals of this level of education. Most countries had well developed syllabuses. Some countries, namely Barbados and St. Lucia, had well developed curricula.

The Project did not break new ground in Mathematics. What it did was to produce:

1. a better organized syllabus in terms of the sequential arrangement of topics and concepts;

2. a more detailed content in areas where teachers and pupils have frequently experienced problems, and

3. pupils' worksheets.

From the very outset the Mathematics materials that were produced received wide acceptance and were judged to be of excellent quality.

The curriculum products in Mathematics consist of the following:

1. Core Curriculum Outline and Teaching/Learning Experiences for each of the four age groups, 7-11 years.

2. Pupils' Materials (worksheets) on the following topics:

   Area: 9-10, 10-11
   Capacity: 9-10, 10-11
   Counting Odd and Even Numbers: 7-8
   Fractions: 8-9, 9-10, 10-11
   Geometry: 9-10, 10-11
   Graphs: 7-8, 8-9, 9-10, 10-11
   Length: 9-10, 10-11
   Mass: 9-10, 10-11
   Money: 7-8, 8-9, 9-10, 10-11
   Number Concepts: 9-10, 10-11
   Operations: 8-9, 9-10, 10-11
   Percentages, Ratio and Proportion: 10-11
   Sets: 8-9, 9-10, 10-11
   Shapes: 7-8
   Time: 7-8, 8-9, 9-10, 10-11

3. Tests on different topics related to the work booklets produced.

Science

The countries choosing Science were Barbados, Belize, St. Kitts/Nevis and St. Lucia. There were wide differences in the state of development of primary Science curricula among the four countries. There were even greater physical environmental differences between Belize and Barbados than

in curricula. The Science group took a decision almost from the outset not to try to develop a common primary syllabus. They justified this approach by the following reasoning:

1. Some of the more fundamental aims of primary education - e.g. developing children's ability to raise questions, plan, then conduct investigations - could not be met if teachers were constantly told what to teach and how to teach it.

2. Ideas develop and change: what is important today may not be so important tommorrow. As more technology reaches the islands, pupils will need to be equipped with the skills to handle an increasingly science-bound environment.

3. A syllabus devised centrally could not cater to regional and local environmental differences.

4. Determining the content of the Science curriculum regionally would pose problems for its interrelationships with other subject areas nationally.

5. For younger children the motivation to learn is strongest when they are working on what interests them. Over-prescription of content can lead teachers to the notion that certain topics have to be covered even if pupils find these dry and boring.

What the group did was to examine national primary Science syllabi and curricula and identify the common topics and themes. Then they identified topics and themes that in their opinion were fundamental to primary science education but which teachers and pupils found difficult to teach and learn. These included Energy, Force, Electricity, and

Weather, among others. These topics and themes in fact comprehensively covered all the topics that one normally would expect to find in a primary curriculum. They then developed teaching guidelines, pupils' materials and tests for each topic independently.

Despite their protestations to the contrary the Science group did produce a common regional science curriculum. What they did not do was to prescribe the year or grade in which each topic should be taught. But the complete set of topics constitutes a comprehensive primary curriculum, grades 1-6.

The original contribution of the Project to regional primary education is that it has Caribbeanized it. The curriculum materials have translated the universal concepts and principles of Science into the everyday events and familiar objects of material culture of the Caribbean.

The curriculum products in Science produced by the Project are as follows:

1. "Science Education: A Background to the UWI/USAID Primary Education Project Science Units".

2. "Improvisations in Science: A Handbook for Teachers".

3. Teaching/Learning Experiences and Pupils' materials on the following topics:

Weather	Time - Early Experiences
Water	Matter & Air
Sound - Early Experiences	Energy & Forces
Plants	Machines
Animals	Heat

Matter - Early Experiences	Time - Time Sequence Pictures
Magnets	Matter: Solids & Liquids
Light - Early Experiences	Movement in Living Things
Light 2	You
Sound - Second Experiences	Keeping Clean
Rocks and Soils	Three Investigations
Electricity	Soils and Living Things
More About Weather	Materials Around Us 1
Plastics	Energy, Beginning And End
Making Things Move	Animals With Wings
Chemistry in the Home	The Sky Above
Measurement	Weather/Water/Animals
	Materials Around Us 2

4. Objective test items and work cards related to each topic.

The Science materials are judged to be of excellent quality. The Teaching/Learning Experiences have been particularly helpful to teachers. Many qualified teachers have poor backgrounds in Science, are unsure of content, and in need of guidance in the use of teaching strategies.

The accomplishment of the Teachers' Manuals with well organized pupils' materials is an added bonus. Most Project schools have reported that the Science materials for pupils have generated considerable enthusiasm among pupils and have raised interest in Science. Teachers have reported that they feel more confident and are more willing to teach Science than before.

Social Studies

Social Studies was the least developed of the four subject areas at the commencement of the Project. It was in this area that the Project had the greatest scope to make an original contribution to Caribbean primary education. Where syllabi existed they were little more than a list of topics. It is not an overstatement to say that the Social Studies group grasped the opportunity presented to them with both hands.

The curriculum products produced are grounded in sound theory as well as being rooted in Caribbean experience. The Social Studies group succeeded in achieving a novel integration and reconciliation of two theoretical positions normally perceived as being diametrically opposed.

Jerome Bruner's spiral approach to learning advocating movement from the specific to the general through ever widening concentric spirals of interrelationships goes in almost the opposite direction from David Ausubel's approach to school learning which postulates commencement with the most general and inclusive idea and proceeding then to greater and greater details. The Social Studies group used Bruner's approach to give the curriculum an overall structure from year 1 to year 4. Hence in year 1 students would commence by studying their community, followed in year 2 by studying their country, succeeded in year 3 by study of the Caribbean and culminating in year 4 with a study of the world. The simple elegance of this structure could easily lead one to underestimate its significance. By organizing the work in each year in a logical sequence both teaching and learning give to Social Studies an integrated wholeness that removes the tendency to approach it as a hodge podge of loosely related disciplines.

Within each year topics are approached from Ausubel's school learning theory which employs the use of Advance Organizers. The movement is from the most general and inclusive concepts to specific details.

In addition to having an intriguing theoretical structure the material is rich in its approach and treatment of Caribbean life. It requires investigation into the common everyday experiences and that which is thought to be known by everybody. The discoveries made are then even the more fascinating.

From the beginning the format of the Social Studies curriculum was most "user friendly". All relevant information except student materials was included in a single volume.

The products of the Social Studies Curriculum Development are as follows:

1. Core Curriculum Outline
2. Teaching/Learning Experiences
3. Suggestions for Evaluation Procedures
4. Teacher Resource Materials

These are produced in four volumes, one for each year group 7-11 years with each volume consisting of the four components identified above.

In addition to the above, pupils' materials have been produced in work booklets to accompany each teacher's manual. Each booklet has been organized to cover a term's work.

From the outset the quality of the Social Studies materials was judged to be excellent. Teachers have been very enthusiastic about them.

The major problem mentioned is the unavailability in some settings of certain pictures that are required for some lessons. Some schools may not have maps or globes. This also places a limitation on the teaching of some topics.

Opinions about the Curriculum Products

The External Evaluation Team tried to obtain data on the opinions of educational leaders and teachers in the various countries as to the quality of the curriculum products. This was done through questionnaires as well as interviews. The responses of Chief Education Officers, Project Implementation Officers and Principals tended to be almost identical while those of teachers were similar but somewhat different.

When asked to rate the materials on a five point scale ranging from poor to very high the educational leaders rated the Language Arts as average to high - that is between the 3rd and 4th intervals - and the Social Studies, Science and Mathematics as high to very high - that is between the fourth and fifth points. Teachers on the other hand rated the Language Arts as high, the Science and Mathematics as high to very high and the Social Studies as very high.

Principals, Teachers, PIOs and Subject Matter Leaders were asked about the impact of the curriculum products on the work of the pilot schools. They were asked to rate the impact on a five point scale. Table 2 below shows the responses.

TABLE 2

IMPACT OF CURRICULUM PRODUCTS ON PILOT SCHOOLS

	None	Slight	Medium	High	Very High	Total
PIOs	-	-	1	6	2	9
Subject Leaders	-	-	2	20	14	36
Principals	-	-	5	19	8	32
Teachers	-	3	47	93	28	171
		3	55	138	52	248

From the questionnaire responses and the interviews the reports were that the curriculum products were considered to be of good quality and the impact on the schools was on the whole positive.

Generally speaking the Language Arts materials were positively perceived but not as much as the other three subjects, although almost all respondents reported that there was great improvement in the Language Arts materials between the original testing and their final production. On the whole it would appear that Social Studies was most positively perceived.

The assessment of the content of the curriculum materials made by the mid-term External Evaluation Team remains valid and accurately represents the opinion of this Team. It is enough simply to restate their judgement. *"The fourth distinctive characteristic of these excellent materials is their attention to the development of the higher levels of thinking especially in Science and Social Studies. The Curriculum materials are outstanding in their use of activities involving forecasting, estimating, evaluating, analysing,*

synthesizing, thinking critically and creatively and experimental problem solving. We would also note the exceptionally fine development activities incorporated in the Science and Social Studies curricula." The curriculum products in all four areas are of high quality and if used as intended should contribute significantly to student learning.

Dissemination

The Project Paper left open the issue of the dissemination of the curriculum products. This was a reasonable stance since the quality and demand for what the Project hoped to produce would determine the size and scope of any dissemination that would follow. Having assessed the quality of the first products the mid-Project External Evaluation Teams of 1981 and 1982 raised the issue of dissemination.

At that time the three partners to the Project - USAID, UWI and the Governments - were in a much better position to address the issue than at the beginning of the Project. In June 1983 two consultants - Professor A. Phillips and Mr. E. Rawlins - were assigned the task of determining the requirements for the dissemination of the curriculum products. They reported in August 1983.

On the basis of that Report agreement was reached to extend the Project for a further year to ensure the dissemination of the curriculum products on a system-wide basis in each participating country.

USAID approved a no-cost extension for this dissemination phase and changed its policy on the provision of hardware. Originally the provision of equipment to territories was

excluded from the terms of operation of the Project. However, realizing that production of the materials had to be decentralized USAID displayed commendable flexibility in modifying its position

The essential elements of the dissemination phase can be summarized as follows:

1. All governments and Ministries of Education would be assisted in disseminating the Project materials to all schools in their primary systems.

2. Assistance would be given for one year.

3. Production would be decentralized by providing each participating Ministry with either hardware or software or both in order to allow Ministries to manage the production and distribution in their own countries.

4. Workshops would be funded to allow Principals and Teachers from non-Project schools to be oriented to the materials and to be given some training in their use.

5. Assistance in dissemination would be given in each territory for the subject areas in which the territory participated during the developmental phase. Where territories wished to disseminate the fourth subject they would have to meet this out of their own resources.

6. Financial assistance would be given to the territories for the purchase of textbooks

7. The central Project Staff, PIOs and Subject Leaders would manage the operations of the dissemination year and contribute in such professional ways as was required.

The major problem that has faced the dissemination has been the considerable delay in the delivery of paper by the U.S. supplier. This has significantly delayed the actual distribution of the materials to schools. Some territories are also just now beginning to commence that process. In some instances there has also been a delay in the acquisition of equipment. This seemed to be rooted in the procedures required and the slow nature of movement of correspondence from a territory to Barbados.

The net result of these delays has been a loss of momentum. Having not received the equipment and paper so that materials could reach the schools for the commencement of 1984-85 school year, territories have rescheduled the dissemination for the 1985-86 school year. Notwithstanding these problems Principals, Teachers, PIOs, Subject Leaders and Ministry officials in the various territories have retained enthusiasm for the Project outcomes and commitment to use the materials in their schools.

All Ministries have adopted the curriculum products for use in their systems. In some territories the core syllabus for each subject has become the national syllabus as a result of the policy decisions taken. In others national syllabi have been revised incorporating the Project materials. Where the national curriculum was very similar to the Project curriculum the Project materials have been adopted as resource materials for the schools..

The only concern of the External Evaluation Team is the length of time these materials will last under constant use by teachers and pupils. This issue will be addressed in a subsequent chapter. Details of dissemination activity are presented in Appendix B.

Impact on Teacher Behavior

Another of the principal outcomes anticipated as a result of Project implementation was that there would be a positive impact on improving teacher behavior. The designers of the Project anticipated that Teachers of the pilot schools after participating in the Project would rely less on lecturing/ teacher talk as their main methodology, and that they would make more frequent use of child-centered approaches to teaching. Without going into detail at this point in the Report, the external evaluators found that some evidence exists to show that such changes in teacher behavior did indeed occur. The evidence is discussed later in this section.

Collection of data to provide hard evidence to demonstrate positive changes in teacher behavior requires that trained observers observe classroom teaching over time. That is, a trained observer must observe a teacher for more than a short period of time and for more than once. Research shows that when this approach is used reliable results can be obtained.

For obvious reasons it was not possible for the External Evaluators to use this approach. Rather, other approaches for data collection were used and yielded what we prefer to call soft evidence. They were:

1. Analyzing the responses of 236 Teachers, 43 Subject Matter Leaders, 42 Principals, and of the Project staff who responded to questionnaires designed by the evaluators.

2. Analyzing the results of on-site interviews in the 9 participating territories with Principals and Teachers of the pilot schools, and with Teacher Training College staff members.

3. Reviewing the findings of the 1981 and 1982 mid-Project External Evaluation Reports.

4. Reviewing the findings of internal evaluation.

However, before reviewing the findings from each of these sources it is important to comment on the critical problem of teacher turnover and the high incidence of unqualified teachers in a number of territorial schools. Both of these factors had a bearing on the outcomes relating to changes in teacher behavior.

The high rate of turnover of teachers in some territories created problems for Project implementation. This was especially critical in the case of the pilot schools.

Whenever a Project Teacher left his/her position it meant that Project implementation for that particular situation was back to square one. It meant that the orientation process had to be repeated and that whatever positive results on teacher behavior had accrued from training before were not reflected in the data collected by the Evaluators. Furthermore, Project implementation was delayed in each situation where there was turnover. Turnover among pilot school Principals was also a problem, but not as serious as among Teachers. Again, whenever the Principal of a pilot school left his/her position, Project implementation was delayed in the pilot schools so affected.

The second factor, the high incidence of unqualified teachers among some of the territories, had a more positive effect on the results. The Evaluators found that unqualified teachers considered participation in the workshops, using the curriculum materials, and the supervision provided by the Subject Matter Leaders especially helpful. Many probably were exposed for the first time to a concentrated period of teacher training.

Data Collected via Questionnaires

Principals and Teachers of pilot schools and the Subject Matter Leaders in the participating territories were requested to complete questionnaires which had been constructed by the Evaluation Team. Subject Matter Leaders and Principals in the territories overwhelmingly rated the degree of positive impact of the Project as "very high" or "high" with regard to positive impact on teacher behavior. Responses from Teachers themselves were similarly high, though when asked in another question to what extent they feel that they are now better teachers, the number who said "significantly" or "considerably" was only slightly more than those who said "somewhat".

Principals were asked to rate the degree of teacher improvement by subject area. Greatest improvement was noted for Social Studies, Science, and Maths. For Language Arts, the number of Principals who said "significant" or "considerable" was only slightly higher than those who said "some".

Teachers were requested to indicate to what extent there was an increase in their knowledge of subject matter resulting from participation in the Project. For Language Arts, 53%

of those who responded said "significantly" or "considerably"; for Social Studies - 78%; for Science - 73%; and for Mathematics - 59%.

Teachers in the pilot schools were asked which teaching methods they used frequently before and after participating in the Project.

Sixteen different strategies were identified. The anticipated outcome was that Teachers would depend less on lecturing and more on the use of child-centered approaches to teaching. The responses indicated that that is exactly what happened. There was a 26% decrease in the number who frequently used lecturing as a teaching method after participating in the Project. There were increases in the frequency of using the other 15 strategies, many of which are child-centered in nature. Greatest increases were in the frequency of using small group work, project work, role play, laboratory work, AV aids, pupil worksheets, and specially prepared learning aids. The shifts on all items reflect desirable changes in accord with the anticipated Project outcomes ranging from +11% to +48%. Table 3 below shows the degree of shift for each item.

Table 3

Degree of Shift in Frequency of Use of Various Teaching Methodologies BEFORE and AFTER Participating in the Project

Methods	BEFORE N	BEFORE Number responding "frequently"	BEFORE %	AFTER N	AFTER Number responding "frequently"	AFTER %	SHIFT
a. Lecture, talking to, telling	204	116	57	185	58	31	- 26%
b. Small group work	204	79	39	194	145	75	+ 36%
c. Project work	146	26	18	146	75	51	+ 33%
d. Games	188	68	36	193	102	53	+ 17%
e. Discussion	212	159	75	183	158	86	+ 11%
f. Role play	170	43	25	179	90	50	+ 25%
g. Field trips	177	17	10	169	35	21	+ 11%
h. Lab work	75	12	16	77	43	56	+ 40%
i. Oral reports	66	94	41	171	111	65	+ 24%
j. Problem solving	179	110	61	158	119	75	+ 14%
k. Charts and maps	183	100	55	190	151	79	+ 24%
l. Other AV aids	111	41	37	125	85	68	+ 31%
m. Pupil work-sheets	145	43	30	192	150	78	+ 48%
n. Specially prepared learning aids	153	55	36	160	104	65	+ 29%
o. Debates	75	7	9	88	26	30	+ 21%
p. Community resource people	142	17	12	159	43	27	+ 15%

On-site Interviews

Interviews were held by the External Evaluators with Principals and Teachers in 26 of the 45 pilot schools and with staff members of Teacher Training Colleges in several territories. Principals and Teachers both reported that there were positive changes in teacher behavior. Many Teachers said that they are now more confident in their roles, are better planners, are more enthusiastic about the material they teach, and appreciate having the new curriculum materials available. Principals reported that Teachers are better planners and more willing to try new teaching methods. These findings corroborate what was reported in the questionnaires.

In several schools the Evaluators saw evidence that Teachers had created stimulating learning environments for the pupils, particularly in the areas of Social Studies and Science. Worthy of mention are large visual charts in two classrooms teaching particular topics in Social Studies. These were constructed by the Teachers on their own time and consisted of well chosen, attractive pictures taken from old issues of the National Geographic which were obtained from the local library. Appropriate, informative commentary accompanied each picture. In another school, students had constructed a prize-winning Science exhibit which consisted of two houses, a street, light poles, wiring, and lighting switches. Lights could be turned on and off inside and outside each of the two houses, as well as the street lights out front. Power was obtained by using C-cell batteries and the 6 separate switches were made from safety pins and thumb tacks. And it worked!

Teacher Training College staff reported that unqualified teachers who had participated in the Project and who were

enrolled in the college for training already showed mastery of many teaching skills which apparently were the result of training received under the Project. Students who had taught in pilot schools reported that the Project was helpful to them with regard to their studies and work in both theory and practice.

Review of the 1981 and 1982 mid-Project Internal Evaluation Reports

The External Evaluators in 1981 and 1982 made some observations of classroom teaching in the territories. But it should be remembered that these observations were short and occurred only one time. Even so, some interesting and promising practices were observed. The team noted, *while the teaching methodologies promoted by the Project are relatively new in the participating territories, it was noted that teachers often demonstrated growth in the design and use of child-centered materials and activities as alternatives to the use of more traditional lecture-rote-memory-coercion teaching methods. Furthermore, the team observed more frequent use of varied teaching methodologies and materials which were tailored to the individual needs and differences in students. Often, teachers were observed using teacher-made materials to deal more adequately with the economic, educational, cultural, religious and social diversity represented in the classroom as well as in the large community. Additionally, the team noted improvements in teacher-pupil interaction, a display of a positive attitude about both teaching and learning which enhanced the total learning environment."*

The Evaluation Team for the final evaluation of the Project concludes that as early as 1982 evidence already was

beginning to surface supporting the conclusion that the Project had a positive effect on teacher behavior, an effect envisioned by the Project Paper.

Review of Internal Evaluation Findings, 1985

In the spring of 1985, the Evaluation Specialist of the Project staff conducted a survey of Subject Matter Leaders and Project Implementation Officers. A total of 42 responses was received. They were asked how their education systems in their respective territories would be different as a result of participating in the Project. Of the 42, 22 (52%) indicated in response to open-ended questions that the quality of teaching will be upgraded. In response to what they thought were the most valuable aspects of Project participation, 24 (57%) identified teacher training. In response to the question regarding the extent to which the Project will lead to increased knowledge of the teaching content among all primary teachers, 24 (57%) said that it would be "greatly increased", 21 (50%) said "some increase".

Also in the Spring of 1985, the Internal Evaluation Specialist administered an attitude inventory to teachers in Project and parallel schools in the participating territories to determine whether or not there were more positive attitudes toward teaching, learning, and pupils among Project teachers than among their counterparts in the parallel schools. The results obtained indicated that there were statistically significant differences at both the regional and territorial levels.

At the regional level, the main differences were:

1. greater awareness of the importance of a good general education, and habits of thought and work

2. a more favorable image of pupils -- a greater belief in the willingness of pupils to work, in their politeness and in their making a satisfactory amount of progress -- and more interest in the pupil as an individual

3. more use reported of resource materials and teacher-made teaching aids; more satisfaction with the number of trips out taken by the respondent's class;

4. recognition of a more active role played by the principal in classroom affairs

At the territorial level, the differences noted for individual territories pointed in much the same direction; where, for the Barbados Project school group, it was found that there was.

1. better attendance reported in respondent's school

2. better pupil motivation reported in respondent's school

3. better collaboration reported with respondent's colleagues

4. more confidence reported in respondent's knowledge of content and better self confidence

5. more eagerness reported for the principal to be involved in curriculum matters

and in St. Lucia, where for the Project school group, it was found that:

1. respondents reported more likely to receive ideas from colleagues, and more consensus in objectives in respondents' schools

2. respondents reported more frequent visits to class by people from the community, and more field trips

3. more confidence reported in respondents' knowledge of content

The Team agrees with the Internal Evaluator's conclusion: *"Therefore, the evidence from the Teacher Attitude Inventory is strongly suggestive that reports of a favorable change in attitude amongst the Project teachers are well founded; and that it would be possible with further refinement and development of the instrument, to obtain a much better estimate of the nature and extent of this change."*

Conclusion

Based on the evidence presented above, the External Evaluators conclude that some positive changes in teacher behavior have resulted from participation in the Project. While there have been these changes already, it must be said that it is still too early to judge the full measure of the impact at this time.

Impact on Pupil Performance

The major expectation of the Project was that it would improve student performance at the primary level in the four subject areas. This could justifiably be regarded as the bottom-line of the Project. It is necessary therefore to report and review carefully such evidence - hard and soft - as exists which indicates the outcome of the Project in this area.

Design

Both the Project Paper and the Evaluation Plan dealt with the design that would be employed in measuring improvement in student performance. It is necessary to identify and discuss the basic elements of the design.

Base-line data. It was expected that base-line data on student achievement would be collected just prior to and during the early years of the Project. These data would then be used to judge and determine student gains, if any, at the termination of the Project.

Pre-test/Post-test approach. It was envisaged that the standard pre-test/post-test approach would be used to determine gain scores in the four subject areas.

Pilot - Parallel School strategy. The most critical element of the design was the use of the experimental strategy of having treatment and control groups in order to determine effect. This meant the choice of five pilot schools in each territory in which the curriculum development, inservice training of Teachers, inservice training of Principals and supervision would take

place. Correspondingly five parallel schools would be selected in which the only activity that would take place vis-a-vis the Project would be the testing of the students at the same intervals as in the pilot schools.

Instructions were given for Ministries of Education to match the pilot and parallel schools closely on all dimensions that might be correlated with achievement.

The Internal Evaluation Strategy

The overall internal evaluation strategy for assessing student performance over the life of the Project was to gather baseline data on levels of student achievement at the commencement of the Project and to use those data in a pre-test/post-test comparison at the end of the Project to determine gain scores.

These data would be assessed in the pilot - parallel schools paradigm to determine whether the gains were as a result of the Project "treatment". There can be no question that the overall evaluation design is sound. What is important is to identify the assumptions on which this design is based and the extent to which these assumptions were valid in the actual implementation of the Project. The assumptions on which the Evaluation Design was based could be summarized and commented on as follows:

1. That it was feasible to collect baseline data at the beginning of the Project concerning student achievement which could be used in a pre-test/post-test design. Until the core syllabi were determined explicitly or implicitly it was not feasible to collect baseline student achievement data since the tests had to be based

on a Project curriculum if it were going to have any validity. It was not possible to develop tests before the curricula were in place. Again there are no standardized tests for Caribbean primary schools that could be used as impartial independent measures for both Project and parallel schools. It was not until 1983 that appropriate tests were developed. This might probably have happened earlier if the untimely death of the first Internal Evaluator had not occurred.

2. That the pre- and post-tests would be identical instruments. Tests were developed in all four subject areas to be used in pre-tests - post-tests in 1983 and 1984.

   However, after administration and analysis of the test results in 1983, substantial revisions had to be done to the tests in Language Arts and Science. This means that only the tests in Mathematics and Social Studies can be meaningfully interpreted within the framework of the original Evaluation Design.

3. That the schools could be matched on all the different dimensions that are correlated with achievement and that the selection done by the Ministries of Education would be precisely according to the instructions. The strategy of matching usually assumes a wide choice of pairs. In the smallest territories like BVI and Montserrat this is difficult to achieve since the total number of public primary schools is only 14 and 12 respectively. While all territories tried to achieve this comparability, at best this could only be regarded as a rough approximation.

4. That there was/would be no spread of the treatment from pilot to parallel schools. In the smallest territories - BVI and Montserrat - this isolation of parallel and pilot schools could not be sustained. There was considerable spread of treatment to parallel schools as a result of transfers of principals and teachers, inclusion of both in workshops, and in the use of Project materials. Due to factors such as geographic proximity, common church ownership and interest there was a fair amount of spread between pilot schools and three of the parallel schools in St. Lucia. To a lesser extent this happened in other countries. The net result of this process would be to increase the chances of a null result in the comparison of student performance in pilot and parallel schools.

5. That the pilot schools would actually apply the treatment. The overall evidence is that in most of the territories Teachers and Primary Principals participated in all the training and orientation provided by the Project and then used the materials and strategies in the classroom. In Antigua, however, there are indications that while Teachers and Principals did participate in all of the orientation and training exercises there was some reluctance to use the Project materials and strategies totally. In the main these were used as resource materials and not the main focus of teaching. This was done out of their fear that the students might not be able to compete successfully in national examinations which were not based on the Project materials. While the overall Project design might not be affected, comparison of pilot and parallel schools in Antigua may be affected.

Analysis of Results

If the External Evaluation Team were to insist only on data and analyses consistent with the original Evaluation Design then only pre-test and post-test data for 1983 and 1984 for Mathematics and Social Studies would be examined. However the gain score approach is not the only way in which evidence can be gathered on student performance. It is reasonable and valid to examine the 1984 student achievement scores of pupils in all participating territories and in all 4 Subject areas and make reasonably valid inferences about performance as related to Project treatment. Reasonable faith can be put in the 1984 testing since by that time the instruments themselves had been subject to refinement based on the 1983 experience.

Consequently the External Evaluation Team decided to examine the student performance data generated by the Internal Evaluation Officer, from three perspectives:

1. the pre-tests and post-tests 1983 and 1984 in Mathematics and Social Studies,

2. the 1984 achievement tests in all four subject areas - pilot versus parallel schools in the nine territories and

3. the relative achievement of students in the different territories in the four subject areas

The Team took the position that consistent findings from different perspectives are more likely to be valid than any single set of findings regardless of the methodological purity

Pre-test/Post tests: 1983 and 1984. The Internal Evaluation Officer reported that "*An attempt was made to collect a form of longitudinal data by administering each test in 1983 to pupils who had completed the work covered in the test and to pupils who had not, i.e., pupils at the end of their preceding year in school. This served two purposes. First, by administering a test on which neither group had received specific instructions, it gave us an opportunity to assess whether the groups were in fact comparable. Secondly, it gave us two opportunities (where the tests survived unchanged from 1983 to 1984) to assess the size of the gains in each group*". Before reporting the results it is important to comment on the strategy used in the tests themselves.

It is necessary to make a distinction between pre-test and post-test and pre-instruction and post-instruction testing. The two need not be the same. The pre-test/post-test stategy assumes not only that there be pre-instruction testing and post-instruction testing but that the same students are tested on both occasions, unless every precaution is taken to establish a completely homogeneous group in the first instance so that any subset chosen for testing is identical with other possible subsets.

While the comparison of the performance of children at the end of grade 2, for example, with those at the end of grade 3 on the same test is useful and may yield some useful indication, one should not treat that as a pre-test/post-test situation.

The strategy used by the Evaluation Officer to develop the tests was sound. However, as he and the Project staff recognized, by only choosing content that was common to pilot and parallel schools significant areas of variance between the two might well be omitted. This may indeed eliminate

areas in which the wider scope and greater detail of the Project materials may have had their greatest impact. The content of the tests would tend to produce a null result since what is actually being tested is the qualitative impact of the Project and not its quantitative aspects.

The most serious methodological weakness of the internal evaluation data or student performance gains between 1983 and 1984 is that the performance of the same students is not evaluated over the two testing periods. The progress of each individual student in each subject area examined was not followed from 1983 to 1984. This constitutes a substantial defect. The External Team was therefore reluctant to accept these data as showing greater improvement in student performance in Project versus parallel schools.

Despite the fact that the defect was consistent in that it was evident for both Project and Parallel school student performance evaluation, the Team was very cautious about drawing any inference from these data.

Tables 4 and 5 below show some of the data reported by the Internal Evaluation.

TABLE 4

MATHEMATICS GAINS 1983 TO 1984

		Pilot Schools			Parallel Schools		
		Pre-test	Post-test	Gain	Pre-test	Post-test	Gain
Year 2-3	Mean	9.43	12.59	3.16	9.12	11.32	2.20
	S.D.	5.27	6.25		5.28	6.10	
	N.	390	885		361	647	

		Pilot Schools			Parallel Schools		
		Pre-test	Post-test	Gain	Pre-test	Post-test	Gain
Year 3-4	Mean	9.63	11.30	1.67	10.04	9.68	- .36
	S.D.	5.02	5.74		5.07	5.62	
	N.	441	796		326	675	

TABLE 5

SOCIAL STUDIES GAIN SCORES 1983-1984

		Pilot Schools			Parallel Schools		
		Pre-test	Post-test	Gain	Pre-test	Post-test	Gain
Year 2-3	Mean	10.36	11.93	1.57	9.39	10.67	1.28
	S.D.	4.09	5.49		3.55	5.34	
	N.	252	517		267	547	
Year 3-4	Mean	10.05	15.88	5.83	10.27	13.05	2.78
	S.D.	4.38	6.50		4.27	5.75	
	N.	280	553		267	553	

Sampling. Before commenting on the data in the table it is necessary to make some reference to the sampling strategy used by the Internal Evaluator. In 1983 a sample of 1:4 students was used. In every Project and parallel school one out of every four children in each class was randomly selected to sit one of the three subjects being done in the Project. Every child in each class was only tested in one subject area. In the 1984 testing the sample size was doubled to 1:2 children. This was done in order to increase the size of N for analyses within territories and within year groups. In the opinion of the Evaluation Team a more appropriate strategy would have been to use a 1:3 sample in both years. That is, every third child in each class would have been tested in one of the three subjects being taught

in the Project schools. This would have followed the natural pattern of the Project, provided adequate numbers, and would have been more easily administered in the testing situation.

In the data reported by the Internal Evaluator, children in 1984 who did not sit the pre-test in 1983 where included in the post-test results, hence the increase in the size of N between tests.

While the data in Tables 4 and 5 show that in each instance Project school children recorded greater improvements than their parallel school peers in both Mathematics and Social Studies in their movement from Years 2 to 3 and 3 to 4 respectively, because of the methodological and sampling defects the Team cannot accept any positive inferences unless these are strongly corroborated by other modes of analysis.

1984 testing. In examining the internal evaluation data on student performance in 1984 the External Evaluation Team looked at the performance of pilot versus parallel school children in each country in the light of the background factors which the Team found to be operative in each territory. The Team felt that this would be a more instructive approach than a Project versus non-Project comparison with no reference to territory. Given the size of N which would be close to 7000 all differences would likely be significant. Moreover, a territory by territory approach should be instructive to all partners to the Project.

The central Project staff produced and administered the following tests in 1984 in each year group of the Project:

Language Arts
English Test 1 in Listening
English Test 2 in Reading
Writing Test

Mathematics
One test

Social Studies
One test

Science
Science Test 1
Science Test 2

For each territory the performance of Project versus parallel school pupils will be shown in a Table reporting the results on each test, followed by comments by the Evaluation Team.

1. ANTIGUA

Table 6 shows the performance of Project and parallel school pupils in Antigua in Language Arts, Mathematics and Social Studies.

It can be seen in Table 6 that in Language Arts, except for students in year 1 on the Writing tests, there are no significant differences between the pupils in Project and parallel schools. In Mathematics, Project school students performed significantly better in years 2 and 3 than their peers in the parallel schools. In Social Studies, pupils in the Project schools in each year except year 1 performed significantly better than their peers in the parallel schools.

It would appear that in Antigua the Social Studies curriculum and materials seem to have made the greatest impact and the Language Arts little if any at all. Given the fact that the Language Arts materials would be at greatest odds with the national curriculum and its relationship to common entrance the results reported there are not suprising

TABLE 6

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

ANTIGUA

		Project	Non-Project	Diff.	Sig.
1. English Test 1					
Year 1	Mean	13.40	13.39	0.01	n.s
	S.D.	4.29	4.94		
	N	89	80		
Year 2	Mean	15.15	15.95	-0.80	n.s
	S.D.	4.88	4.57		
	N	87	78		
Year 3	Mean	24.97	25.04	-0.07	n.s
	S.D.	6.78	8.59		
	N	77	83		
Year 4	Mean	29.19	28.41	0.78	n.s
	S.D.	8.71	8.54		
	N	85	82		
2. English Test 2					
Year 1	Mean	16.47	17.51	-1.04	n.s
	S.D.	7.73	8.33		
	N	88	79		
Year 2	Mean	23.06	21.50	1.56	n.s
	S.D.	8.35	8.84		
	N	88	80		
Year 3	Mean	13.22	14.01	-0.79	n.s
	S.D.	4.34	5.72		
	N	76	83		
Year 4	Mean	15.90	17.34	-1.44	n.s
	S.D	6.52	8.75		
	N	84	82		
3. Test of Writing					
a. Writing Tests					
Year 1	Mean	0.47	0.24	0.23	0.02
	S.D.	0.71	0.51		
	N	88	79		
Year 2	Mean	0.67	0.44	0.23	n.s.
	S.D.	0.86	0.74		
	N	88	80		
Year 3	Mean	0.75	0.90	-0.15	n.s.
	S.D.	1.32	1.21		
	N	76	83		
Year 4	Mean	1.26	1.02	0.24	n.s.
	S.D.	1.46	1.35		
	N	84	82		

		Project	Non-Project	Diff.	Sig.
b. Letter Writing					
Year 3	Mean	3.58	2.93	-0.65	n.s
	S.D.	2.38	2.27		
	N	76	83		
Year 4	Mean	4.62	3.91	0.71	n.s
	S.D.	2.40	2.38		
	N	84	82		
4. Mathematics					
Year 1	Mean	11.11	10.40	0.71	n.s
	S.D.	4.14	4.18		
	N	87	83		
Year 2	Mean	14.99	12.39	2.61	0.01
	S.D.	6.19	5.30		
	N	98	79		
Year 3	Mean	10.79	9.05	1.74	0.05
	S.D.	5.36	4.75		
	N	82	86		
Year 4	Mean	7.34	7.55	-0.21	n.s
	S.D.	3.91	4.48		
	N	76	85		
5. Social Studies					
Year 1	Mean	13.26	14.45	-1.19	n.s
	S.D.	5.45	5.71		
	N	86	84		
Year 2	Mean	13.65	11.68	1.97	0.01
	S.D.	4.26	4.28		
	N	98	78		
Year 3	Mean	12.52	9.30	3.22	0.001
	S.D.	5.36	4.23		
	N	82	84		
Year 4	Mean	12.13	10.65	1.48	0.05
	S.D.	5.12	3.73		
	N	77	85		

2. BARBADOS

Table 7 shows the performance of Project and parallel schools pupils in Barbados in Language Arts, Mathematics and Science.

It can be seen from Table 7 that in Language Arts pupils in Project schools performed significantly better than their peers in parallel schools in Listening skills in year 2, Reading in years 2 and 4, and Writing in year 4. In year 2 parallel school children performed significantly better than Project children in Writing. In Mathematics, only in year 1 was the performance of Project children significantly better than parallel school children. In Science Project children in year 2 performed significantly better on both tests and significantly better on Test 2 in Year 4, than did pupils in parallel schools

From these results it would appear that in Barbados the Science curriculum made the greatest impact on student performance, Language Arts next and Mathematics the least. Given the fact that Barbados from the commencement had well developed curricula in all three subject areas and that the core curricula developed by the Project more closely resembled that of the Barbados curricula than those of other territories it is not surprising that the differences shown are not overwhelming and that it is Science that had a significant impact.

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

BARBADOS

1. English Test 1

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	17.01	16.45	0.56	n.s.
	S.D.	4.26	4.92		
	N	149	134		
Year 2	Mean	19.93	18.55	1.38	0.01
	S.D.	4.57	4.36		
	N	165	163		
Year 3	Mean	32.10	31.79	0.31	n.s.
	S.D.	9.38	9.87		
	N	169	156		
Year 4	Mean	36.89	35.23	1.66	n.s.
	S.D.	7.85	8.26		
	N	169	171		

2. English Test 2

Year 1	Mean	31.29	29.13	2.16	n.s.
	S.D.	10.46	11.22		
	N	149	131		
Year 2	Mean	37.27	31.96	5.31	0.001
	S.D.	7.64	10.39		
	N	157	162		
Year 3	Mean	18.33	17.60	0.73	n.s.
	S.D.	6.82	6.37		
	N	170	156		
Year 4	Mean	21.76	19.96	1.80	0.05
	S.D.	7.00	7.64		
	N	174	163		

a. Writing Tests

Year 1	Mean	1.00	0.83	0.17	n.s.
	S.D.	1.26	1.04		
	N	149	131		
Year 2	Mean	1.07	1.35	-0.28	0.05
	S.D.	1.23	1.27		
	N	157	162		
Year 3	Mean	1.26	1.36	-0.10	n.s.
	S.D.	1.61	1.72		
	N	170	156		
Year 4	Mean	2.48	1.79	0.69	0.001
	S.D.	1.76	1.84		
	N	174	163		

b. Letter Writing

Year 3	Mean	4.32	4.72	-0.40	n.s.
	S.D.	2.62	2.33		
	N	170	156		
Year 4	Mean	5.31	5.45	-0.14	n.s.
	S.D.	2.33	2.08		
	N	174	163		

3. Mathematics

Year 1	Mean	17.76	16.09	1.67	0.05
	S.D.	6.24	6.69		
	N	148	141		
Year 2	Mean	18.52	18.63	-0.11	n.s
	S.D.	6.37	6.48		
	N	147	157		
Year 3	Mean	15.36	15.78	-0.42	n.s.
	S.D.	7.68	6.77		
	N	185	142		
Year 4	Mean	14.52	13.74	0.78	n.s.
	S.D.	6.86	6.23		
	N	159	172		

6. Science Test 1

Year 1	Mean	24.86	24.50	6.06	n.s.
	S.D.	5.14	6.06		
	N	145	135		
Year 2	Mean	27.85	26.23	1.62	0.02
	S.D.	5.53	5.82		
	N	171	151		
Year 3	Mean	28.39	29.14	-0.75	n.s.
	S.D.	5.53	5.37		
	N	178	126		

7. Science Test 2

Year 2	Mean	18.10	16.86	1.24	0.01
	S.D.	4.27	4.27		
	N	169	154		
Year 3	Mean	19.53	19.45	0.08	n.s.
	S.D.	4.22	4.33		
	N	179	128		
Year 4	Mean	22.47	20.57	1.90	0.001
	S.D.	4.48	4.33		
	N	160	177		

3. BELIZE

Table 8 shows the performance of Project and parallel school pupils in Language Arts, Mathematics and Science in Belize.

It can be seen from Table 8 that in Language Arts, except for year 1, Listening, Year 3 and 4 Reading, and Year 2 Writing, and Year 4 Letter Writing, students in Project schools performed significantly better than did students in parallel schools. In Mathematics students in Project schools performed significantly better than their parallel school peers in all four years. In Science, except in Year 3 on test 1 and Year 2 on test 2 students in Project schools performed significantly better than did those in the parallel schools.

From the results in Table 8 it is evident that the Project curriculum and materials made a significant impact on student performance in all three subjects. The greatest impact seems to have been made by Mathematics. It is to be noted that Belize is one of the countries in which the External Evaluation Team found little evidence of "contamination" between Project and parallel schools

TABLE 8

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

BELIZE

1. English Test 1

		Project	Non-Project	Diff	Sig.
Year 1	Mean	15.07	15.68	-0.61	n.s.
	S.D.	3.87	3.78		
	N	139	109		
Year 2	Mean	16.53	15.10	1.43	0.01
	S.D.	3.94	3.88		
	N	134	154		
Year 3	Mean	27.15	24.21	2.86	0.001
	S.D.	6.65	7.02		
	N	155	131		
Year 4	Mean	30.74	27.43	3.31	0.001
	S.D.	7.91	7.35		
	N	136	117		

2. English Test 2

Year 1	Mean	22.28	18.35	3.93	0.001
	S.D.	6.42	6.71		
	N	138	117		
Year 2	Mean	28.09	22.68	5.41	0.001
	S.D.	8.31	7.50		
	N	135	155		
Year 3	Mean	14.46	13.75	0.71	n.s.
	S.D.	5.16	5.25		
	N	153	134		
Year 4	Mean	16.60	15.65	0.95	n.s.
	S.D.	4.53	5.44		
	N	133	115		

a. Writing Tests

Year 1	Mean	0.46	0.21	0.25	0.01
	S.D.	0.86	0.61		
	N	138	117		
Year 2	Mean	0.59	0.54	0.05	n.s.
	S.D.	1.01	0.85		
	N	135	155		
Year 3	Mean	1.61	0.75	0.86	0.001
	S.D.	2.11	1.33		
	N	153	134		
Year 4	Mean	1.60	1.02	0.58	0.01
	S.D.	1.66	1.50		
	N	133	115		

b. Letter Writing

		Project	Non-Project	Diff.	Sig.
Year 3	Mean	4.48	3.10	1.38	0.001
	S.D.	2.38	2.36		
	N	153			
Year 4	Mean	4.62	4.10	0.52	n.s.
	S.D.	2.33	2.50		
	N	133	115		

3. Mathematics

Year 1	Mean	15.34	11.61	3.65	0.001
	S.D.	6.25	4.22		
	N	143	122		
Year 2	Mean	16.93	12.98	3.95	0.001
	S.D.	5.85	5.29		
	N	135	146		
Year 3	Mean	13.45	12.08	1.37	0.05
	S.D.	6.02	5.11		
	N	151	128		
Year 4	Mean	12.35	10.83	1.52	0.01
	S.D.	4.93	4.20		
	N	136	116		

4. Science Test 1

Year 1	Mean	20.89	19.01	1.88	0.01
	S.D.	5.62	4.51		
	N	136	118		
Year 2	Mean	22.88	21.02	1.86	0.01
	S.D.	5.12	4.79		
	N	131	166		
Year 3	Mean	25.03	23.86	1.17	n.s.
	S.D.	5.06	5.06		
	N	151	132		

5. Science Test 2

Year 2	Mean	16.67	17.19	-0.52	n.s.
	S.D.	3.38	3.89		
	N	132	151		
Year 3	Mean	18.07	16.81	1.26	0.01
	S.D.	4.05	3.48		
	N	153	136		
Year 4	Mean	20.62	18.14	2.48	0.001
	S.D.	5.95	5.55		
	N	138	117		

4. BRITISH VIRGIN ISLANDS

Table 9 shows the performance of Project and parallel school children in British Virgin Islands in Language Arts and Mathematics.

Table 9 shows that students in Project schools performed better than their parallel school pears in four of the fourteen Language Arts tests and in two of the four Maths tests. BVI is one of the territories in which there was a lot of evidence to indicate that the Project materials and training spread to parallel schools sufficiently to narrow any difference between them. Probably of greater significance is the fact that the method of selecting schools as pilot and parallel was likely to make a difference to the comparison.

BVI chose the large schools as Project schools or parallel schools. In terms of the Ministry's rating of the schools' performance, say, the primary 5 examination, three top schools and two schools normally at the bottom of the range constitute the parallel schools while schools in the middle of the range constitute the Project schools.

The results, showing only modest impact, seem to be a reflection of both the spread effect and the method of selection of Project schools, and seem to reflect an underestimation of Project impact. This matter will be discussed again in the next section.

TABLE 9

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

BRITISH VIRGIN ISLANDS

1. English Test 1

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	14.28	14.53	-0.25	n.s.
	S.D.	3.38	3.72		
	N	99			
Year 2	Mean	17.17	16.92	0.26	n.s.
	S.D.	4.23	3.50		
	N	115	13		
Year 3	Mean	28.66	22.80	5.86	0.01
	S.D.	6.96	8.20		
	N	80	15		
Year 4	Mean	32.19	30.25	1.94	n.s.
	S.D.	7.10	7.33		
	N	99	16		

2. English Test 2

Year 1	Mean	21.56	23.87	-2.31	n.s.
	S.D.	7.70	9.02		
	N	99	15		
Year 2	Mean	29.33	32.23	-2.90	n.s.
	S.D.	8.78	10.24		
	N	75	13		
Year 3	Mean	17.60	14.90	2.70	0.05
	S.D.	5.05	4.70		
	N	81	21		
Year 4	Mean	19.93	18.44	1.49	n.s.
	S.D.	5.59	4.61		
	N	82	16		

a. Writing Tests

Year 1	Mean	0.54	0.73	-0.19	n.s.
	S.D.	0.90	0.77		
	N	99	15		
Year 2	Mean	0.84	1.23	-0.39	n.s.
	S.D.	1.10	1.23		
	N	75	13		
Year 3	Mean	1.86	1.05	0.81	0.05
	S.D.	1.82	1.43		
	N	81	21		
Year 4	Mean	2.44	2.13	0.31	n.s.
	S.D.	1.76	1.73		
	N	82	16		

b. Letter Writing

		Project	Non-Project	Diff.	Sig.
Year 3	Mean	4.51	3.00	1.51	0.02
	S.D.	2.46	2.51		
	N	81	21		
Year 4	Mean	4.85	5.44	-0.59	n.s.
	S.D.	2.24	2.15		
	N	82	16		

3. Mathematics

Year 1	Mean	15.43	12.00	3.43	0.02
	S.D.	4.37	5.13		
	N	98	15		
Year 2	Mean	16.21	12.67	3.64	0.05
	S.D.	4.87	6.30		
	N	85	15		
Year 3	Mean	14.43	11.93	2.50	n.s.
	S.D.	5.80	4.99		
	N	104	14		
Year 4	Mean	12.78	13.33	-0.55	n.s.
	S.D.	4.31	4.47		
	N	89	15		

5. DOMINICA

Table 10 shows the performance of students in Dominica in Project and parallel schools in English, Mathematics and Social Studies.

It can be seen from Table 10 that in Language Arts Project school children performed significantly better than their parallel school peers on 9 of the 14 tests, on all four Mathematics tests, and on three of the four Social Studies tests.

It would be fair to conclude that in Dominica the Project seems to have made substantial impact on student achievement in all subject areas, with the greatest impact being made in Mathematics.

It should be noted that Dominica used the Project to improve rural primary education that country. In its selection of Project schools the Ministry of Education did not include any schools in the capital, Roseau. This was deliberate. The rationale was that Roseau schools continually receive the best of whatever is available in the normal running of things, hence through the Project attention would be paid to rural schools.

TABLE 10

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

DOMINICA

1. English Test 1

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	11.78	11.95	-0.17	n.s.
	S.D.	3.29	3.86		
	N	74	58		
Year 2	Mean	13.90	13.93	-0.03	n.s.
	S.D.	3.08	4.09		
	N	68	67		
Year 3	Mean	22.88	19.00	3.88	0.001
	S.D.	6.54	5.62		
	N	93	66		
Year 4	Mean	26.88	19.00	7.88	0.001
	S.D.	7.42	6.56		
	N	102	68		

2. English Test 2

Year 1	Mean	19.24	15.14	4.10	0.01
	S.D.	8.10	7.87		
	N	83	59		
Year 2	Mean	24.00	19.67	4.33	0.001
	S.D.	7.17	8.03		
	N	95	56		
Year 3	Mean	13.55	10.57	2.98	0.001
	S.D.	5.13	4.48		
	N	89	53		
Year 4	Mean	15.75	10.97	4.88	0.001
	S.D.	5.43	5.13		

a. Writing Tests

Year 1	Mean	0.00	0.00	0.00	n.s.
	S.D.	0.00	0.00		
	N	83	59		
Year 2	Mean	0.06	0.00	0.06	n.s.
	S.D.	0.35	0.00		
	N	95	58		
Year 3	Mean	0.21	0.04	0.17	0.05
	S.D.	0.73	0.27		
	N	89	53		
Year 4	Mean	0.70	0.01	0.69	0.001
	S.D.	1.51	0.11		
	N	97	78		

Mathematics

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	11.44	9.32	2.12	0.01
	S.D.	4.50	3.68		
	N	79	60		
Year 2	Mean	12.28	9.29	3.61	0.001
	S.D.	5.69	3.61		
	N	85	76		
Year 3	Mean	8.51	6.57	1.94	0.01
	S.D.	5.07	3.66		
	N	100	70		
Year 4	Mean	8.30	5.53	2.77	0.001
	S.D.	3.96	2.87		
	N	84	89		

Social Studies

Year 1	Mean	13.46	12.23	1.23	n.s.
	S.D.	6.32	5.38		
	N	68	60		
Year 2	Mean	12.27	8.64	3.63	0.001
	S.D.	4.28	3.97		
	N	86	75		
Year 3	Mean	10.35	7.39	2.96	0.001
	S.D.	6.14	5.02		
	N	96	72		
Year 4	Mean	14.48	9.26	5.22	0.001
	S.D.	5.07	2.74		
	N	102	88		

6. MONTSERRAT

Table 11 shows the performance of Project and parallel school students in Montserrat in Language Arts, Mathematics and Social Studies.

Table 11 indicates that parallel school children performed significantly better in Year 2 Reading than Project children and that in Year 4 Social Studies the situation was reversed. These are the only two differences that were significant. The External Evaluation Team is of the view that it would be an error to interpret these results to mean that the Project had no impact on student achievement in Montserrat. On the contrary, it would appear that the impact was very significant, and that these materials, syllabuses and training were in fact generalized to the entire system before the conclusion of the Project, hence the null result.

TABLE 11

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

MONTSERRAT

		Project	Non-Project	Diff.	Sig.
1. English Test 1					
Year 1	Mean	13.42	14.58	-1.16	n.s.
	S.D.	4.30	4.07		
	N	38	40		
Year 2	Mean	15.49	15.76	-0.27	n.s.
	S.D.	3.27	3.90		
	N	45	41		
Year 3	Mean	25.98	27.38	-1.40	n.s.
	S.D.	7.33	6.67		
	N	42	40		
Year 4	Mean	30.77	31.65	-0.88	n.s.
	S.D.	7.06	6.96		
	N	39	43		
2. English Test 2					
Year 1	Mean	24.71	25.78	-1.07	n.s.
	S.D.	7.33	7.45		
	N	34	41		
Year 2	Mean	29.67	32.59	-2.92	0.05
	S.D.	5.61	6.61		
	N	39	39		
Year 3	Mean	16.94	15.03	1.91	n.s.
	S.D.	4.66	5.60		
	N	33	35		
Year 4	Mean	18.09	18.66	-0.57	n.s.
	S.D.	4.57	5.43		
	N	32	32		
a. Writing Tests					
Year 1	Mean	0.71	0.32	0.39	n.s.
	S.D.	0.99	0.75		
	N	34	41		
Year 2	Mean	1.05	0.92	0.13	n.s.
	S.D.	0.99	0.97		
	N	39	39		
Year 3	Mean	0.55	0.77	-0.22	n.s.
	S.D.	1.37	1.35		
	N	33	35		
Year 4	Mean	1.50	2.09	-0.59	n.s.
	S.D.	1.58	2.10		
	N	32	32		
b. Letter Writing					
Year 3	Mean	4.91	4.06	0.85	n.s.
	S.D.	1.93	2.52		
	N	33	35		
Year 4	Mean	5.88	5.69	0.19	n.s.
	S.D.	1.90	1.86		
	N	32	32		
3. Mathematics					
Year 1	Mean	14.34	15.58	-1.24	n.s.
	S.D.	5.80	6.03		
	N	35	45		
Year 2	Mean	17.08	16.34	0.74	n.s.
	S.D.	5.18	6.18		
	N	40	38		
Year 3	Mean	14.30	14.72	-0.42	n.s.
	S.D.	5.25	6.10		
	N	43	43		
Year 4	Mean	11.00	11.50	-0.50	n.s.
	S.D.	4.85	4.99		
	N	46	44		
4. Social Studies					
Year 1	Mean	18.16	17.50	0.66	n.s.
	S.D.	4.10	5.70		
	N	37	46		
Year 2	Mean	15.58	15.95	-0.37	n.s.
	S.D.	4.07	4.31		
	N	40	37		
Year 3	Mean	13.32	12.56	0.76	n.s.
	S.D.	4.50	3.87		
	N	44	43		
Year 4	Mean	16.46	14.05	2.41	0.02
	S.D.	4.82	4.08		
	N	46	44		

7. ST. KITTS/NEVIS

Table 12 shows the performance of pupils in Project and parallel schools in St. Kitts/Nevis on tests in Language Arts, Mathematics and Science.

As is evident from Table 12, Project school pupils performed significantly better than their parallel school peers in Years 1, 3, and 4 of English Test 1, Years 1 and 3 of English Test 2; on all Mathematics tests; and on Year 1 of Science Test 1 and Years 2 and 3 on Science Test 2. It would appear that the greatest impact by the Project in St. Kitts/Nevis is in respect to Mathematics performance.

While the impact of the Project seems substantial it should be noted that in St. Kitts/Nevis there was a significant turnover of personnel at all levels except the PIO. This turnover had a destabilizing impact on the Project implementation in that country.

TABLE 12

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

ST. KITTS-NEVIS

1. English Test 1

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	11.84	10.00	1.84	0.01
	S.D.	3.66	5.00		
	N	87	89		
Year 2	Mean	11.78	12.37	0.66	n.s.
	S.D.	4.93	4.47		
	N	124	84		
Year 3	Mean	26.72	21.79	4.93	0.001
	S.D.	6.85	8.01		
	N	148	76		
Year 4	Mean	28.98	23.04	5.94	0.001
	S.D.	9.19	8.11		
	N	114	114		

2. English Test 2

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	15.49	12.87	2.62	0.05
	S.D.	8.18	7.29		
	N	87	87		
Year 2	Mean	20.44	18.51	1.93	n.s.
	S.D.	10.31	10.44		
	N	115	78		
Year 3	Mean	14.58	12.58	2.00	0.02
	S.D.	4.97	5.98		
	N	106	78		
Year 4	Mean	16.40	14.86	1.54	n.s.
	S.D.	6.68	7.01		
	N	103	76		

a. Writing Tests

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	0.02	0.07	-0.05	n.s.
	S.D.	0.15	0.30		
	N	87	87		
Year 2	Mean	0.18	0.22	-0.04	n.s.
	S.D.	0.65	0.57		
	N	115	78		
Year 3	Mean	0.59	0.54	0.05	n.s.
	S.D.	1.18	1.21		
	N	106	78		
Year 4	Mean	1.27	0.91	0.36	n.s.
	S.D.	1.81	1.71		
	N	103	76		

b. Letter Writing

		Project	Non-Project	Diff.	Sig.
Year 3	Mean	3.24	2.85	0.39	n.s.
	S.D.	1.91	2.30		
	N	106	78		
Year 4	Mean	4.21	3.87	0.34	n.s.
	S.D.	2.36	2.35		
	N	103	76		

3. Mathematics

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	10.93	7.73	3.20	0.001
	S.D.	5.89	5.00		
	N	104	86		
Year 2	Mean	11.58	9.41	2.17	0.05
	S.D.	6.03	6.52		
	N	111	74		
Year 3	Mean	11.36	9.05	2.31	0.01
	S.D.	4.24	5.30		
	N	101	76		
Year 4	Mean	10.02	6.64	3.38	0.001
	S.D.	4.81	4.25		
	N	108	78		

4. Science Test 1

		Project	Non-Project	Diff.	Sig.
Year 1	Mean	21.69	15.87	5.82	0.001
	S.D.	6.18	7.04		
	N	85	70		
Year 2	Mean	21.10	20.45	0.65	n.s.
	S.D.	6.37	6.61		
	N	126	86		
Year 3	Mean	23.41	22.52	0.89	n.s.
	S.D.	4.72	7.41		
	N	109	79		

5. Science Test 2

		Project	Non-Project	Diff.	Sig.
Year 2	Mean	16.33	14.41	1.84	0.001
	S.D.	3.52	4.42		
	N	98	76		
Year 3	Mean	17.32	15.67	1.68	0.01
	S.D.	3.66	4.38		
	N	109	78		
Year 4	Mean	19.88	19.21	0.67	n.s.
	S.D.	4.42	3.92		
	N	103	86		

8. ST. LUCIA

Table 13 shows the performance of pupils in St. Lucia on the Language Arts, Science and Social Studies tests.

It can be seen from Table 13 that only in Year 1 on English Test 1, and in Year 2 on English Test 2 did Project school pupils perform significantly better than their parallel school peers on any Language Arts tests. On the other hand parallel school students performed better on the Year 2 Reading test. In Social Studies Project school students in three of the four years performed significantly better than their parallel school peers. In Science on Test I in year 1 and on Test 2 in years 3 and 4 Project school students performed significantly better.

The above suggests that in St. Lucia the Project had its greatest impact on student performance in Social Studies and the least impact in Language Arts. It was reported to the Evaluation Team that at the beginning teachers did not use the Language Arts materials or only began to use them after their revision. Again there was evidence of spread of Project material and training to three of the five parallel schools during the life of the Project. That the Project seems to have made only modest impact in St. Lucia must therefore be interpreted cautiously.

TABLE 13

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

ST. LUCIA

		Project	Non-Project	Diff.	Sig.
1. English Test 1					
Year 1	Mean	16.02	13.79	2.23	0.001
	S.D.	5.04	4.74		
	N	185	262		
Year 2	Mean	15.17	15.56	-0.39	n.s.
	S.D.	5.33	6.32		
	N	190	249		
Year 3	Mean	24.81	24.61	0.20	n.s.
	S.D.	8.41	11.21		
	N	199	219		
Year 4	Mean	28.37	26.95	1.42	n.s.
	S.D.	9.49	11.26		
	N	235	244		
2. English Test 2					
Year 1	Mean	23.79	23.49	0.30	n.s.
	S.D.	11.09	10.11		
	N	159	243		
Year 2	Mean	24.55	28.27	-3.72	0.01
	S.D.	11.74	10.68		
	N	158	229		
Year 3	Mean	14.55	15.57	-1.02	n.s.
	S.D.	6.56	6.34		
	N	200	240		
Year 4	Mean	18.72	18.36	0.36	n.s.
	S.D.	6.97	7.46		
	N	223	251		
a. Writing Tests					
Year 1	Mean	0.58	0.33	0.25	0.01
	S.D.	0.91	0.75		
	N	159	243		
Year 2	Mean	0.48	0.67	-0.19	n.s.
	S.D.	0.96	1.07		
	N	158	229		
Year 3	Mean	1.08	0.99	0.09	n.s.
	S.D.	1.44	1.42		
	N	200	240		
Year 4	Mean	1.46	1.38	0.08	n.s.
	S.D.	1.82	1.53		
	N	231	247		
b. Letter Writing					
Year 3	Mean	3.50	3.70	-0.20	n.s.
	S.D.	2.48	2.42		
	N	200	240		
Year 4	Mean	4.44	4.45	-0.01	n.s.
	S.D.	2.73	2.35		
	N	231	247		
3. Social Studies					
Year 1	Mean	19.51	16.81	2.70	0.001
	S.D.	5.46	5.97		
	N	148	261		
Year 2	Mean	15.03	12.87	2.16	0.001
	S.D.	5.77	5.70		
	N	178	248		
Year 3	Mean	12.28	11.59	0.69	n.s.
	S.D.	5.38	6.06		
	N	176	259		
Year 4	Mean	17.58	15.47	2.11	0.001
	S.D.	6.99	6.55		
	N	230	260		
4. Science Test 1					
Year 1	Mean	23.26	21.05	2.21	0.001
	S.D.	5.36	6.21		
	N	179	244		
Year 2	Mean	25.06	24.29	0.77	n.s.
	S.D.	5.87	6.10		
	N	194	235		
Year 3	Mean	24.78	24.60	0.18	n.s.
	S.D.	6.09	5.48		
	N	165	272		
5. Science Test 2					
Year 2	Mean	18.15	17.38	0.77	n.s.
	S.D.	4.71	4.34		
	N	183	223		
Year 3	Mean	19.78	18.70	1.08	0.02
	S.D.	4.48	4.57		
	N	186	266		
Year 4	Mean	22.83	19.02	2.81	0.001
	S.D.	4.72	4.40		
	N	235	255		

9. ST. VINCENT

Table 14 shows the performance of pupils in Project and parallel schools in St. Vincent in Language Arts, Mathematics and Social Studies.

As can be seen from Table 14, Project school children performed significantly better than parallel school children in all three subject areas. The greatest impact of the Project appears to have been in Reading, English Test 2, Writing and Mathematics.

It would appear that the Project made substantial impact on student performance in all three subject areas.

It should be recalled that St. Vincent, like Dominica, used the Project to improve rural primary education. The Ministry did not include in the Project schools in Kingstown, the capital, which normally have better qualified teachers and students who generally perform better on national achievement tests.

What the difference between Project and parallel school pupils in St. Vincent indicates is that the Project materials and process can bring about significant and substantial improvement in the performance of students in rural areas.

TABLE 14

DIFFERENCES BETWEEN PROJECT AND NON-PROJECT SCHOOLS

ST. VINCENT

			Project	Non-Project	Diff.	Sig.
1. English Test 1						
Year 1		Mean	11.67	10.89	0.78	n.s.
		S.D.	4.11	3.42		
		N	97	87		
Year 2		Mean	14.53	12.11	2.42	0.001
		S.D.	4.05	3.55		
		N	117	110		
Year 3		Mean	21.44	21.10	0.34	n.s.
		S.D.	6.28	5.48		
		N	129	98		
Year 4		Mean	27.95	22.44	5.51	0.001
		S.D.	7.98	6.11		
		N	88	71		
2. English Test 2						
Year 1		Mean	16.16	13.30	2.86	0.01
		S.D.	7.46	6.22		
		N	96	86		
Year 2		Mean	25.52	19.27	6.25	0.001
		S.D.	7.29	7.13		
		N	116	113		
Year 3		Mean	11.74	10.02	1.72	0.01
		S.D.	4.24	3.84		
		N	130	98		
Year 4		Mean	15.10	11.44	3.66	0.001
		S.D.	4.97	4.00		
		N	87	70		
a. Writing Tests						
Year 1		Mean	0.24	0.16	0.08	n.s.
		S.D.	0.57	0.50		
		N	96	86		
Year 2		Mean	0.21	0.42	-0.21	0.05
		S.D.	0.52	0.85		
		N	116	113		
Year 3		Mean	0.27	0.04	0.23	0.01
		S.D.	0.81	0.24		
		N	130	98		
Year 4		Mean	1.44	0.10	1.34	0.001
		S.D.	1.63	0.38		
			87	70		
b. Letter Writing						
Year 3		Mean	3.14	2.32	0.82	0.01
		S.D.	2.40	1.90		
		N	130	98		
Year 4		Mean	4.41	1.57	2.84	0.001
		S.D.	2.16	1.91		
		N	87	70		
3. Mathematics						
Year 1		Mean	11.58	8.96	2.62	0.001
		S.D.	4.10	3.87		
		N	89	70		
Year 2		Mean	12.22	9.18	3.04	0.001
		S.D.	5.79	4.37		
		N	115	107		
Year 3		Mean	10.66	9.25	1.41	0.01
		S.D.	4.33	3.45		
		N	119	88		
Year 4		Mean	10.45	7.32	3.53	0.001
		S.D.	6.03	3.53		
		N	98	76		
4. Social Studies						
Year 1		Mean	14.92	9.74	5.18	0.001
		S.D.	4.65	3.40		
		N	90	69		
Year 2		Mean	14.08	8.62	5.46	0.001
		S.D.	5.18	2.87		
		N	114	102		
Year 3		Mean	11.75	11.06	0.69	n.s.
		S.D.	5.20	3.08		
		N	119	89		
Year 4		Mean	16.02	11.32	4.70	0.001
		S.D.	6.73	3.72		
		N	98	76		

Overall comment. In looking at the results in the different territories it is clear that in all four subject areas the Project has made positive impact on student performance, though the greatest impact by subject area varies from territory to territory. This variation does not seem to be a feature of the materials or processes used but rather of local factors and situations.

One should be very careful in interpreting the data solely in terms of significant differences between pupils in Project and parallel schools. If one did so then the conclusion would be that the Project had substantial impact in St. Vincent, Dominica, Belize and to a lesser extent in Antigua, St. Lucia and St. Kitts/Nevis, but had little impact in Montserrat, BVI and Barbados. Such a view would be in error since one would be ignoring such factors as the spread effect and national impact that the Project may have already had in some countries.

It should be sufficient to note that the evidence from the Project-parallel school comparison supports the data from the gain scores that the Project has positively influenced student performance in all territories.

Relative Performance of Pupils in Different Territories

The analysis of the student performance data would not be complete without some analysis of the relative performance of students in the various territories. The Evaluation Team wishes to point out that these data have to be interpreted with the greatest care and caution.

No evidence exists to suggest that the performance of children in the Project and parallel schools of any

particular country is automatically representative of the entire school system in that country. By the very method of selection it is quite definite that this is not the case in Dominica and St. Vincent where schools from the capitals have been excluded from the selection as either Project or parallel schools. The schools of Montserrat and BVI are more likely to be representative because of the sizes of those systems.

This analysis is included because it adds a dimension which highlights factors which might otherwise be ignored.

Impact of spread effect. The point has been made previously that the absence of significant differences in the performance of Project versus parallel school pupils is not of itself indicative that the Project did not have a positive impact on student performance. Attention was drawn to the fact that in Montserrat, BVI, and, to a lesser extent, in St. Lucia there was evidence of a spread effect from Project to parallel schools which could "contaminate" the results. These points are clearly demonstrated when the performances of students in Project and parallel schools in each country that participated in curriculum development in Social Studies are compared. Table 15 below shows the rank order of the student performance among the territories and the mean performance overall.

TABLE 15

RANK ORDER OF TERRITORIES BY STUDENT PERFORMANCE IN SOCIAL STUDIES

Territory	Year 1	Year 2	Year 3	Year 4	Overall Mean
1. Montserrat	1	1	1	1	46.75
2. St Lucia	2	2	2	1	45.06
3. Antigua	3	3	4	5	37.10
4. St Vincent	5	4	3	3	37.05
5. Dominica	4	5	5	4	33.68

It will be recalled that the comparison between Project and parallel schoools in Montserrat generated one negative and one positive significant difference each. On the other hand similar comparisons for the other countries all showed that the Project had had significant impact on student performance in those countries. Yet when the performance of students between countries is examined, students in Montserrat performed best in terms of the scores obtained. In the opinion of the External Evaluation Team this is indicative of the spread effect of the Project in Montserrat and to a lesser extent in St. Lucia. Special note should therefore be taken of the difference in the mean scores between these two countries and the other three.

In the opinion of the Evaluation Team, these data should not be interpreted to mean any superior or inferior achievement by any territory. What the data seem to indicate is the general potential that the Project process and products possess to improve Social Studies performance by students when they have been generalized across the primary system.

Structural Factors. In order to appreciate the effect that structural factors outside the scope of the Project may have on student achievement it is also instructive to look at the relative performance of students in Language Arts across the different territories. Appendix C shows the rank position of each territory on all of the different tasks. Their rank position on Language Arts is indicative and representative of the general pattern. Table 16 below shows the relative position and overall mean scores of all Language Arts tests across the four years in each territory. This is a crude index but it is representative of the general pattern. Hence for ease of illustration it is used here. Further details can be examined in Appendix C

TABLE 16

RANK ORDER BY OVERALL MEAN SCORE IN LANGUAGE ARTS TESTS

Territory	Mean Score	Rank Position
Barbados	60.43	1
British Virgin Islands	52.13	2
Montserrat	51.86	3
St. Lucia	48.42	4
Belize	47.10	5
Antigua	44.22	6
Dominica	39.76	7
St. Kitts/Nevis	39.59	8
St. Vincent	38.64	9
Regional Average	47.56	

The data should not be generalized outside of the context in which they were generated

The significance of these data resides in their consistency with various factors previously identified. The core curriculum in Language Arts is very similar to the curriculum that has been used in Barbadian schools for several years, and Barbados started the program with a well developed curriculum. In other words parallel schools in Barbados would be following a curriculum not far removed from the Project curriculum. What the Project did in Barbados was to provide enrichment. Given the content of tests which eliminated areas of difference it is totally understandable that not many significant differences were obtained in Barbados. However, the performance of Barbadian pupils heads the list. Apart from the similarity of the curriculum the quality and stability of the teaching force seems to be a factor. The Barbadian teaching force is almost fully trained professionally and applicants must satisfy certain academic requirements before admission to the teaching service.

The spread effect in the smallest countries, BVI and Montserrat, has already been noted. The relative difference between them and Barbados may well be the quality and stability of the teaching force in their Project and parallel schools compared to what obtains in Barbados. More-over BVI and Montserrat have no Training College and have to send their teachers abroad for training, and Staff in both Project and parallel schools in these countries included a fair number of untrained teachers.

It is interesting to note that these three countries in which there were not many significant differences between the performances of pupils in Project and parallel schools actually head the list in relative achievement. The impact of the Project is definite in both BVI and Montserrat, but that impact was spread to the parallel schools, resulting in

what may very well be an overall improvement in the standard of education in both Project and parallel schools.

In the judgment of the External Evaluation Team the difference in performance between St. Lucia and Belize students and Barbados, BVI and Montserrat can also be explained in terms of the quality and stability of the teaching force in those countries. Only about 35 per cent of the teachers in the Project and parallel schools were qualified. The academic knowledge of some unqualified teachers was weak.

The general point to be noted here is that some attention needs to be paid both to teacher selection and to teacher training in some Caribbean countries. If this is not done then the maximum results may not be achieved even from excellent curricula and materials.

The point has already been made that in Language Arts and Mathematics Antigua did not use the curricula in a substantive way but only as supplemental material. But it is well known that "time on task" (or content) correlates with student achievement. If pupils did not cover the material they could not be expected to do as well as those who had studied it. However it is to be noted that because Antigua has a fairly well trained teaching force, even though the content was not fully covered, pupils' performance is not far below the average for the region.

The point has already been made that St. Vincent and Dominica concentrated on rural schools and that in those territories the Project material had significant impact on student performance. Their position at the bottom of the list is not indicative of poor performance but rather of a different focus from that of the other countries.

In the case of St. Kitts/Nevis high teacher turnover seems to have had a negative effect on performance in both Project and parallel schools. This may be a system-wide problem that the Ministry of Education of that country needs to address since all sectors of the country, including the Ministry of Education, seem to be recruiting personnel for various positions from the ranks of the primary teachers. The performance of the pupils may thus be indicative of a serious problem.

Format of Reports to Territories

The Evaluation Team examined the Reports on Student Achievement that were sent out by the Evaluation Officer. While a lot of data were generalized, these reports concentrated on statistical analysis and to a large extent ignored the contextual factors which were needed for interpretation. As a consequence the interpretation of these data was weak and as a result not very helpful to the territories. It could be that the Evaluation Officer needed to have visited the territories in order to get a better understanding of the circumstances which surrounded student performance in the Project and parallel schools.

Pupil Performance on 11+ Common Entrance Examinations

In addition to examining the design, methodology, and results of internal evaluation activities during the life of the Project, the External Evaluation Team collected some hard evidence in Barbados which indicates that there were marked increases in the performance of pupils in the pilot schools on Common Entrance Examinations when compared to the performance of pupils in the parallel schools.

In some territories the pupils who started in September 1980 in the first year of the Project sat the secondary selection examination in 1984, in others the pupils sat the examinations in 1985. While recognizing that the first group of pupils had the materials developed "on them" so to speak and that both teachers and pupils were part of a new learning experience, it is instructive to see if there are any indications of improved pupil performance in Project schools. It is well known that the impact of curriculum reform and inservice training on improved pupil performance is not as great during the initial implementation stages as after the change has been consolidated. Hence while it may still be early to make any firm inference about the Project's impact on pupil performance on common entrance examinations, it is instructive to identify any indication of possible impact.

In the time available the External Evaluation Team did not have the opportunity to gather secondary school selection data from all the countries in which Project schools pupils sat the 11+ examinations in 1984. The Team was only able to obtain such data from Barbados.

The data gathered included the following:

a) number of students entered by their respective primary schools,

b) number of secondary places obtained,

c) performance of the students in English,

d) performance of the students in Mathematics, and

c) ranking of the school in terms of the achievement of its students vis-a-vis that of students in all other primary schools participating in the examinations.

These data were obtained for Project and parallel schools for 1980 when the Project started and for 1984 when the first group of children from Project classes sat the examination. The results are presented in Tables 17-20 below

TABLE 17
11+ PERFORMANCE OF PROJECT SCHOOL PUPILS
1980 - 1984 (BARBADOS)

1980

Schools	English	Maths	Rank position	Category
1	49.2	30.2	54	M
2	59.2	33.2	21	T
3	61.0	34.1	13	T
4	54.5	27.0	47	M
5	46.8	29.7	58	M

1984

Schools	English	Maths	Rank position	Category
1	42.6	39.1	18	T
2	45.3	40.1	13	T
3	53.6	42.3	4	T
4	45.7	37.5	17	T
5	38.0	43.6	20	T

Table 17 shows that in 1980 only Project school 3 was among the top 20 primary schools in Barbados in terms of the 11+

achievement of its students. In terms of category, two were in the Top Third, (T), of schools and three were in the Middle Third, (M). By 1984 all five Project schools were in the Top Third. In fact all five were in the top twenty schools in the country as judged by their pupils' performance in the Common Entrance Examination. Every Project school had improved its rank position between 1980 and 1984. School 3 was ranked 13th in 1980 and is ranked 4th in 1984. The movement of schools 1 and 5 from 54th and 58th respectively to 17th and 20th respectively is dramatic

It should be noted that because the actual tests in English and Mathematics are different each year and may have changed content and difficulty it is not possible to compare achievement scores between 1980 and 1984.

TABLE 18

11+ PERFORMANCE OF PARALLEL SCHOOL PUPILS IN BARBADOS

1980 - 1984

1980

Schools	English	Maths	Rank position	Category
1	51.3	28.2	52	M
2	59.3	39.2	7	T
3	64.8	28.1	24	T
4	59.4	34.7	15	T
5	54.2	31.2	41	M

1984

Schools	English	Maths	Rank position	Category
1	40.3	33.8	33	M
2	45.3	35.3	41	M
3	36.4	18.8	73	B
4	39.9	29.4	45	M
5	46.1	42.4	8	T

Table 18 shows that in 1980 three of the five parallel schools were in the Top Third category of primary schools in Barbados in terms of student achievement in the 11+ examina- tions. Two were in the Middle Third category. In 1984 only one was still in the Top Third. Three were in the Middle Third and one in the Bottom Third category. In looking at their ranking 3 had lost position compared to 1980 while 1 remained at the same position. Only one school improved its position: School 5 moved from 41st to 8th in rank.

While the performance of Project and parallel school pupils in English and Maths in 1980 shows no great or consistent differences in 1984 Project school children are clearly performing better in both English and Mathematics. This can be seen by comparing the results of Tables 17 and 18. While it would appear that Project and parallel school pupil performance is quite evenly matched, probably with a slight advantage to the parallel schools, in 1984 the performance of the Project schools students is clearly better.

We now turn our attention to the number of secondary places obtained by pupils in the Project and parallel schools in Barbados in 1980 and in 1984.

TABLE 19

SECONDARY PLACES OBTAINED IN 1980 IN BARBADOS

Project Schools				Parallel			
Schools	Number Entered	Places Obtained		Schools	Number Entered	Places Obtained	
		N	%			N	%
1	74	66	89.2	1	85	76	89.4
2	33	30	90.9	2	39	38	97.4
3	49	47	95.9	3	30	28	93.3
4	143	136	95.1	4	85	73	85.9
5	76	64	84.2	5	92	77	83.7
TOTAL	375	343	91.5		321	292	88.4

Table 20

Secondary Places Obtained in 1984 in Barbados

Project Schools				Parallel			
Schools	Number Entered	Places Obtained		Schools	Number Entered	Places Obtained	
		N	%			N	%
1	61	58	95.1	1	89	81	91.0
2	38	35	92.1	2	35	30	85.7
3	35	35	100.0	3	23	20	87.0
4	138	124	89.9	4	106	99	94.3
5	76	70	92.1	5	97	89	91.8
TOTAL	348	322	92.5		350	319	91.1

Tables 19 and 20 show the number of students entered by Project and parallel schools and the number of secondary places obtained. It can be seen from the number and percentage of secondary places obtained that while the Project and parallel schools have improved their positions between 1980 and 1984 the differences are not dramatic. What the Team did not have the time to examine was the schools to which the pupils obtained places. Knowing the keenness of the competition for secondary places in Barbados and the fact that places in certain schools are more highly prized than in others it would have been interesting to examine this aspect. However, time did not permit it. What is clear from the data in Tables 17 to 20 above is that the Project school pupils' performance in the Barbados 11 + examinations showed improvement when compared with that of parallel school pupils from whatever perspective the data were examined. The greater impact of the Project seems to have been on the quality of the performance of the students rather than on the number and percentage of places obtained. It would be interesting for the Ministry of

Education or the Faculty of Education, Cave Hill to continue this line of investigation to find out whether Project school pupils are not obtaining more places than before in prestigious schools. While this was the opinion of at least one Project school Principal, such a conclusion is not possible from the data available.

From the data available from the 1980 and 1984 11 + examinations in Barbados it does seem fair and valid to infer that the Primary Education Project did have a positive impact on improving the performance of Project school children in these examinations. The Project did impact positively on student achievement in the 11+ examination, at least in Barbados. It would be interesting to find out if such results are replicated in the other countries. Findings from a study conducted by the Internal Evaluator give some indication of results in other territories. These are discussed in the next sub-section.

As was said with respect to student achievement generally these are still the early days. Usually positive gains in student achievement as a result of curriculum and material development and in teacher training take a longer time to mainifest themselves than immediately after implementation.

Findings from Internal Evaluation. A study of pupil performance on the Common Entrance Examinations in 6 territories was conducted by the Internal Evaluation Specialist. The study compared the gains of performance of Project school pupils with those of parallel school pupils in Antigua (1981-1984); Barbados, BVI, and St. Lucia (1979-1984); Dominica (1979-1983); and Montserrat (1980-1984).

Statistically significant differences in gains made were noted in favor of Project schools in Dominica, Montserrat, and St. Lucia. That is, the gains made by Project school pupils were higher than those for pupils from the parallel schools. For the other three territories, the gains favored the parallel school pupils. The Evaluation Team believes that the following comments will help to explain the fact that Project school pupils performed lower than their couterparts in the parallel schools.

1. Antigua. It has been already noted in this Report that pilot school teachers in Antigua were reluctant to use Project materials and processes because of fear that doing so would have negative effects on the performance of their pupils on the Common Entrance Examination. Actually, in this case, it can be argued that the opposite effect resulted.

2. Barbados. The comparison made in Barbados was for performance in 1979 against that of 1984, and no significant differences were found. However, the previous subsection provides hard evidence collected by the Team which shows clearly that by 1984 the Project schools were performing decidedly better than the comparison group of non-Project Schools.

3. Montserrat. It has been already mentioned in this Report that Montserrat is typical with respect to comparing performance of Project school pupils with that of parallel school pupils. This is so because of the considerable amount of spread effect of Project outcomes to non-Project schools in the territory which occurred because of the small size of the island and the small number of primary schools (12).

Opinions

In the visits to territories Ministry Officials, PIOs, Teachers and Principals were of the opinion that, because of the Project pupils in the Project, schools were better motivated, participated more in classwork, were more self-confident, had more positive attitudes to school and were achieving better. While this is impressionistic it represented the consensus.

Conclusion

The data from all sources all seem to point in the same direction, namely, that the Project has had a positive impact on student performance.

General experience with such projects is that their impact on student achievement is not always seen in the short term. It would appear therefore that these may still be early days for measuring Project impact on student performance. What these data may have established is that the potential for improvement is certainly there and that in particular instances that potential has begun to be realized. Whether this is sustained and developed will certainly depend on how well the process and products of the Project become institutionalized in the regular systems in the several countries.

Chapter IV

SECONDARY PROJECT OUTCOMES AND UNPLANNED DEVELOPMENTS

The previous chapter dealt with the principal outcomes of the Primary Education Project. But there were other outcomes. Some were anticipated in the original Project Plan and deliberately planned for; others, however, were unplanned and emerged as spinoffs from the mainstream of the implementation of the Project. This chapter treats the training of head teachers/school administrators and the training of educational planners, both of which were part of the design of the Project. It also discusses a number of unplanned developments and outcomes many of which were significant in nature.

Before discussing the training of head teachers through the Project, it is important to note that this component was implemented in two ways: (1) by the Faculty of Education, UWI/Mona, which carried direct responsibility for training of primary school administrators in Jamaica, and (2) by UWI/Cave Hill, through the Project Office, which planned for and implemented training activities for primary principals in the nine other participating territories.

When the Project was first conceived, Jamaica opted not to participate in the curriculum development and inservice training component for primary schools but requested to participate actively in training its primary head teachers through the Faculty of Education, Mona Campus. The sub-components are discussed separately below.

Training of Principals in Jamaica

During the life of the Project, seventy-two Principals of Primary and all-age schools were trained in Jamaica. They were selected each year by the Ministry of Education and the development of the training program and the instruction were done by highly qualified members of the Faculty of Education, UWI/Mona. It should be noted that the number of head-teachers trained involved only about 10 percent of the total population of primary and all-age school principals in the territory.

Before the beginning of this Project, the Faculty of Education had started an experimental project for the training of head teachers under the sponsorship of the Caribbean Society of Educational Administrators. In that project, the following were identified as major administrative problems which were then treated in the USAID/UWI Project

1. Planning for curricula effectiveness

2. Inter-personal relationships

3. School-community relationships

4. Leadership style of principals

5. Staff development

Nature of Training

The training began with a four-week residential summer session based at the University of the West Indies/Mona in which Principals attended seminars in educational administration, sociology of education, and curriculum development. The

summer session was followed by visits to schools in September to November by members of the teaching team. These visits were intended to ascertain administrative problems faced by the participating Principals; to acquaint the teachers of the schools with experimental activities devised by their Principals; to solicit classroom teachers' participation in these activities; to encourage teachers to be innovative and experimental themselves, and to collect data on the demographics and operations of the schools. The information gathered from the visits to the schools was used in seminars for the Principals in subsequent training sessions. The Principals continued their training during the year in one day seminars that were held at convenient centers. Towards the end of the school year, the schools were again visited to determine how well the Principals had done on experiments or projects that they had started during the year, and to examine the effects of the training on the management of the school. The training was conducted over a four-year period with eighteen Principals participating in each of the one-year training periods for a total of 72 in all.

Problems Encountered

Two problems were encountered in implementating this sub-component of the Project. One was related to the part-time nature of the work of the tutors when it became evident that a full-time director/tutor was needed to ensure smooth operation of the program and to provide an adequate number of visits to the schools. A second problem dealt with inadequate funding to pay for travel costs for tutors.

Evaluation

Formative evaluation was done during the course of the Project and the results were used to modify project implementation, e.g., evaluation results at the end of the first year revealed the need for visits to the schools by the tutors.

The External Evaluation Team devised an instrument for securing opinions of 40 of the Principals who were trained, and the questionnaires were disseminated by mail.

However, because of two extended postal strikes in Jamaica, many questionnaires did not reach the field in time to be responded to at the time of the on-site visit. Some were mailed to the Team a month after the visit. In all, 16 of the 40 questionnaires were available for examination and analysis by the Team.

A summary of the analysis of responses to these questionnaires follows:

1. There was almost unanimous agreement that the topics included in the training were relevant, related to the tasks and problems of principals of primary and all-age schools.

2. Similarly, there was almost unanimous agreement that the topics were taught effectively and that a variety of strategies were used for instruction.

3. In response to the question, "Overall, how much do you believe your performance as a school administrator has improved as a result of training received in Project workshops?", most all responded "very much"; the others said "much".

4. All respondents indicated the urgent need for the training of principals.

5. Almost all believed that training should be mandatory for new principals, and that opportunities for continued training and refresher courses should be made available by UWI/Mona. More than half said that the training should result in receiving a professional certificate.

In addition to these responses, copies of five unsolicited letters from trainees were made available to the Evaluation Team for analysis. All expressed high praise and appreciation for the training received.

The external evaluation also included interviews in the field with two trainees, 15 education officers who were acquainted with the training program and who are responsible for visiting schools and evaluating principals, examination of six reports prepared by the director of the subcomponent, and a report prepared by the Coordinator for the Evaluation Team which addressed questions and topics identified by the Team. On the basis of information received from all of the above sources, the Evaluation Team concludes the following:

1. The training addressed identified needs.

2. The fact that Principals recognized their need for training provided a high degree of motivation on their part for study and learning.

3. The training was provided by highly qualified professionals in educational administration, curriculum, and foundations of education.

4. The training was effective and was provided through a variety of instructional strategies: lectures, group discussions, case studies, problem solving, on-site follow up consultation to provide assistance.

5. There is evidence that the performance of Principals has improved as a result of the training received, especially in the areas of management, record keeping, working with teachers in curriculum development, interpersonal relations, and school community relations.

6. There is evidence that the results of training have had a positive impact over time, at least as much as three years.

7. The Ministry of Education working cooperatively with the Faculty of Education, UWI/Mona is now implementing a program under a grant from the Inter-American Development Bank to continue the provision of training for those Principals who were not involved in the USAID/UWI Project.

8. The Ministry of Education was sufficiently impressed with the quality of training provided for primary head teachers that it requested UWI/Mona to provide training for its education officers. This activity is described in greater detail in a later section of this chapter treating unplanned outcomes.

Participants who completed the training were presented with a "Certificate of Completion of a Programme in Educational Administration" noting that it was sponsored by the USAID, Ministry of Education, Jamaica, and the School of Education, University of the West Indies, Mona.

Training Of Primary School Principals in Participating Territories Outside Jamaica

Training of Principals of the primary schools of participating territories outside Jamaica was provided by the School of Education, UWI, Cave Hill, under the auspices of the Project. The Project Coordinator reported that twenty-two such training workshops were held during the life of the Project. Summary reports of ten of these workshops were examined by the Evaluation Team. An analysis of these ten reports shows the information condensed in Chart 3 below.

Chart 3

Analysis of Training Workshops for Principals

Date	Number of Participants	Resource persons	Venue
Feb. 16-20, 1981	28	4 officers from the Ministry of Education, and Mr. Robert Nicholson	Antigua
March 1981		Mr. Frank Vincent, Project Staff	BVI
Nov. 23-27, 1981	32	Ministry of Education Staff and Mr. Nicholson	St. Lucia
May 24-28, 1982	20	Dr. Nicholas Frederick 1 MOE personnel 1 PIO	St. Kitts/ Nevis
June 14-18, 1982	27	3 Education Officers and Mr. Nicholson	Antigua
June 28-July 2, 1982	54	3 Ministry of Education Staff 1 - UNESCO 3 Teachers College Staff Mr. Nicholson	Dominica

Date	Number of Participants	Resource persons	Venue
Nov. 22-26, 1982	29 plus 7 observers	7 Education Officers Mr. Nicholson	St. Lucia
Mar. 21-25, 1983	28	4 Ministry of Education 1 Project Staff Mr. Nicholson	Antigua
Apr. 19-23, 1984	17	2 Education Officers 1 PIO Mr. Nicholson	BVI
Apr. 25-27, 1983	23	Dr. Nicholas Frederick 1 PIO 1 Ministry of Education	St. Kitts/ Nevis

Contents of Training

Training included selected topics and units from the UWI course in Foundation of Supervisory Practice and Management Skills. Topics were selected in accord with the needs of the Primary School Principals and were such as one would expect to find in standard training programs for educational administrators. Included in the training workshops were such topics as the following

1. Working with teachers in curriculum planning

2. Implementing school curriculum

3. Working with teachers in other social activities

4. Staff development

5. School administration: record keeping, communication, management

6. Working with parents

7. Supervising instruction

8. School management problems: lack of equipment, absence of teachers, inadequate staff, turnover of staff, groupings of pupils

9. Staff evaluation

10. School and community

11. The school as a social system

Resource Persons

Mr. Robert Nicholson from the UWI Cave Hill's School of Educaton, carried the major responsibilty for organizing and implementing the training workshops, and for providing the major portion of the instruction. He is a qualified professional in the field of educational administration as is true of Mr. Earle Newton and Dr. Fenty Scott, also of the School of Education, and Dr. Nicholas Frederick, then of USAID, who also ran administration workshops under Project aegis. Additional resource persons were drawn from the Ministry of Education of the territory in which a particular workshop was held. This provided a dimension of localization of the training and of closer relationships between the Principals and the Education Officers who visited them in the field and evaluated their performance.

Evaluation

Formative evaluation was an aspect of each of the training workshops, and was based on a uniform evaluation instrument which consisted of twelve items which participants were asked to rate on a scale of one to five where five equals "very strongly positive" and one equals "very strongly negative".

The twelve items were as follows:

1. The relevance of the Workshop in general
2. The relevance of the topics considered
3. The extent to which topics considered were of major concern to you
4. The usefulness of handouts
5. The ways in which workshop sessions were handled
6. The opportunity given you to make an input
7. The length of the workshop
8. The timing of the workshop
9. The workshop was a learning experience for you
10. Lecturers at workshops
11. The overall usefulness of the workshop to you
12. The extent to which your overall interests were met"

The mean ratings for all items for workshops analyzed were four or above with the exception of those for items numbers seven and eight. For these two items the mean ratings were lower, three or above but no fours. These two items dealt with the length of the workshop and the timing of the workshop. These ratings were consistent for all of the workshops analyzed. In view of the fact that the evaluations were formative in nature, that is, what was learned from early evaluations would have some effect on modifying subsequent workshops, the question arises why these lower ratings persisted during the life of the Project. The over-riding consideration, however, is the fact that participants expressed a high degree of satisfaction for the content and nature of the training offered for all of the workshops analyzed. One can conclude from the internal evaluation that the workshops were successful, if not highly successful. This conclusion is supported by findings of the External Evaluators.

Questionnaires were administered to CEOs, PIOs, Project Staff, Subject Matter Leaders in the territories, the Principals themselves and the Teachers in the Project schools. These persons were asked to give their opinions regarding the extent to which training improved Principals' performance. Of the one hundred and thirty-six Teachers responding seventy-seven (57%) rated the extent of improvement as very high or high; forty-five (33%) said medium, and twelve (90%) said slight. Of the forty Principals who responded, twenty-eight (70%) said very high or high, seven (18%) said medium, two said slight and three gave no response. Of the thirty Subject Matter Leaders who responded, twenty-two (73%) said very high or high; ten (33%) said medium; three said slight, and two gave no opinion. One of the nine PIOs said the training was very

effective; five said effective; and three said somewhat. The Project Staff was less sure about the effectiveness of training in terms of upgrading the performance of Principals. Two said it was high; three gave no opinion. Several general comments about the training workshops are in order:

1. It is commendable that considerable emphasis was placed on the administrator's role in curriculum development. This provided a support base for the work in curriculum development underway by the Teachers of the pilot schools.

2. The fact that Ministry of Education personnel were heavily involved in the workshops was a strategic move to help to ensure that there would be coordination and follow-up within the respective territories.

3. Instruction provided in the workshops was varied and included lectures, small group discussions, case study work, group task assignments, and consideration of real-life problems encountered by primary school principals. This added a dimension of realism and relevance to the training. Participants were appreciative of the fact that the training dealt with their interests and problems.

4. Formative evaluation was always a component of the training workshops.

Training of Education Planners

Another of the anticipated outcomes of the Project was the training of education planners in the Caribbean. While this subcomponent was not a major thrust of the Project, it did nevertheless make an important contribution to the achievement

of Project outcomes. Four such training workshops were conducted during the life of the Project, one each in 1981, 1982, 1983, and 1984. The chart below indicates the number of participants and territories represented for each.

	1981	1982	1983	1984
Number of participants	18	16	15	18
Number of territories represented	11	16	15	16

Territories served - in addition to the nine which participated in the curriculum development component - included Grenada, Jamaica, Trinidad and Tobago, the Bahamas, Guyana, Haiti, Netherlands Antilles and Suriname. The workshops ran for one week each with the exception of the first one which covered approximately one and a half weeks.

Resource Persons

Qualified resource persons provided instruction in the four workshops. They were from the Project office, the University of the West Indies, the Caribbean Network of Educational Innovation Development (CARNEID), Ministries of Education in Barbados and the Bahamas, the College of the Bahamas, UNESCO, the InterAmerican Development Bank (IADB) and the Caribbean Cetre for Development Administration (CARICAD). CARNEID provided major assistance in the organization and running of the training workshops. The implementation of this subcomponent was, in fact, a cooperative effort between CARNEID and the Project. The Caribbean Development Bank (CDB), the InterAmerican Development Bank, and UNESCO also provided some assistance for the workshops.

Content of Training

The instruction included lectures on and discussions about such topics as:

1. What planning is and why it is important
2. Allocation of teacher resources to the school system
3. Pupil to teacher ratios in different types of schools
4. Forecasting of population, enrolment, pupil costs, teacher supply and demand
5. Principles and problems of management
6. Improving planning and management
7. Education statistics collection and use
8. Evaluation and monitoring of the system
9. Roles and functions of education management personnel
10. Budgeting
11. Evaluation of an education project

Evaluation

Formative evaluation was conducted at each of the workshops to determine the extent to which the training had achieved the objectives and to provide direction for designing subsequent workshops. Overall, the degree of satisfaction by participants was high. Concrete evidence of the quality of training provided is shown by the fact that twelve of the fifteen participants who were trained in the 1983 workshop returned for more training in the 1984 workshop.

Corps of Trained Education Leaders

Another of the anticipated outcomes of the Project was that as a result of its implementation during the five years, a corps of trained education leaders would emerge within the participating territories. It is evident that this happened. Some of the leaders who emerged are new; others already were leaders but are now more qualified.

Key Project staff members and Implementation Officers in the territories were requested to identify the names of persons whom they would include in such a corps of trained leaders. These names will be transmitted to the appropriate Ministries of Education, the University of West Indies, Cave Hill, and also to the Project central office.

The Evaluators wish to observe that there is, as is to be expected, a wide range of qualifications and expertise among those persons identified. While we do not wish to rate persons according to their potential for leadership in the future, we do note that those who have developed the most professionally

appear to be those who have been most active in Project implementation. We also wish to call the attention of Ministries of Education to this list of resource persons as the Ministries plan for further improvements in Primary education in their respective territories.

Unplanned Outcomes

It is not surprising that unanticipated outcomes emerge from the conduct of education projects. One expects that to happen. In the case of the Primary Education Project, however, the number and quality of such unplanned developments and outcomes is significant, far beyond what one might have expected at the outset. In evaluating the overall impact of the Project on primary education in the region, one must also take into account the nature of these unplanned outcomes and the effect they have had on improving education in the territories.

The unplanned outcomes were searched for by the Evaluation Team through interviews with Project personnel in the field and at the central office, and through analyzing responses to the questionnaires which key personnel completed for the Evaluation Team.

Interagency Cooperative Activities.

1. PAHO: The Pan American Health Organization under the leadership of Mr. Seymour Barnes, Health Adviser, developed several health readers to supplement the language arts materials produced by the Project.

2. CARNEID: Mention already has been made of CARNEID's important contribution in co-sponsoring training workshops for education planners. UNESCO, IADB, AND CDB also provided some assistance for these workshops.

3. Mr. Michael Ratcliffe of the British Development Division contributed in developing and disseminating Science education materials.

Training of Education Officers in Jamaica

As noted above, one of the unplanned outcomes of the Project was the provision of training for Education Officers of the Ministry training which was requested by Jamaica's Ministry of Education itself. Sixteen Education Officers responsible for primary education were selected to participate in a three-week program at the Mona Campus during the summer of 1983. The program was designed to enhance the supervisory capabilities of the Education Officers, to increase the confidence of those who had recently joined the staff, to attempt to develop a manual of operations for the Officers, and to develop evaluative instruments to assist them in their evaluation of principals, teachers, and school plants. The program was run largely as a workshop in which the Education Officers identified supervisory problems relating to their role definition and helped to develop some of the evaluative instruments. The major themes treated in the three-week workshop were:

1. The law as it affects the role of Education Officers

2. Supervision of school records and school plants

3. Supervisory relationships between Education Officers, principals, teachers and school boards

4. Improvement of school-community relationships

5. Production of a manual of procedure (this was done)

6. Evaluation of teacher classroom management

7. Evaluation of teacher behavior beyond the classroom

8. Evaluation of the maintenance of school plant, equipment and records

9. Evaluation of principal behavior and leadership

In addition to lectures, instruction was provided through small group work and discussions, problem-solving activities related to the role of the Education Officer, and meeting/working with principals who were present during part of the training period. This latter feature provided an opportunity for interchange between head teachers and Education Officers concerning the topics under consideration.

Internal evaluation showed that the participants demonstrated a high level of enthusiasm for the training program. They expressed a strong need for such help in defining their roles more clearly and in providing them with more objective instruments to assist in school evaluation.

The results of internal evaluation were confirmed during a 45-minute interview one of the External Evaluators had with fifteen of the sixteen Education Officers involved in the training.

Other Training Activities

1. Under auspices of the Project, special reading instruction was provided for all primary schools in Montserrat.

2. In Belize, two workshops for making low-cost teaching aids were conducted.

3. Also in Belize, which had opted to participate in Language Arts, Mathematics, and Science, workshops were held in the area of Social Studies under the guidance of the Project Social Studies Consultant. This activity was over and above its regular participation in the Project, and was carried out at the Ministry's request.

4. The Project Office made it possible for an indivdual from each of three participating territories to attend a one-week workshop in Trinidad on computers and their use in education.

5. A workshop on metrication was sponsored for principals in Antigua, as well as for teachers in Belize.

Curriculum Development Activities

1. TESOL: In Belize, activity is underway in developing materials for teaching English to speakers of other languages. The activity is focused now on the Ketche Indian dialect.

2. Belize produced a number of supplementary reading materials which highlighted Belizian life and culture. These materials supplement the Language Arts materials produced under the Project. Antigua also produced

supplementary materials in Language Arts while Montserrat did likewise in Social Studies.

3. Several Ministries of Education have strengthened their Curriculum Units/Centres; BVI is forming one; and several have plans in blueprint stage to establish such centres.

4. Because Teacher Training Colleges were not integrally involved in the conduct of this Project, special steps were taken to keep them informed about Project developments. As a means to this end the Project Office on a regular basis shipped fifteen copies of all curriculum materials produced by the Project to the Ministries of Education of the participating territories for distribution to their Teacher Training Colleges.

5. In several territories assistance was provided by the staff to produce and/or revise Science Education materials: test booklets, hand-books, and other training materials.

6. In one territory, Project materials were used as the basis for development of a program for junior-secondary departments of schools.

7. In some territories, Project materials were used by some teachers in the lower forms of secondary and junior secondary schools.

8. The Project provided basal readers for early primary age pupils in the nine participating territories.

Unplanned Outcomes of a General Nature

1. Stimulated by participation in the Project, Antigua strengthened its reading centre and Belize and St. Kitts each established such a centre.

2. Belize developed national selection examinations with assistance from the Project office.

3. Closer collaboration among head teachers and classroom teachers resulted; in one territory pilot school teachers exchanged visits.

4. There is some evidence to show that pupil attendance and punctuality improved as a result of participating in Project classes. Of the one hundred and eighty-three Teachers who responded to the Evaluators' questionnaires:

46	(25%)	said the extent of improvement was "significant"
54	(30%)	said "considerable"
38	(21%)	said "some"
16	(9%)	said "minimal"
29	(15%)	said "none"

This means that 76% of all respondents thought that the Project had some or more positive effect on improving pupil attendance and punctuality.

In addition, the results of a study of absenteeism in Project and parallel schools conducted by the Internal Evaluation Specialist, confirmed the opinions of the Project school teachers. Usable data were available for only four territories: Antigua, Barbados, Montserrat, and St. Kitts-Nevis.

For three territories (Barbados, Montserrat, and St. Kitts/Nevis) there is clear evidence to show that there was less absenteeism in Project schools during the life of the Project (1979-1984) with one exception in 15 comparisions, 1981-1982 in Barbados. In Antigua, the reverse was true. Again, the Team notes that in this territory pilot school teachers were reluctant to use Project materials and processes because they feared that negative results would occur in the performance of their pupils on the Common Entrance Examinations.

5. One CEO reported that as a result of participation in the Project there is a growing demand by teachers in his territory for on-going curriculum development spanning the entire primary school curriculum.

6. Another CEO reported that the Project has had a multiplier effect on teacher training in his territory.

7. The same CEO commented on the enthusiasm demostrated by teachers in non-project schools for Project curriculum materials.

8. Research activity is underway in the area of achievement testing in Science.

9. The Project provided assistance to St. Kitts/Nevis to help meet the cost of a study of mathematical ability among pupils in the country.

10. The Project Coordinator, with the approval of the funding agency (USAID), gave permission for the Ministry of Education, Turks and Caicos, to reproduce and use the Project materials.

Chapter V

GENERALIZED IMPACT ON PROJECT OUTCOMES ON PRIMARY EDUCATION: SPREAD EFFECT

Mechanisms of Generalization

One of the stated objectives of the Primary project was that its outcomes would be generalized to the entire primary educational system in each of the participating countries. The Project planners anticipated that this generalization process would begin during the life of the Project and continue afterwards. Promotions of Project Teachers and Subject Leaders, the transfer of Principals and Teachers from Project to non-Project schools, the involvement of non-Project Teachers in some Project activities and the use of Project materials in Teacher Training Colleges were identified as the mechanisms through which Project outcomes would be spread

Two constraints were identified by the Project Paper that could limit the spread of the Project outcomes. These were (a) the quality of the products developed and (b) the financial limitations of Ministries and UWI. The question therefore becomes to what extent did the anticipated dissemination of Project products occur and in what ways, if any, was it constrained?

Mobility of Project Participants

The anticipated promotion and transfer of PIOs, Subject Leaders, Principals and Teachers participating in the Project did take place. The extent of the mobility over the life of the Project varied considerably from country to country. The degree of movement could be said to be

inversely related to the stability of the education system in general in the several countries. The least movement took place in Barbados while the degree of mobility in St. Kitts-Nevis was considerable. The negative aspects of turnover were commented on in the previous chapter. Notwithstanding those negative effects the positive side was that whenever Project participants moved to non-Project schools they invariably carried Project products and processes with them. Principals were more effective than Teachers by virtue of their authority to initiate change. But mobility was not only with respect to movement from Project to non-Project schools but also to positions in Teacher Training Colleges as tutors, into Ministries of Education as Education Officers and from junior to more senior positions in Ministries of Education. One PIO became the Chief Education Officer in the territory concerned. Such movement facilitated the spread of Project impact.

Impact through Teacher Training Colleges

Seven of the nine countries participating in the curriculum component of the Project have Teacher Training Colleges. In each of the seven territories the PIOs and Ministries of Education ensured the use of Project materials by the College tutors by sending them sets of materials - 15 copies of each set of materials were actually made available for this purpose by the Project Office - by including them as Subject Leaders, and by including the Principals as members of the PIU. Project materials were widely used in the Colleges in the training of teachers during the Project period. In addition several of the untrained teachers in Project schools were accepted as Teacher College students and found the Project experience helpful in their College experience.

In some countries the relationship between the Project and the Teacher Training College in the three subject areas was systematic, hence students were instructed in the teaching of Project material in all three subjects. In other countries the relationship was not systematic. In such countries Teacher Training College students would receive experience in and exposure to two subjects but not the third.

While the anticipated spread of Project outcomes did take place through teacher training programs in all of the countries, in some countries the scope of integration between the Project and the colleges was much more comprehensive than in others.

Inclusion of Non-Project Schools

It was anticipated that Ministries of Education would, by invitation, include Principals and Teachers from non-Project schools in various Project activities including territorial and local workshops and the distribution of Project materials. This did in fact take place in every country. Of greater significance, however, was the fact that several Principals and Teachers from non-Project schools requested to be included in Project activities. In some instances PIOs were not able to meet the demand created by these various requests.

Degree of Generalization

The extent to which the Project spread within any country during its life was largely determined by the size of the countries and their respective educational systems. In the case of the British Virgin Islands and Montserrat the Project

materials spread to nearly all of the schools. When the Minister of Education, Montserrat, declared the Project core curriculum to be the National Curriculum in those subjects, she was simply formalizing what, in fact, was the de facto situation as a result of the generalization of the Project outcomes through informal channels. In the larger countries the spread from non-Project schools created a network of committed local educators clamoring for the Project outcomes to become national policy. This network facilitated policy making in the planned direction without the usual friction associated with such decisions.

Constraints

The products of the Project were of sufficient quality to create the expected demand for them. This ensured their continued dissemination during the life of the Project. Quality of the products therefore was not a constraint but a selling point and an attractive feature.

The constraint became the financial and personnel resources of the UWI and Ministries to satisfy the demand for these materials. The Project material supply was not sufficient to provide fresh yearly supplies for each grade in the Project schools for which the Project had developed curricula. The spread to non-Project schools therefore created a demand that placed a strain on Project resources. In the end the structure of Project financing had to be altered to allocate much more resources to dissemination.

The extension of the Project to include a dissemination year was a direct result of the success of the Project and its spread within the various educational systems. In a sense the accomplishment of the original expectations concerning

dissemination of the Project during its life has already been evaluated and agreed on by all parties in the Project extension that was granted.

Impact on Primary Education in the Territories

The Project had both general and specific impact on primary education in the Caribbean. First the general impact on all participating territories will be discussed followed by reference to specific developments in particular territories.

General Impact

The Primary Education Project has been a watershed in Caribbean education. Things will not be exactly the same as they were before the Project. Some of its contributions have been creative and original where others have consolidated trends that had developed in the years prior to the Project. It is necessary to categorize these contributions and comment on them separately.

Creative Contributions. Four creative contributions are worthy of mention as follows:

1. New ground in Social Studies

   Social Studies as a subject in the primary curriculum has a relatively short history in the Caribbean. The larger territories of Jamaica, Guyana, Trinidad and Tobago and Barbados had developed curricula for their schools.

The Eastern Caribbean States had syllabuses for this subject but little else. The Project went much further than providing a comparable curriculum for those States that had none. It has produced an original approach to Social Studies that is probably superior to anything that currently exists and that probably will become the standard against which all future developments in this subject are judged.

The curriculum that was produced is based on very sound theoretical principles which achieved a novel reconciliation of the apparently contradictory spiral organizational approach of Bruner and the Advance Organizer approach of Ausubel. The end result of this attention to theoretical principles is that the Social Studies curriculum has a commendable logical structure, sequential organization and internal consistency.

The structure is readily understood, has immediate face validity and is easy to use. Topics in the first year are focused on the Community of the child, the second year on the child's Country, the third year on the Caribbean and the fourth year on the World. Teachers therefore immediately have some idea of the content of each year's work.

The new curriculum has almost revolutionized teaching in Social Studies in the countries that have participated. Teachers and students alike have gained new knowledge and a greater understanding of themselves, their countries, the region and also the world in which they live. The level of interest generated by the Social Studies curriculum materials has been extremely high. Teachers and schools have put on fund-raising drives to obtain money to produce materials related to the Project. The Project provided pupils' workbooks for Terms 1 and 2 of the Fourth Year but

none for Term 3. Several Teachers using the Project principles created their own workbook for Term 3.

Already some countries have been seeking to build, on this base, Social Studies curricula for the first three years of secondary schooling. Such developments have already begun in St. Vincent, St. Lucia and Dominica There can be no question that further development in Social Studies at the primary and early secondary levels of educational systems in the region will take note, guidance and probably inspiration from the Project outcomes.

2. Caribbeanization of Primary Science

Science has had a much longer history in the primary curriculum than Social Studies. Traditionally primary teachers have shied away from teaching Science or, if they did, taught mainly the topics they liked or understood, which by and large were of a biological nature. The most significant contribution of the Project in this area has been in demystifying Science as being the preserve of the academically brilliant. It has succeeded in presenting Science as part of everyday life and as something that can be understood by the layman. This has been accomplished through the use of everyday events, experiences and materials of Caribbean life as a source of examples, activities and discussion. This has not been improvization of standard Science using local material as much as it has been using familiar local material to teach standard Science.

The net result has been that Teachers have become much more confident in teaching Science at the primary level and have been conveying a new positive attitude to their

students. Recognizing the strength of this new development, personnel from the British Development Division working in Science education in the Eastern Caribbean have been disseminating Project materials in countries that did not participate in the development of these materials. Again Ministries of Education have been drawing on the principles and approaches of the Project in Science to plan curriculum reform at the Junior-Secondary level.

3. Teachers as Decision-Makers in Curriculum

To date curriculum development has been the preserve of the experts. Specially trained Education Officers with a strong background in the subject area, University academic staff and foreign consultants have been the decision makers on curriculum reform. Even in instances where national committees have been formed with teacher representatives, the weight of authority has rested with the experts. Some enlightened experts have consulted teachers or included them in a pilot testing situation. But even then the final word has been that of the expert. The weight of decision making on curriculum has rested firmly on expert knowledge.

The structure and modus operandum of the Project shifted the balance of decision making to give teachers in the classroom a much greater say about what goes into the curriculum and how it should be approached than in any other curriculum to date. The expert was another voice in the decision making process but even the expert could be vetoed if the weight of evidence was that his or her suggestions and recommendations were not working in the classroom. On the other hand successful practice

ensured the inclusion of teachers' ideas in what was being done.

While the Project did not set out with an articulated criterion for the decision-making process, what emerged as the baseline principle was the pragmatic criterion: Did it work in the classroom? The inclusion of principals with classroom teachers in the curriculum process considerably strengthened the voice of the practitioners in the discussion with the academics and the experts.

The overall result of this process is that Subject Leaders in each territory and those Project school Principals and Teachers who have been through the development phase now have a strong sense of ownership of the Project outcomes and products in their particular subject area. They feel strongly that they helped to create these products and that it is their efforts that produced them. This strong sense of identification with the Project products has generated strong local commitment in each territory.

4. Regional Dimension to Primary Education

Primary education over the 150 years of its existence in the Caribbean has been largely a territorial matter. During the era of colonization the common British linkage created a source of cooperation and collaboration. With statehood and independence, primary education in each country could become insular in its approaches, expectations, inspiration and direction. In small systems such isolation could be damaging.

The Project created a mechanism through which Caribbean principals, teachers, academics and administrators could constructively share their insights and understanding of common problems on a regional basis. All of the Subject Leaders testified to the enriching effect of learning how their counterparts in other countries were approaching or had solved problems with which they had been grappling.

What the Project did was to provide a means by which these newly sovereign states could examine primary education with a view to finding common ground. The long-term implications are substantial even in economic terms. Common curriculum could mean common textbooks and pupils' material which could make the production of such items commercially cheaper than if each territory does its "own thing" in isolation.

Regional cooperation must be strengthened through collaborative efforts which allow the countries to share their human and financial resources. The Project made available to each country talent and expertise which it could not otherwise obtain for assistance over such a prolonged period.

Consolidation Contributions. The Project consolidated a number of trends that had developed previously. These can be listed as follows:

1. Second Language Approach to English Teaching

From the early 1960's linguists and educators had been advocating that second language techniques had greater relevance to the teaching of English in Caribbean schools than the traditional approach. Pioneering work

by Dennis Craig and others had developed a Dialect to Dialect Model of teaching Standard English which is of particular relevance to the Caribbean. While some work along these lines had been going on the Project provided the opportunity whereby the specifics of this approach could be translated into language teaching objectives and teaching strategies, as well as the means by which teachers could be equipped with the skills to execute such a program effectively.

While the ideas and concepts of this approach were familiar to the teachers the specific approaches and strategies were not. The Project thus provided the means by which this approach could become standard practice in schools in the participating territories.

2. Sequence in Mathematics Curriculum

Mathematics was the subject area in which most work had been done by several curriculum development projects in the past. As such the Project did not break new ground. After examining what had been done in previous years, the Project produced a more logical organization and sequence of the topics being taught at the primary level in Caribbean schools. It also provided needed expansion of several topics with detailed activities and content. The pupils' work-booklets were a particularly welcome addition. Teachers and pupils both perceived them as a positive development in meeting a need and filling a gap that had existed in Mathematics education at the primary level.

3. Curriculum Development as Part of the Education System

Since the 1960's Ministries of Education have been institutionalizing curriculum development as an on-going process in their educational systems. Guyana, Belize, Jamaica, Trinidad and Tobago, Barbados, St. Lucia and Grenada had established Curriculum Units as part of the Ministry of Education while St. Kitts-Nevis had included it as part of the Teacher Training College's responsibility. The Project provided the mechanism, inspiration and justification whereby Ministries of Education in Antigua, British Virgin Islands, Dominica, St. Vincent and Montserrat could argue for and make structural changes which permitted them to man Curriculum Units in one way or another.

Equally important was the fact that the Project exposed large numbers of teachers, and other educators sometimes, to the curriculum development process. This has provided a pool of persons in each country with curriculum development experience and, in the case of the Subject Leaders, with skills and strategies for executing such activities.

The Project has provided the means by which several countries could continue to consolidate curriculum planning and development as an integral and on-going feature of their respective systems.

Specific Impact

In addition to the general impact that the Project had on primary education in all of the participating countries it made specific impact on the system in particular countries. In almost all instances this resulted from an extension of

some aspects of the Project to some particular concern that exercised the minds of local educators. These can be listed as follows:

1. Teaching of English to Speakers of Other Languages - Belize

   Belize has a complex language situation when compared to most of the other Caribbean nations. There are at least five language groups which are required to learn the official language of the country - English. Encouraged by the apparent success of the Project approach in Language Arts, Belize has expanded the Project approach to encompass more than the Creole-Standard English dichotomy. With assistance from the Project they have established a small project called TESOL - Teaching English to Speakers of Other Languages

   For the next few years Belize, through TESOL, will be focusing upon the particular strategies that must be used along with the supporting materials required to teach English to Ketche, Maya, Garifuana and Spanish speaking Belizeans. Limited by the available resources they will be concentrating on one language at a time.

   While such a development may seem only to be of esoteric interest to the outsider this is a significant and meaningful development for Belize where ethnic groups maintain strong separate identities.

2. Regional Centres for Inservice Training - Belize

While it is difficult to claim that the development of Regional Inservice Teacher Training Centres is the direct result of the Project, the simultaneous and inter-related development of both make it virtually impossible to report on the Project without mentioning these centres. The Belize Ministry of Education has acted to establish six regional centres for the inservice training of unqualified teachers in primary schools across the country.

Using existing Subject Leaders the Ministry has trained two subject leaders in the three subject areas for each of the six centres. The Subject Leaders in each centre will take responsibility for the inservice training of unqualified teachers in the areas served by the centre.

The creation of the regional centre is not only significant in terms of spreading Project outcomes to the entire system in Belize, it represents an innovation in decentralization of services to teachers and schools in order to improve the quality of education in Belize. Given the size of the country - twice the size of Jamaica geographically, and the relatively sparse population - 140,000 persons - the regional centres could become a pivotal part of the strategies for the delivery of goods and services to the primary system in Belize

While the Project may not have developed this strategy directly it provided a convenient opportunity for its emergence.

3. Reading Centre - Antigua

Participation in the Project stimulated the Ministry of Education in Antigua to establish a Reading Centre for the teaching of reading to children experiencing difficulties. Teachers in the school system can refer children to this Centre for help by teachers specially trained in the teaching of reading. Correspondingly teachers may go to the Centre for inservice training in the teaching of reading as well as for needed support or for supplementary material for particular children.

Again it is not possible to say that the Centre was a direct outcome of the Project but the fact is that the Project did cradle the conditions which led to its creation.

4. Common Primary Curriculum - British Virgin Islands

Prior to the Project there was no common syllabus or curriculum for primary education in BVI. The Primary V Examinations which determine entry to high schooling was not set on any specific syllabus. The Project provided the framework for the emergence of a common curriculum for all grades of the primary school.

This has been welcomed by teachers and principals for a number of different reasons. First, they claim that it facilitates transfers from one school to the next which sometimes occur. In the past children being transferred had difficulty in being placed and in continuing their education without serious disruption and discontinuity. Second, it now provides a common syllabus for the Primary V Examinations. All schools and teachers can

prepare students for this Examination knowing the content on which the pupils will be tested.

It would appear that the Project provided the framework for the emergence of a common curriculum in BVI. While there was a felt need for such a development the necessary local momentum for its creation had not been forthcoming. The Project created this momentum and strengthened the advocacy of those who wished such a development to take place.

5. Improvement of Rural Primary Education

Both St. Vincent and Dominica used the Project to direct resources to the improvement of primary education in rural areas. Arguing that the urban schools in both countries had better trained teachers, better facilities and greater community support, the Ministries of both countries located the Project in rural schools which they perceived were in need of developmental assistance. No schools in the capitals of either country were selected as Project schools.

Ministry arguments were that if the Project did improve quality in these rural schools then generalization to the rest of the system would be easier than if similar gains were made in better endowed urban settings. Also if the Project were successful in these schools it could be successful anywhere.

Given the circumstances of primary education in both countries this was a perfectly justifiable position to take. If resources and development are directed to the areas of greatest need then maximum returns can be

expected from all inputs. Conversely if the constraints are so great as to frustrate strategies developed on conventional lines then alternative strategies would need to be found

That the Project inputs did result in improved learning environments in both countries with improved teacher and pupil performances in these rural schools should provide the Ministries of Education of both countries with the confidence to employ similar strategies for the continued development of rural primary schools. The lessons learned could be of use to other countries with similar cirumstances

Impact on Territorial 11+ Examinations

Eight of the nine countries participating in the curriculum aspects of the Project select students for secondary schooling by means of some type of examination either at age eleven years or at age twelve years.

In the case of St. Kitts-Nevis students are automatically promoted from primary to secondary school without any achievement criterion being required.

Because the Project has focused on curriculum for the 7-11 age group countries can be categorized into two groups. Those that have their selection examinations during year four of the Project and those having them one year later. Countries having the examination at 11+ are Barbados, St. Lucia, Antigua and Montserrat. Countries having a 12+ examination are Belize, St. Vincent, Dominica and BVI. This latter group of countries have had to make some decision on how they will bridge the one year gap between the end of the

use of Project material and the end of their system of primary education.

The Project has had impact on the common entrance or secondary school selection process in three distinctly different ways. First, both Evaluation Officers employed by the Project over its duration have at the request of several countries given technical assistance with respect to reforming testing strategies. This has resulted in changes in the focus and format of the testing instruments employed in the selection process. In the case of Belize the assistance was substantial.

Second, the Project has influenced content on which the examinations are based. All of the territories concerned either have adopted fully the core curriculum of particular subjects or have revised their existing syllabuses in the process of incorporating the Project content and methodology for teaching in all schools. The examinations in all countries consist of tests in English and Mathematics. In addition, some countries have tests in Science and Social Studies or use a General Paper which includes Science and Social Studies questions.

The Project content will change the Common Entrance content to the same extent as it changes the syllabus content in each subject in each country. This is because in most countries the selection examinations are based on the syllabus for the primary schools in the subjects that are examined. In Dominica, for example, Common Entrance syllabuses are being studied for implementation nationally. These syllabuses are based largely on the core curriculum of the Project in English and Mathematics. Several other territories are making similar adjustments to the syllabus requirements for these examinations.

Third is pupil performance. As reported in detail in Chapter III under the section on Impact on Pupil Performance, hard evidence exists to show that there were marked increases in the performance of pupils in the pilot schools of Barbados on the Common Entrance Examinations when compared to that of the parallel schools in the same territory. In addition, some evidence exists to show similar results in other territories

Steps Toward Institutionalization

There is an abundance of evidence to show that steps are being taken to integrate the Project outcomes into the regular educational systems of the countries. These efforts can be classified under the following headings: curriculum reform, curriculum personnel, adjustments, teacher education, and limitations. Each is discussed below

Curriculum Reform

All nine countries participating in the Project have either carried out or are in the process of carrying out curriculum reform exercises in which the curriculum products of the Project are being incorporated into their primary education policies. Montserrat and BVI have adopted as their national curriculum the core curriculum in all subject areas in which they participated. Dominica, St. Lucia and St. Vincent have similarly adopted the Social Studies curriculum. In Barbados where the Project curricula closely agreed with that of the national curriculum, the expansion of particular topics included in the Project curricula has been adopted and the entire Project materials have been adopted as resource and enrichment materials for the entire primary

system. These include the teachers' manuals and pupils' worksheets

St. Lucia, St. Vincent and St. Kitts are revising their national curricula in Science to include content from the Project. They are adopting all the materials for support of the revised curricula. By these various strategies the curricula reform started in the Project will be consolidated as a part of the several national systems.

The extension granted for the purpose of the dissemination of the Project products has greatly assisted governments in their attempts to institutionalize the curriculum outcomes of the Project.

Curriculum Personnel

The Ministries of Education have not only sought to reform curriculum in Language Arts, Mathematics, Social Studies and Science but they have also sought to relate these developments to curriculum planning and development in the Ministries themselves. In Barbados, where a Curriculum Unit already existed and where personnel from that Unit were involved in the development of the Project materials, orientation and training is planned for a large number of Education Officers to make them conversant and familiar with the materials so that they can effectively assist schools in the reforms that are being implemented. They will be following the Project pattern where one officer will be responsible for assisting five schools in one particular subject area. Barbados is therefore institutionalizing Project practice seeing that they already had the appropriate curriculum structure.

In St. Lucia the Curriculum and National Development Unit will be taking responsibility for implementation and continued development of the materials. Similarly the Curriculum Unit in the Ministry of Education in Belize will function in a similar way. In St. Kitts-Nevis the Teachers Training College - which has the responsibility for curriculum - has already started to devise ways of implementing the new curriculum in schools.

In St. Vincent, Dominica, BVI, Montserrat and Antigua, the Ministries of Education have made proposals to have included in their respective establishments a curriculum officer who would have duties similar to that of the PIO.

All the countries are therefore attempting to develop or improve their capacity to manage the curriculum process in their systems, following up the impact made by the Project.

Adjustments

Several countries have begun to look at curriculum at the Infant level and at the Junior - Secondary or forms 1-3 level of the High School to see the kinds of curriculum adjustments that need to be made in the process of institutionalizing the Project outcomes. In this regard countries need to look at the experiences and contributions of the Regional Pre-school Project funded by several agencies and executed by the UWI and also that of the Bernard van Leer Foundation. Some dialogue would need to take place between educators at the early childhood level and those responsible for primary education.

Dominica has used the primary Project as the basis for planning curriculum for its junior secondary program. It is no accident therefore that some schools have redeployed some

of the teachers trained by the Project to teach at the forms 1-3 level

Teacher Education

In order to ensure that there will be a continuous supply of teachers trained to teach the new curricula, Ministries of Education had included Teachers' College tutors in the four subject areas as Subject Leaders and had kept the Colleges in constant supply of materials.

Most of the territories involved in the Project have been using workshops run by the Organization for Cooperation in Overseas Development (OCOD) of Canada to orient unqualified teachers in classroom practices and teaching methodology.

St. Vincent had begun to use these workshops to provide unqualified teachers with orientation and training in the use of Project materials. Other countries are thinking of following this lead for summer workshops of 1986 and thereafter. Such efforts assist in institutionalizing the Project in both inservice and pre-service modes of teacher training operating in these countries

The shortcoming here is that the Project materials developed for teachers were not packaged to be taught in 30 or 40 hour courses in formal teacher training program in the pre-service or inservice mode. These materials therefore need to be transformed into courses in methodology and curriculum to be taught in colleges during the academic year or in inservice summer courses.

Limitations

Despite all the success that has been achieved through the informal spread of Project materials from Project schools and the informal acceptance of syllabuses and materials by Ministries of Education as part of the National Curriculum policy the major limitation on the impact of the Primary Project on primary education in the participating countries is that some governments do not have the resources to implement the program nationally as the UWI/USAID implemented it in five Project schools in each territory.

The Caribbean has had experience with other pilot projects which have developed excellent materials for teachers and pupils which were demonstrated and proven to have the capability of significantly increasing and improving Language and Mathematics achievement of students at the primary level. Yet these same materials when distributed to the total primary system in the countries in which they were developed did not have the same effect as in the pilot stage principally because the national dissemination was not accompanied by the support services that were an integral ingredient of the pilot stage. Two outstanding examples of this have been the Caribbean Primary Mathematics material developed by CAMDU in St. Lucia and the Primary Language Arts materials developed by the Language Material Workshop in Jamaica. The lesson learned from these two experiences is that the power of improvement of these materials lay much more in the process than in the products.

Workshops to orient teachers to the materials, followed by school visits by resource persons to assist the teachers to interpret and implement the ideas in their classes, supported by further visits over a year or more until teachers have fully assimilated and internalized the

strategies and concepts are as important as the materials themselves.

From discussions with CEOs, Principals and Teachers in the various territories it would appear that only the smallest territories - BVI and Montserrat - and Barbados will be able to institutionalize both the process as well as the products developed by the Project. Other countries which have much larger systems than BVI and Montserrat do not have either the infrastructure or resources as does Barbados. In these countries Project materials are not likely to result in any significant improvement in primary education. They seem heading to repeat the experiences of both the Caribbean Primary Maths and the LMW Language Arts projects. The orientation of principals plus one day orientation in each subject for each teacher provided by the Project during the Extension is certainly not sufficient to ensure effective impact in the non-Project schools. St. Kitts-Nevis, Antigua, Dominica, Beize, St. Vincent and St. Lucia need substantial assistance in order for them to institutionalize the Project processes as well as its products.

The second limitation on impact of the Project is the need for a continuous supply of the materials at low cost. The question is how long will the current supply of materials, delivered through the dissemination phase last? The form in which the material was developed and disseminated would not ensure their constant use by teachers and pupils for any length of time. Now that nine primary systems will be using the materials nationally, should not some other form of production and distribution be considered? Now that the Project has developed these products and created a demand for them should not their continued supply be a matter for firm recommendation by their developers and sponsors? The Project seems to be leaving this matter as a loose end that

hopefully will be tied up somehow in the future. UWI and USAID both seem to have some responsibility to determine the future of the materials on a more definite basis. It would seem almost irresponsible to leave the production of the materials on the present basis.

The third limitation is the assumption that the continued revision of materials developed for the four subject areas and the development of materials for the other subjects of the primary curriculum not included in the Project will be developed on some other basis. How will these materials be revised? Surely it could not be intended that these materials constitute the final form of curriculum development in these countries for the forseeable future, even for ever! How will the similar syllabuses, curricula and materials be developed for other subject areas taught in primary schools? If the answer to these questions is through the curriculum units in the different countries then some further questions have to be raised. Basically the central Project staff was a regional curriculum Unit located in the SOE, UWI developing common curricula and materials in partnership with nine small states. This mode of curriculum development has several economic and educational advantages. It creates the basis for advantages of economies of scale in producing and distributing textbooks, and teacher and pupil materials for these small states. If the revision of these materials is on a territorial basis without regional coordination will it not undermine the very advantage that has been created by its regional origin?

Secondly the regional cooperative enterprise which developed the materials sponsored cross fertilization of ideas and exchange of solutions between primary systems that were otherwise isolated. The educational advantages of this interchange and exchange between primary educators and

administrators were enormous. Will the revision of these materials take place solely on a territorial basis with the inbuilt liability of narrow insularity where the intimacy of relationships could undermine needed objectivity?

The situation that the continued development of primary education faces is precisely what existed before the Project started. But the Project has clearly demonstrated a more powerful and productive approach. The question is how can this continue on a more permanent basis?

Chapter VI

LESSONS LEARNED FROM IMPLEMENTATION OF THE PROJECT

The purpose of this chapter is to identify and comment on the major lessons learned from the implementation of the Primary Education Project which, as noted in the Introduction, is one of the three components of the larger, regional Caribbean Education Development Project (Number 538-0029). Lessons learned should provide useful information for the funding agency, the University of the West Indies, and the Ministries of Education in the region.

The Regional Model

1. Assigning responsibility for the implementation of the Caribbean Education Development Project to three regional agencies, namely, the Caribbean Development Bank, the Caribbean Examinations Council, and the University of the West Indies, worked effectively since each had already demonstrated the capability to deliver products and services to the territories of the region.

2. In the case of both the Secondary and Primary Education Projects, the use of Project Officers in each participating territory worked well; implementation of the Projects would have been next to impossible without their participation. It should be noted, however, that for the Primary Education Project, the Project Implementation Officers (PIOs) were employed by the Project on a full-time basis while for the Secondary Project the Local Coordinators were employed by CXC on only a half-time basis. Experience shows clearly that territorial project officers should be assigned on a full-time basis.

3. Another strength of the regional model with respect to the Primary Education Project was the selection of a strong qualified Project Coordinator and a team of four highly qualified curriculum specialists, one for each subject area which the Project treated: Language Arts, Mathematics, Social Studies, and Science. The fifth member of the staff was an Evaluation Specialist.

4. The organization for Project implementation within each territory paralleled the structure of the central office Coordinator (the PIO), Subject Matter Leaders, and a Project Implementation Unit which served in an advisory capacity for its territory. This arrangement provided stability for Project implementation even though in some cases (PIUs) parts of the structure did not function well during the entire life of the Project.

5. At the outset of the Project, there was a question as to whether its implementation should take place within the UWI's School of Education -- that is, as an integral part of the program --- or as a separate unit attached to the School of Education. The latter alternative was chosen and this decision proved to be a sound one since it has worked well for overall Project implementation. There were some problems, however, with respect to how Faculty members of the School of Education should be related to the Project. Over time most of these problems were worked out.

6. The Project did function within the overall structure of the University, however, and this meant that it could enjoy the services of the institution's Finance Office.

Since the Project involved considerable travel and dissemination of curriculum products, and the disbursement of funds to territorial governments, the Finance Office provided a considerable support service.

7. The identification and involvement of pilot schools for each participating territory as a means of effecting change was also a strength of the model used for the Primary Education Project.

8. Another strength was the fact that curriculum products were produced on a predetermined schedule which meant that the products were produced and tested on a sequential basis, that is first for 7-8 year olds, next for 8-9 year olds, then for 9-10 year olds, and finally for 10-11 year olds. This arrangement had the strength of not imposing the total load on the Project at the outset, but it had the weakness of delaying production and dissemination of products for older primary children, and of not providing continuous strong support for teaching and using curriculum materials which had been introduced in previous years.

9. Another positive element in the area of curriculum development was the fact that only four subject areas were selected, three which were fairly common to the region (Language Arts, Mathematics and Science) and one which was relatively new (Social Studies). Similarly, the fact that each territory could opt for which subject areas it wanted to be involved in added strength to the arrangement.

10. Perhaps the most significant factor which was built into the model from the outset was that West Indian educators would be involved in every aspect of Project

implementation, and the involvement of classroom teachers at every stage in the curriculum development process - planning, preliminary draft, editing/field testing and classroom assistance to teachers by Project Staff, PIOs, Subject Leaders and other resource persons. This feature, perhaps more than any other, contributed to the overall success of the Project.

11. The Project model called for implementation in the participating territories through the respective Ministries of Education. This was a wise decision for both educational and political reasons. It allowed for some degree of direct participation by the Ministries in decision making as well as providing some insurance that Project outcomes would be institutionalized. While there were strengths in this arrangement, there were also weaknesses. All Subject Matter Leaders were employees of the Ministry and therefore were called on to perform their regular Ministry teaching functions as well, this meant that in some cases they were not always available to serve the Project. The release of Principals and Teachers from schools to participate in Project workshops was also under the control of the Ministries and on occasion some of them were reluctant to approve such releases.

12. While the overall Project design for the three components had many desirable features, it must be noted that little provision was built into the design to ensure a degree of coordination among the three parts or to provide means for relationships and cross-fertilization. The overall Project was designed to improve primary and secondary education in the English-speaking Caribbean territories; there were three components one for constructing primary schools; a second for improving

primary education, and a third for improving secondary education. There would have been advantages for all parties concerned to have had some interrelationships among the three components at least for exchanging information. One exception to the lack of coordination was that the Project Coordinator of the Primary Education Project served on the CXC Secondary Education Project's Management Committee and the CXC Registrar served on the Primary Education Project Advisory Group.

13. The design of the Primary Project did not take into account a realistic position regarding generalization of Project outcomes. As pointed out in greater detail in the next chapter, some territories (at least 6 of the 9) are now facing generalization of outcomes on their own and without adequate resources to do so. This situation could mean that these territories may soon be back to square one. This is a lesson that was learned from earlier curriculum development projects in the Caribbean.

Project Management

1. In any administrative effort, effective communication, between management and implementors is of importance. In the complex administrative structure which characterized this regional Project and which involved ten separate countries, effective communication was of critical importance. This was further evidenced by the fact that three of the four Subject Matter Specialists serving on the staff lived in territories outside Barbados, and that the ten PIOs lived and worked in their respective territories. The system of regular reporting at all levels to ensure proper monitoring of the program worked reasonably well although there were occasional delays in submitting reports.

2. With respect to finances, it was necessary to have a central finance office which did the accounting for the Project and made disbursements of funds to appropriate persons and agencies. This service was effectively provided by the U.W.I. Cave Hill Campus Finance Office. It was also necessary that the participating territories provided timely and accurate accounting of Project funds received from U.W.I.

3. Experience showed that provisions had to be made from time to time for unexpected circumstances and for responding to special needs/situations. This required a degree of flexibility in Project management and this was done without jeopardizing overall Project outcomes. A specific example was in the case of BVI which was permitted to participate in the Project in only two curriculum areas instead of three because of its late entry. Even its late entry was something of a modification. Other examples are included in the section on unplanned outcomes in Chapter IV.

4. Selection of qualified Project Staff was critical to the effective implementation of the Project. Mention already has been made of the significant contributions of the central Project Staff and the PIOs in the territories. In this Project, Ministries of Education were permitted/requested to identify key educational leaders in their respective territories to serve as Project Officers. This procedure, even though it involved some risk, turned out to be an effective way to select Project personnel. The risk arises if Ministries will not free persons full-time for the assignments, and/or use this avenue to unload incompetent Ministry Officers. Fortunately, this did not happen. In fact, in one case the Ministry of a territory later employed the PIO as a Senior Education Officer.

5. Ministries of Education were also requested to identify and appoint two Subject Matter Leaders for each subject area in which the respective territories were involved in the Project. Overall, this arrangement did not work as well as in the case of the PIOs. For the most part, Subject Matter Leaders were selected from among head teachers, Education Officers and Teacher Training College staffs. The assignments however, were add-ons, extra load in nature. This meant that the time available to participate in Project implementation was limited, sometimes severely so. In addition, in some territories, Ministries of Education were reluctant to release personnel from their regular assignments to do Project work. The arrangement probably would have worked better if some remuneration had been made available for salary as well as for travel expenses. In spite of these inherent weaknesses in the arrangement, Project implementation in many territories was carried on at a high level of effectiveness.

6. The conduct of territorial and administrators training workshops involved the selection of resource personnel to provide training. In view of the diversity among the participating territories it was important that trainers were well acquainted with the characteristics of the educational systems for which training was being provided. With one or two specific exceptions, this aspect of implementation was carried out effectively.

7. Travel expenses provided for PIOs were totally inadequate. The rates for mileage were prescribed on the basis of U.S. standards which are irrelevant to the Caribbean where the cost of gasoline, motor oil, and repairs and the condition

of roads are vastly different than in the U.S. For future projects in the Caribbean involving local travel, USAID may wish to develop some variation of its general policy for travel expenses which would be more appropriate for the Caribbean.

3. There were some problems related to the disbursement of Project funds to territorial governments. The policies established for this Project required that CEOs submit vouchers to the Project Office. In at least one case, the CEO was required to submit his vouchers to the territorial government thinking that the requirements were met and assumed that the government would then be reimbursed accordingly This arrangement is similar to many bilateral agreements between grantor and grantee. In such cases the recipient government is required to include the funding for a project in its national budget for the particular Ministry charged with implementing the project. In this case the government is not required to submit vouchers. The question, in this new project model involving regional institutions and national governments is, what system of financial accountability is appropriate, desirable, and consistent. It appears that this is another area that needs to be reexamined and discussed by all the partners concerned: USAID, regional institutions and the national governments.

The Curriculum Development Process

1. The model used was essentially a "from the bottom up" approach rather than "from the top down". It is best described as a participatory model in which principals and Teachers were included in the decision making process. The model worked well and generated a sense of ownership and commitment on the part of participants with respect

to the products which were developed. It was one of the main factors which contributed to the overall success of the Project, and the primary factor with respect to curriculum development.

2. The use of regional, territorial, and local workshops as the vehicles for curriculum development and inservice training of teachers also worked well. Diversification of the function of the three types of workshops added to the effectiveness of the arrangement. Regular monitoring of the conduct of workshops by participant evaluation provided a means for improving subsequent workshops. Such evaluation characterized each workshop.

3. While workshops were effective vehicles for curriculum development, lessons were learned about their conduct. For example, the closing of schools so that teachers could attend territorial workshops did not work well in most territories. Parental complaints were loud and clear, especially when workshops were scheduled near the time of the administration of common entrance examinations. Early on, it was learned to set a realistic agenda for what could be accomplished.

4. Inclusion of background subject matter content and instructional assistance in the curriculum products were strong features of the process.

5. From the beginning, it was known that curriculum products must be produced and disseminated on a low-cost basis. The advantages are obvious but the territories will soon face the problem of how to replace materials that are certain to disintegrate with use.

Inservice Training of Teachers

1. Inservice training of teachers was interwoven with the curriculum development process. In fact, working cooperatively with professional peers to develop new curriculum materials is in itself professional training.

2. Judging from comments by participants, more training should have been provided in testing.

3. Training during the life of the Project was provided for teachers in three important ways

   a. Participation in workshops

   b. Written instructions in teachers' manuals

   c. On the spot assistance by territorial Subject Matter Leaders and staff Subject Matter Specialists

Together, these three factors contributed greatly to the improvement of teaching in the pilot schools.

Turnover Problem

1. One of the important lessons learned in the Project is the fact that there was a high degree of turnover among personnel at almost every level of Project implementation. For example

   a. In the central Project staff of six people, there were two changes during the life of the Project, one caused by death, the other by resignation.

b. Among the nine PIOs, six served for the life of the Project, three did not. In one territory, there were four different PIOs.

c. Among Subject Matter Leaders in the territories there was high turnover. For example, in the areas of Social Studies -- selected by five territories -- two persons were to have carried this responsibility for each territory for a total of ten Subject Matter Leaders in Social Studies. By the end of the Project, 16 persons had served in this capacity.

d. But by far the turnover problem was most critical at the local level among Principals and especially Teachers.

2. For the implementation of a Project which aims to bring about educational change, turnover creates serious problems. In every instance where some one leaves a position, it means that Project implementation in the situation is back to square one and the process of orientation in that particular situation is delayed.

3. When one considers the problems caused by turnover, one can comprehend more fully what has been accomplished through this Project. It succeeded in spite of turnover. Achievements might have been even greater if turnover rates had been lower.

4. An interesting sidelight -- not everything about turnover was negative. The evaluators found that

a. when pilot school teachers were transferred to non-Project schools, they often took Project materials with them and used them in their new positions;

b. in one territory strong Project class Teachers were deliberately transferred to weaker non-Project schools to strengthen them;

c. in some territories, when a pilot school Principal was transferred to a non-Project school, he/she took steps to install Project materials and processes in the new school and;

d. when Project materials were borrowed, they were, as one Teacher put it, "confiscated by the borrower".

Dissemination of Curriculum Products

1. From the beginning of the Project, it was recognized that the dissemination of curriculum materials would be difficult. Experience showed that this was the main problem of implementation during the life of the Project. This was so for a number of reasons

a. lack of hardware to produce materials; actually, appropriate hardware should have been in place in the Project office from the outset;

b. lack of sufficient software (paper and ink) at the time when it was needed;

c. difficulties surrounding the transporting of materials from territory to territory;

d. some delays in getting workshop reports so that materials could be produced in a timely fashion;

e. lack of adequate funding for dissemination early in the Project and;

f. the piling up of heavy production and dissemination demands in the last year of the Project.

2. A number of concrete and important steps were taken to resolve at least some of these problems and it is to the credit of USAID and the Project management that such resolutions were made. For example

   a. USAID approved a one-year extension of the Project targeted specifically on dissemination.

   b. USAID made concessions to permit the purchase of hardware to speed up the dissemination process; funds were made available to purchase electronic scanners, collators, typewriters, and duplicators not only for the Project Office, but also for the territories. Attention was called to this problem in the 1982 mid-Project Evaluation Report.

   c. The Project Coordinator employed additional part-time staff to assist in the production and dissemination process. A dedicated support staff worked beyond the call of duty to ensure that materials were produced and shipped.

   d. Transporting of materials was often handled by Subject Matter Specialists as they travelled from territory to territory to conduct workshops.

3. The lesson learned from this Project and two other curriculum projects in the Caribbean is that the power of improvement of curriculum materials lay as much in the process used for their development as in the products themselves.

4. Dissemination involves more than the distribution of curriculum products. Examples in the field of education are many which show that the distribution of print/graphic materials without supporting orientation and instruction and supervision in early stages of use result in little or no improvement. The Primary Education Project demonstrated clearly that improvments are much more likely to result when dissemination includes both the distribution of products and the supporting services necessary to launch and sustain their use.

5. The importance of supporting services in dissemination activities is well documented by what pilot school teachers reported in a study conducted by the Internal Evaluation Specialist. Hard evidence from this study reveals what Teachers believe to have been the most significant aspects of Project implementation. The various aspects were rank ordered by Teachers of pilot schools as follows

"1. *Having workshops to train teachers*

2. *Having Subject Specialists (from the Staff) visit their territories to help teachers.*

3. *Having a specialist to guide/coordinate work in each subject*

4. *The high quality of teaching materials*

5. *Having subject leaders (in the territories) to give day-to-day guidance in each subject*

6. *Having the PIO to coordinate all the work in a territory*

7. *Distribution of the materials in quantity*".

The fact that Teachers ranked supporting services (1,2,3) above

the high quality of teaching materials, and the fact that distribution of the materials in quantity was ranked 7 is clear evidence of the importance of providing supporting services in dissemination activities.

Generalization of Project Outcomes

1. Both St. Vincent and Dominica used the Project to improve primary education in rural areas. Arguing that the urban schools in both countries had better trained teachers, better facilities and greater community support, the Ministries located the Project in rural schools which they preceived were in greater need of developmental assistance. They argued that if the Project improved quality in these schools then generalizaiton to the rest of the system would be easier than if similar gains were made in better endowed urban settings, and if the Project were successful in these rural schools it could be successful anywhere. That the Project did result in improved learning environments in both countries with improved teacher and pupil performances in these rural schools should provide the Ministries of Education of both countries with the confidence to employ similar strategies for the continued development of rural primary schools. The lessons learned could be of use to other countries with similar circumstances.

2. The implementation of the Primary Education Project demonstrated that unanticipated spread of Project outcomes can and does occur. For example non-Project school teachers heard about the new curriculum materials and requested to receive the materials for their use; Principals and Teachers who were transferred from pilot

schools to non-Project schools used Project materials and processes, non-participating territories learned of the Project and requested to use curriculum products; Ministries of Education incorporated Project curriculum outcomes into their territorial education systems; etc.

3. The involvement of personnel from all sectors concerned with improving primary education in the implementation of Project contributes positively to generalization of Project outcomes.

4. Generalization of outcomes should take into account pre- and inservice training programs for teachers. During the life of the Project, Teacher Training Colleges were increasingly involved.

Chapter VII

PROJECT EVALUATION SUMMARY

At the request of the USAID Office, this chapter is included in the Evaluation Report and follows the specific guidelines provided by that Office.

A. Summary

The UWI/USAID Primary Education Project was a subproject of the larger Caribbean Education Development Project (Number 538-0029) which also included the Primary School Construction/Rehabilitation subproject implemented by the Caribbean Development Bank, and the Secondary Curriculum Development subproject implemented by the Caribbean Examinations Council. The Primary Education Project has been underway since December 1979 and terminates in 1985. A no-cost extension from May 1984 to October 1985 was approved for the Project by the funding agency.

The principal outcomes of this Project were the development of new or revised curriculum materials in Language Arts, Mathematics, Social Studies and Science for primary school education (ages 7 - 11) in the English-speaking Caribbean territories, and the provision of inservice training of Principals and Teachers in the pilot schools to use the new curriculum materials. These outcomes have been achieved, and in some cases with distinction. One exception is that some work is yet to be done to disseminate the materials to all of the participating territories for use in all primary schools. That work is underway and will be completed. The extension period was for the express

purpose of completing the dissemination activity. Dissemination has been unnecessarily delayed as a result of lack of appropriate hardware early in the Project, and a six-month delay in receiving paper and ink from the U. S. during the extension period.

In addition to the principal outcomes, the secondary out-comes were achieved as well as a significant number of unplanned outcomes. A number of the unanticipated outcomes are viewed by the Evaluators as contributing in a major way to the overall purpose of the Project.

The Evaluators wish to go on record to report that the implementation of the Primary Education Project has met the anticipated outcomes in the Project Paper, and in some cases exceeded what was expected. The success of the implementation of the Project can be attributed to many factors but most importantly to the contributions of the central Project Staff and the territorial Project Implementation Officers. They are to be commended for excellent work.

B. Evaluation Methodology

In addition to internal evaluation which was conducted during the life of the Project, two mid-Project external evaluations were held, one in 1981 the other in 1982. Project implementation subsequent to those dates reflected modifications suggested in those Evaluation Reports.

The terminal external evaluation was planned for in December 1984 in Barbados and conducted during the period January to June 1985. The on-site visits of the

two evaluators to the participating territories were made from May 20 to June 20, 1985.

The design of the external terminal evaluation was based on the requirements specified in the Project Paper (Number 538-0029), and as these are reflected in the approved evaluation plan of 1980. In addition, account was taken of the requests of the USAID Office in the following documents: (a) "Final Evaluation in 1984" (this document was prepared prior to the approval of the extension period), and (b) "Project Evaluation Summary, Part II." The external evaluation covered the following areas:

1. An assessment of the principal outcomes of the Project:

    a. The development and use of curriculum materials in four subject areas -- Language Arts, Social Studies, Science, and Mathematics -- and at four age levels -- 7-8, 8-9, 9-10, and 10-11 -- at the primary level in the participating territories

    b. The dissemination of curriculum materials developed by the Project to the participating territories

    c. The effectiveness and appropriateness of curriculum development and teacher training workshops held at the regional, territorial, and local levels

    d. The impact of the curriculum and teacher training component of the Project on teacher behavior and pupil performance

2. An assessment of other Project outcomes:

    a. The training of education administrators in Jamaica

and in the other nine participating territories.

b. The training of education planners

c. The development of health education curriculum materials in collaboration with PAHO

d. Unplanned developments and outcomes either at the level of the central Project staff or in the territories

3. An assessment of Project Management

4. An analysis of indicators of Project institutionalization within the University and in the territories

5. An assessment of Project impact in the region generally

6. A compendium of lessons learned from the implementation of this Project.

In conducting the terminal external evaluation, the Evaluation Team did the following: examined Project files documents, and reports; examined the curriculum materials produced by the Project; critically appraised the internal evaluation reports and their findings; made site visits in all of the participating territories and collected first-hand information by means of questionnaires and interviews with CEOs, PIOs. Subject Matter Leaders, Principals and Teachers of pilot schools, Ministry of Education personnel and, in some cases, Teacher Training College staffs; summarized and analyzed findings from questionnaire responses and the interviews; held discussions with Project staff; compared the separate sources of

information for consistency and congruence; drafted a preliminary evaluation report; reviewed the major findings of that report with Project staff and USAID personnel to correct any inaccuracies in the Team's findings; and revised the preliminary evaluation report accordingly

C. External Factors

It was anticipated that ten territories would participate in the curriculum development and inservice training of teachers component of the Project (Antigua, Barbados, Belize, BVI, Dominica, Grenada, Montserrat, St. Kitts/ Nevis, St. Lucia, and St. Vincent and the Grenadines). Grenada withdrew from participating in the Project during the first year, but has recently expressed interest in becoming involved (Spring 1985). In addition to the nine territories involved in this component of the Project, Jamaica participated in the training of primary school principals specifically for its own primary schools

There were no major changes in Project setting for the host governments of the nine participating territories or for Jamaica during the life of the Project and their priorities continued strong, namely, the improvement of primary education in their respective territories. In fact, motivation for participating increased over time and this has created a demand within the territories for continued efforts to improve primary education, a demand which many of them will find it difficult, if not impossible, to meet considering the unavailability of financial resources to support such efforts.

D. Inputs

Major problems with respect to inputs dealt with dissemination activities. During the extension period, there was a six-month delay in getting paper and ink from the USA which seriously hampered timely production and distribution of curriculum products. A related problem was caused by the fact that the purchase of production hardware was not approved by the funding agency at the outset of the Project. The availability of such hardware, especially for the central Project office, at the beginning of the Project would have increased the efficiency of the dissemination effort. Eventually, for the extension period, USAID approved the pruchase of hardware not only for the central office but also for each participating territory as well. This concession will help considerably in speeding up the dissemination process. It would have been much wiser to have made this concession near the beginning of the Project at the time when it was discovered that dissemination of curriculum products was seriously behind schedule. That point was made clearly in the mid-Project External Evaluation Reports of 1981 and 1982.

E. Outputs

Outputs as anticipated in the Project Paper, Appendix J-2 are listed below in column #1 with comments regarding their achievement in column #2.

Outputs	Comments
1. New curricula consisting of revised syllabi, teachers' manuals, and	Completed. Achievements are commendable. Low-cost production, however, means

Outputs	Comments
pupils' workbooks in Language Arts, Social Studies, Science, and Mathematics.	that the materials will not last long.
2. Additional teaching aids and materials related to the revised curriculum materials.	Such aids and materials were produced by the Project; in some cases individual territories produced their own materials.
3. A modified refined model of curriculum development process.	Produced. Excellent. And it worked.
4. Teachers and supervisors with experience and skill in use of new instructional materials, new methods, content, testing, and curriculum development.	Level of achievement of outcome was high in all areas with the exception of testing. Time restraints resulted in less emphasis on testing in the training workshops, but even so teachers reported gains in this area.
5. Headteachers and principals trained.	Four year-long training sessions in Jamaica trained 72 primary and all-age principals. Twenty-two workshops were conducted to train principals in the other nine territories. Effective results.

Outputs	Comments
6. Project Advisory Group (PAG)	Functioned effectively throughout the life of the Project.
7. Project Implementation Unit (PIU).	All participating territories had PIUs and they functioned satisfactorily for the first two years or so. Later, in some territories they ceased to function.

Conditions expected at the end of the Project as reported in Appendix J-1 of the Project Paper are listed below in column #1 and comments regarding the extent to which outcomes were achieved are presented in column #2.

Conditions expected	Comments
1. Pupils achieving learning objectives.	There is considerable soft evidence and some hard evidence from test results to show that Project class pupils performed better than parallel school pupils on achievement tests in the four subject areas, and on Common Entrance Examinations. For example, in 1984 all five of the pilot schools ranked in the top third of all schools in the Common Entrance Examination of one territory, while only one parallel school did so. Three of these ranked in the middle and one in the bottom third. In 1980

onditions expected	Comments
	parallel schools did better than the Project schools. Full impact of the Project in this area will show in two or three years; it is still too early too judge full impact now
2. Improved syllabi, teachers' manuals and other instructional materials used by teachers.	Outcomes achieved. Some materials are excellent by any standard. Main problem is that materials are likely to disintegrate in a couple of years because of the low-cost staple-back binding. Low-cost production is understandable but it has long term consequences.
3. Teachers applying new instructional methods, e.g. increased use of child-centered activity, and less use of lecturing, teacher talk, telling, etc.	There is considerable soft evidence from PIOs, Subject Matter Leaders Principals, Project staff, and teachers themselves to show that teacher behavior has improved markedly in the desired direction. For example, there was a 26% decrease in the use of lecturing, and increases ranging from 11% to 48% in the use of other teaching strategies most of which were child-centered in approach.
4. Teachers covering a broader, more enriched content.	Of the teachers who responded to the Team's questionnaire, more than half said that their knowledge had increased "significantly" or

Conditions expected	Comments
	"considerably" in the four subject areas. Gains for Social Studies and Science were higher than for Mathematics and Language Arts.
5. Teachers utilizing more frequent classroom testing as part of the evaluation process.	Of the teachers who responded to the Team's questionnaire, 66% reported that their skills in devising better tests had improved "significantly" or "considerably" as a result of participation in the Project.
6. Teachers creating materials for use by students.	The Evaluators observed evidence of the use of teacher-made materials in classrooms in the pilot schools. Responses to the Team's questionnaire indicated roughly that about a fourth of Project teachers had either helped to develop such materials or developed them on their own
7. Headteachers/ principals and supervisors supporting the curriculum development process.	A majority of the more than 100 Principals who participated in Project training activities and who responded to the Team's questionnaire for Principals reported that the topics on curriculum development were effectively taught and relevant to their roles. Deliberate efforts were made in the training to emphasize the role of the Principal in curriculum development to support the ongoing activities of the Project

Conditions expected	Comments
	in that area. Teachers were asked to judge the degree of positive impact the Project had on upgrading the performance of their Principals: 57% said "very high" or "high", 33% said medium", and 10% said "slight" or "none."

Additional details concerning outputs and anticipated conditions at the end of the Project are presented in Chapters III and IV and in Appendix A of this Report.

F. Purpose

"The basic purpose of this subproject is to improve the learning environment for the primary school age group (7-11 years of age) throughout the region." (Project Paper, No. 538-0029, page 25).

This basic purpose was to be accomplished through the development of new or revised syllabi for Language Arts, Mathematics, Science, and Social Studies; through the development of teachers' manuals and instructional aids for teachers and pupils; through the dissemination of these curriculum materials to the pilot schools in the participating territories; through inservice training of teachers in the pilot schools of the participating territories using the regional, territorial, and local workshops as the means for such training; through training workshops for head teachers/principals in the participating territories.

In addition to these expected principal and secondary outcomes which were achieved, a number of unplanned developments and outcomes also resulted from Project implementation.

The anticipated outcomes were achieved. The major problem, as mentioned elsewhere in this Report, was in the area of dissemination of curriculum materials. (See section D above.)

F. Goal

The goal of the Project was "*to enable the human resources of the Caribbean to achieve their full potential.*" Measures of goal achievement identfied in the Project Paper, Appendix J-1, are: "*reduce unemployment levels, increase productivity, and lower birth rate.*" Annual reports and statistics of governments were to be the means of verification of goal achievement.

It is obvious that it is premature to make any judgements relative to achievement of the anticipated long-range goal. Nevertheless, one can assume, as was done in the Project Paper itself, that improvements in pupil performance will ultimately contribute positively to that goal. Those improvements are discussed in Chapter III and in section E above.

H. Beneficiaries

Direct beneficiaries of the implementation of the Primary Education Project were:

1. The pupils of the 5 pilot schools in each of the 9 participating territories

2. The teachers and principals of those pilot schools

3. The 72 Principals in Jamaica who were trained under auspices of the Project

4. The Ministries of Education of Jamaica and the nine participating territories in the curriculum development and teacher training component of the Project

5. The Project Implementation Officers

6. The Project Staff

Indirect beneficiaries were:

1. The Subject Matter Leaders in each of the nine participating territories

2. The pupils in non-Project classes in the pilot schools

3. The pupils in the non-Project schools in the participating territories

4. The seven Teacher Training Colleges in the participating territories

5. The University of the West Indies, Mona Campus in Jamaica, and Cave Hill Campus in Barbados

6. Non-participating territories which now use the curriculum products

7. Teachers and principals of non-Project schools who participated in territorial and/or local workshops

I. Unplanned Effects

Chapter IV treats this topic in detail under the headings of inter-agency cooperative activities, training activities, curriculum development activities, and unplanned outcomes of a general nature.

J. Lessons Learned

Chapter VI treats this topic in detail under the headings: the regional model, project management, the curriculum development process, inservice training of teachers, the turnover problem, dissemination of curriculum products, and generalization of Project outcomes.

K. Special Comments or Remarks

Special commendation is due to:

1. USAID for funding this regionally-based Project, for making appropriate adjustments in the Project Plan to facilitate Project implementation, and for placing confidence in the expertise and ability of West Indian Educators to implement the Project. The excellent results confirm the wisdom of these policies and practices.

2. The Project Coordinator and Staff for superior performance in the Project's implementation.

3. The PIOs of the participating territories for their commitment to the Project and their leadership in its implementation at the territorial level.

4. The University of the West Indies -- Cave Hill and Mona Campuses -- for their contributions to Project implementation.

5. The Ministries of Education of the participating territories for their contributions to the implementation of the Primary Education Project and for steps taken to institutionalize the outcomes.

Chapter VIII

A LOOK INTO THE FUTURE

The Primary Education Project represents successful developmental cooperation among three partners USAID the donor agency providing the funding, the University of the West Indies School of Education providing the expertise and overall management; and the ten Ministries of Education taking the responsibility for implementation in their respective countries. Each partner can be justly proud and satisfied with the Project outcomes. Yet the implications of the Project for each territory go far beyond feelings of fulfillment and actualization. The future for each partner has to be different because of the outstanding success of the Poject. It is therefore necessary to examine the implications for each partner separately.

USAID

The USAID has a long history of bilateral aid to the Caribbean countries. However the Caribbean Education Development Project has pioneered a regional approach to assistance. The outstanding difference between the bilateral and regional models appears to be that the regional model permits Caribbean expertise to conceptualize the precise content and approaches to be used in achieving the stated objectives. In the bilateral model much more of the expertise and conceptualization tends to be of U.S. origin giving the impression that through the assistance mechanism the U.S. is imposing its ideas on local issues and problems.

In the Primary Education Project, although the funding was U.S. in origin, the experts, the conceptualization of content and approaches, and the methodology employed were entirely

of Caribbean origin. While the goals were jointly agreed on by the three partners to the Project, the ways to achieve these goals were left entirely to the UWI and the governments. At no point could USAID be reasonably charged with imposing U.S. personnel or ideas on any aspect of the Project.

While the Project Paper did say that if the Caribbean did not have the expertise this could be acquired from elsewhere, the fact is that all of the expertise for the Project was found in the Caribbean. This Project has demonstrated that the Caribbean does have competent professionals who if given the resources can devise meaningful solutions to Caribbean education problems. USAID deserves all commendation for creating a project framework which made such an achievement possible.

It may well be that this regional approach has wider applicability than to education only, but it should certainly continue to be used in education. The key to the capability of utilizing regional talent lies in the use of an intermediary for the management of the overall implementation of the components, especially an intermediary which already has demonstrated a capability to deliver relevant products and services. Certainly the Caribbean Development Bank, the Caribbean Examinations Council and the University of the West Indies have established their capacity and competence to implement complex regional projects. USAID now has reliable partners which it could be calling on for future ventures.

One of the shortcomings of project assistance given to education by most aid agencies is that in many instances education development is left "half way" at the termination of projects. In some instances the projects raise expectations concerning the solution of certain problems during the life of

the project and then frustrates these expectations on its premature termination. Most times countries and institutions targeted for project assistance have a good idea of both the nature of and solutions for the problems addressed. This gives rise to the project in the first instance. While the project may help to redefine the issues and refine the strategies, its usefulness is not in telling people what they did not know before but rather in providing a framework for achieving the desired goals. When the project ends having proven the soundness of the solution but before it can be generalized to the target population disillusionment can be the next result.

In the opinion of the External Evaluation Team there are a number of areas in which some Ministries and the UWI itself are being left "half-way" at the end of the Project. In several instances the constraint is entirely a financial resource gap. Trained personnel and infrastructure exist for the generalization of the Project process and products to the entire primary system. The policy decisions have been taken but the money available is limited. In such instances it would appear that USAID, probably though bilaterial arrangements, has an obligation to assist these Ministries of Education and UWI in bridging this gap. The amount of money involved does not appear to be large in USAID terms, but it is outside the immediate available resources of those institutions. The team wishes to draw three areas and the special case of Grenada to the attention of USAID.

Generalization to the Entire Primary System. In the opinion of the Evaluation Team only minimal assistance will be needed by Barbados, the British Virgin Islands and Montserrat in generalizing the Project processes and products to their entire primary systems. The plans and resources they

have committed to this exercise seem sound and reasonably adequate. In the case of Barbados the infrastructure already is in place and available resources explain their favorable position. BVI and Montserrat have very small primary systems, fourteen and twelve schools respectively.

However, in the case of St. Kitts-Nevis, Dominica, Antigua, St. Lucia, St. Vincent and Belize, because of the combination of larger size of their primary systems and a poorer resource base, they will need varying levels of assistance. They have developed some plans, have trained personnel in place, and have established national policies for the adoption of the materials but lack the financial resources to provide principals and teachers with the level of training and support that will be required for them to assimilate and internalize the new strategies.

These countries have real needs and certainly deserve to be assisted in this exercise. Without such assistance the Team is convinced that the desired results will not be achieved.

Teacher Training . The teacher training done both in support of the implementation and dissemination of the project materials was based on an inservice approach. Although these materials have been distributed to all Teacher Training Colleges in the participating countries, they have not been translated into an in-college mode of teacher training. In addition the implications of the Project for teacher training are not simply restricted to courses in curriculum in Language Arts, Mathematics, Science and Social Studies. Immediately one can identify implications for general education courses such as Curriculum Planning, Educational Measurement as well as General Methodology. But the implications could also extend to the methods of teaching

used by the Colleges themselves in educating the student teachers. Teachers tend to use the models of teaching employed in their own learning and training.

Each of the seven Teacher Training Colleges involved should not have to tackle this problem independently. In addition, the Faculty of Education, Cave Hill, through the Research and Development Section has responsibility for curriculum development in these seven Colleges. Some members of this Section participated in the conceptualization of the approaches approaches employed in the Project materials. They are therefore advantageously placed to translate the Project outcomes into the teacher training process in the Eastern Caribbean countries. However, this activity would require financial support which is currently outside of the present resources of this Section. USAID should consider some support for this activity.

Continued Production of Materials . One of the great problems of the Project outcomes is the continued production of the materials for teachers and pupils at low cost. In the future one needs also to think of the revision of these materials. The answer does not appear to be each country trying to produce its own set of materials. Commercial publishing may be a possibility but at what cost? A possibility is for UWI to retain copyright of the materials and to be given a capital grant to produce the materials using, say, Newsprint. From the proceeds of sales UWI could be required to continue to produce the materials and to revise them periodically. Such an approach would make use of the economy of scale in regional production and at the same time keep costs within the reach of Ministries and parents in the participating countries. USAID's role would be to give this process the necessary start either through a low interest loan or grant or some combination of both.

Grenada. Grenada was originally one of the participating countries. However, differences arose between USAID and the then government of Grenada concerning the scope of the Project in Grenada. Failure to resolve their differences led to the then government of Grenada concerning the scope of the Project in Grenada. Failure to resolve their differences led to the non-participation of Grenada in all aspects of the Project for some time. During 1985, however, Grenada has expressed interest in the Project and its outcomes. They have requested to examine the materials and to study ways in which these materials could be adopted and adapted for implementation into their primary education system. It would appear that the special circumstances of the Grenada experience and the great need for assistance in providing curricula for this level warrant continued assistance after the Project terminates. Some bilateral assistance appears justified.

The University of the West Indies.

Through this Project the University of the West Indies through its Faculty of Education, has again demonstrated that when it is given the resources it can assemble a team of competent Caribbean administrators and professionals who can deliver a high quality product. The Project not only benefitted from the University's access to the region but also from the pool of expertise the University possesses on its three campuses. It was interesting to note that in their visits to the different countries the External Evaluation Team members found that on most occasions the Project was either referred to as the Primary Education Project - PEP - or the USAID Project. It was only in a few instances that the University was given immediate recognition for its contribution; while all respondents gave credit to the University for its

involvement this was not generally the first response. While in some measure this type of response could be due to the special project nature of the exercise it could well be indicative of amore general phenomenon, namely that the University and particularly the School of Education have not been receiving due recognition for some of the good work they have been doing in various areas of Caribbean education. The University may wish to examine the matter again especially as it relates to the non-campus countries which were mainly involved in this Project.

For its duration the Project strengthened, widened and deepened the UWI capacity to serve the educational needs of Barbados and non-campus countries and, to a lesser extent, Jamaica. It did so principally because it filled a structural gap in the organization of the Faculty of Education, Cave Hill. While the Research and Development Section served teacher education and the Inservice Section served secondary education there was no structural entity which functioned principally to serve the needs of primary education. Now that the Project has terminated the gap exists again. The question is whether the Project has made the case for this gap to be permanently closed. In the opinion of the External Evaluation Team it has more than made the case. It has put the argument beyond all reasonable doubt.

The model for curriculum development and leadership in primary education developed by the Project is that of a full time regional team of subject specialists linked to each territory through a full-time curriculum coordinator working with a national committee which pulls together primary schools, principals, Ministry officials, Teacher Training College staff and local subject specialists

who had other substantive responsibilties but could provide advice and guidance rooted in local experience. The External Evaluation Team is of the opinion that the Project could be translated into a permanent program for the delivery of the same service to the same countries.

The University and its contributing governments should give consideration to the establishment, on a permanent basis of a Department of Primary Education within the Faculty of Education, Cave Hill. This would be a department of the Center, in the restructured establishment of the UWI, serving the non-campus countries. It would be composed of specialists covering all the subjects taught at the primary level, that is, ages five to twelve years. The non-campus countries could provide most of the specialists needed to man this department. These persons could continue to live in their respective countries as was the case in the Project. The Head of the Department and its support staff would of necessity be required to be resident in Barbados.

This department could work with each Ministry of Education through an Education Officer, Curriculum, appointed with full-time responsibilty for the development of curriculum and materials at the primary level. That officer would work with a national committee for curriculum development at the primary level which would include subject specialists in each area. These latter persons need not be full-time.

The arguments for this regional approach have to be compared and contrasted with the approach where each non-campus country would seek to establish its own national curriculum unit. This seems to be the direction that most countries are taking. The questions raised concerning this latter direction given the small sizes of the countries concerned and their limited resources can be listed as follows:

1. Will each Ministry of Education be able to finance a curriculum unit with full-time specialists in all subject areas taught at the primary level?

2. Can these Ministries attract and sustain the quality staff that is required?

3. Even if such financial and personnel resources can be marshalled, will it not institutionalize insularity which will be to the overall detriment of these small systems?

4. Will not the products of such a process be so localized as to make their marketing and distribution costs prohibitive?

The virtue of the regional approach through a central department of the Faculty of Education, Cave Hill, is that it would be more cost effective in both establishment and maintenance and, would ensure competent staff that can produce an operative strategy that would result in interchange and exchange between and among the countries. Moreover the curriculum and material products could be based on a large economic base thus ensuring lower production costs.

The Evaluation Team is of the opinion that the University and its contributory governments, especially those within the Organization of Eastern Caribbean States, should examine this proposition carefully. The existing R & D Section of the Faculty of Education, Cave Hill, could not be reasonably expected to undertake the functions of the Staff of the centre without significantly increasing the

resources allocated to it. In the opinion of the Evaluation Team a more ideal approach would be to create a department commissioned to address directly the needs of primary education in the non-campus territories.

Ministries of Education

Ministries of Education of the participating countries demonstrated their will and determination to improve primary education by the quality of persons they selected as PIOs and the support that was given by CEOs. This ensured successful implementation in each territory. The Ministries have also been consistent in that they have all formulated routine curriculum policies which have incorporated the Project outcomes. Their commitment and support have gone beyond mere rhetoric and participation at meetings to the point of ownership of the outcomes.

There are a number of implications of the Project for Ministries of Education which need also to be addressed.

Teacher Training. With the exception of Barbados, all countries participating in the curriculum development aspect of the Project need to give urgent attention to teacher training. Subject Specialists, Subject Leaders and Project Implementation Officers of the Primary Education Project all drew attention to the fact that the teaching force in many countries is manned by a large number of unqualified teachers. Some of these teachers not only lack methodological skills but also have serious gaps in content. In some systems unqualified teachers constitute as much as two thirds of the teaching force. This low level of training poses a serious constraint to further improvement of primary education, however good the curriculum may be.

Ministries in several countries may wish to review the level of qualifications that now stands as the minimum requirement for employment in the teaching service. In some instances this appears to be too low. A second issue is that of significantly increasing the porportion of qualified persons in the teaching service. A kindred issue is that of teacher turnover.

In some countries the conditions of service and salaries of primary teachers seem to be factors inhibiting the recruitment and retention of qualified persons. While recognizing the difficulties involved in addressing these issues it is not possible to overlook or ignore them.

Teaching Materials and Supplies. In some countries the difference between Project and non-Project schools was that the former had materials for pupils and teachers while the latter had virtually nothing at all. In these countries one of the virtues of the dissemination phase is that all schools for a period at least, will have some teaching and learning materials and supplies.

With the exception of Barbados and the British Virgin Islands, to varying degrees, the question of classroom materials and supplies is a moot problem. Some schools have embarked on fund raising drives to obtain the necessary supplies. But this is an unsatisfactory way of resolving the issue because the ability of schools to raise funds successfully is a reflection of the relative wealth of the communites in which they are located. It is clear that Ministries of Education need to develop some rational and systematic policies concerning how much the Ministry can supply and how parental and voluntary contributions will be integrated into the system.

The current situation is unhealthy and counter-productive to any efforts to improve primary education on a long term basis.

Structural Adjustment. If Ministries of Education in the participating countries were to accept that primary education could benefit from a regional approach to curriculum and material development then some attention should be given to rationalizing and standardizing the structure of the primary system to ensure greater commonalities. The variations that currently exist have more to do with terminology than actual structures. Territories use different names to describe the same structure, for example grade, standard or class. Some consideration could be given to the use of a common terminology.

Concluusion

Certainly the over-riding aim of all governments and institutions of the Caribbean and all agencies working in the Caribbean at the primary level must be to provide sound basic education for all children. The Project constituted a major step toward this goal. If the cooperating partners were to follow up the implications of their efforts then the achievement of this goal should not be too far into the future.

APPENDIX A

SUMMARIES OF THE RESPONSES TO THE EVALUATION TEAM'S QUESTIONNAIRES

As part of the external terminal evaluation exercise, the Evaluation Team prepared questionnaires for project participants to collect data for the writing of this report. A separate instrument was developed for each of the following groups: Chief Education Officers (CEOs), Project Implementation Officers (PIOs), Subject Matter Leaders (SMLs) in the 9 participating territories, and the Principals and Teachers of the 5 pilot schools in each territory. The number of responses received is as follows:

Number of responses received from:

Territory	CEOs	PIOs	SMLs	Principals	Teachers	Totals
Antigua	1	1	4	4	17	27
Barbados	1	1	6	4	41	53
Belize	1	1	6	8	37	53
B.V.I.	1	1	4	5	34	45
Dominica	1	1	4	5	20	31
Montserrat	0	1	4	5	18	28
St. Kitts	1	1	3	4	23	32
St. Lucia	1	1	6	5	40	53
St. Vincent	0	1	6	2	16	25
Total	7	9	43	42	236	337

Several comments are in order about the general nature of these responses.

1. The CEO from Montserrat had just assumed her position and felt unqualified to respond.
2. There was an unusually high incidence of no response to various items in the questionnaires. This was especially so for the teacher respondents. The incidence of no response was true for teachers in all territories. The team did not have time to ferret out why this was so. One fact which may have had a bearing on this result was that teachers had received two evaluation instruments from the Project's Internal Evaluation Specialist at about the same time as the questionnaires from the team. Another explanation which probably is more plausible is that the high rate of turnover among primary teachers in the pilot schools (as well as in most other schools) influenced the high incidence of no response. The team learned from its visits to the field that some teachers who were teaching Project classes for a year or less felt unqualified to respond to many or all of the questions.

3. The summaries do not include a review of the responses to some of the open-ended questions. The suggestions and comments, however, are incorporated into the body of the Report.

4. As noted in the Report, questionnaires were also developed for the primary school principals in Jamaica who had received training from the University of the West Indies, Mona. Questionnaires were mailed to a sample of 40 of the 72 trainees. Unfortunatley, due to a serious postal strike in the territory the instruments were not received in time for most of the principals to respond according to the schedule of the team for visiting the territory and writing the report. The 16 that were received were very positive about the quality of the training they had received.

Before presenting the summaries of all responses, it is interesting to note the opinions of Project participants as to the overall effectiveness of the Project on improving primary education in the pilot schools of their respective territories.

	Degree of impact					
Participant	Very high	High	Medium	Slight	None	No opinion
CEOs	3	4				
PIOs	1	8				
SMLs	2	21	2			
Principals	8	24	2			2
Teachers	29	94	28	1	1	
Totals	43	151	32	1	1	2

Summaries of all responses are included in Appendix A as follows:

A - 1 Chief Educational Officers (CEOs)

A - 2 Project Implementation Officers (PIOs)

A - 3 Subject Matter Leaders (SMLs)

A - 4 Principals of Pilot Schools

A - 5 Teachers of Project Classes

CEO questionnaire page 2-A
Responses to Question 12

Main problems encountered in implementing the Project in your territory:

1. Delays in getting shipment of curriculum materials
2. Securing project funds in a timely fashion
3. Language arts curriculum specialist did not visit our territory often enough
4. Absence of subject matter leaders from their schools when they had to visit schools or attend workshops
5. Scheduling of territorial workshops during school sessions
6. Local workshops put strain on schools during the absence of teachers (2)
7. High turnover of staff in pilot schools
8. Restriction of visits by subject matter leaders
9. Few meetings of the Project Implementation Unit
10. Organization of territorial workshops to involve entire staffs for daily sessions

Responses to Question 17, other comments:

1. It is regrettable that the Project did not span the entire primary school curriculum
2. This was a good cooperative effort at the international level and the local level
3. Brought school administrators, teachers and Ministry Officials closer together at both the regional and national levels
4. The dissemination phase is invaluable to the impact the Project will have qualitatively and quantitatively
5. This impact will be reduced if the promised materials and equipment are not supplied too late
6. Visits by subject leaders should continue during the dissemination phase and even after
7. Many of the good effects of the project cannot be really measured objectively as they relate to improved quality of perception and daily performance; some benefits will be felt later when these teachers and administrators function in other capacities; our PIO is already acting in a senior post in the Ministry and it is proposed to put him in charge of the Curriculum Section shortly.

APPENDIX A - 1 CEOs

USAID/UWI Primary Education Project

QUESTIONNAIRE FOR CHIEF EDUCATION OFFICERS (9)

Chief Education Officers of the participating territories are requested by the External Evaluation Team to complete this questionnaire. CEOs have a crucial role to play in this terminal evaluation. The team needs your opinions, judgments, and comments. The completed questionnaire should be mailed to DR. KARL MASSANARI, Team Chairman, 4309 N.W. 39th Way, Gainesville, Florida, 32606 no later than April 1 , 1985. Responses will not be attributed to individuals.

N = 7: 2 did not respond, one has new

Name _____ Territory _____ Date _____

1. During the life of the Project, what was the quality of performance of your Project Implementation Officer (PIO)? Check one.

5 Very high 2 High 0 Average 0 Below average 0 Poor

2. What was the quality of performance of your Project Implementation Unit (PIU)? Check one.

0 Very high 4 High 2 Average 1 Below average 0 Poor

3. During the life of the Project, how satisfied were you with the management of the Project by the Central Office Staff in Barbados? Check one.

4 Very satisfied 3 Satisfied 0 Somewhat 0 Minimally 0 Dissatisfied

Comments:

One each: 7,6,5; one "a few"; one "all TERRITORIAL"; two "0"

4. In all, how many Project workshops have you attended? ..... [ ] CEO's No Work

5. In how many Project workshops have you served as resource person?.. [ ] 1 - - 0

6. In how many regional CEO meetings was the five-year Project been considered, discussed, or reported on? ..... [ ] 5 - - 0

2 said "all"; one said 1

7. In general, to what extent do you believe that the Project has contributed to the improvement of the performance of teachers of Project classes in the pilot schools? Check one.

2 Very considerably 0 Very little
4 Considerably 0 Not at all
1 To some extent 0 No opinion

8. To what extent do you believe that there has been a desirable spread effect of Project outcomes in your territory:

a. to non-Project classes in the pilot schools? Check one.

1 Very much 3 Much 3 Some 0 Very little 0 None 0 No opinion

b. to non-Project schools in your territory? Check one.

1 Very much 0 Much 6 Some 0 Very little 0 None 0 No opinion

9. To what extent has the Project strengthened the University of West Indies to enable that institution to expand and extend its assistance to your territory for improving educational programs? Check one.

0 Very considerably 1 Considerably 5 Somewhat 0 Little 0 None

10. In general, what is your judgment about the quality of curriculum materials produced by the Project? As a basis for your judgment, compare their quality with that of curriculum materials used before the Project began. Check the appropriate cells in the chart below.

Curriculum materials	Level of quality of curriculum materials						
	Very high	High	Average	Below average	Poor	No opinion	Not applicable NOTE:
LANGUAGE ARTS							
Syllabuses	1	3	3	0	0		8 TERRITORIES
Teacher Manuals	2	2	3	0	0		OPTED FOR
Instructional Aids	0	3	3	0	0		THREE CURRICULUM AREARS:
SOCIAL STUDIES							ONE, B.V.I. FOR
Syllabuses	3	0	0	0	0		ONLY TWO
Teacher Manuals	3	0	0	0	0		
Instructional Aids	1	2	0	0	0		
SCIENCE							
Syllabuses	1	2	1	0	0		
Teacher Manuals	1	2	1	0	0		
Instructional Aids	1	2	1	0	0		
MATHEMATICS							
Syllabuses	2	2	2	0	0		
Teacher Manuals	3	2	1	0	0		
Instructional Aids	1	4	1	0	0		

11. Frequently, in projects the magnitude of the five-year Primary Education Project, there are unplanned, unexpected developments and/or outcomes. If there have been such unplanned developments or outcomes in your territory as a result of participating in the Project, please list them below.

INCORPORATED IN CHAPTER IV.

12. What are the main problems you have encountered in implementing the Project in your territory, and how were these problems resolved? List below.

Main problems	How they were resolved
SEE PAGE 2-A	

- more -

13. Please comment on the extent to which Project outcomes have had a positive effect on the nature and content of 11+ examinations in language arts, social studies, science and mathematics in your territory: (Use other side of page if needed)

INCORPORATED IN CHAPTER V

14. The team's report will include a section on lessons learned through the implementation of the regional Primary Education Project with implications for USAID, UWI, and Ministries of Education. Please list below what you consider to be the main lessons learned under the three categories noted. (If needed, use other side)

Strategies for implementing the Project which:

a. worked well and which would be transferable to future projects of a similar nature

INCORPORATED IN CHAPTER VI

b. could have worked well if certain conditions were present; state the conditions

c. did not work well or simply did not work; in this case, indicate why you think they did not work

15. One of the planned outcomes of the Project was that each territory would develop an on-going capability for curriculum development after the termination of the Project.

a. What specific steps for the immediate future has the Ministry of Education taken to ensure that capability?

INCORPORATED UNDER

b. What long-range plans are being considered or already underway which will help to ensure that capability?

INSTITUTIONALIZATION

c. Even though they are not yet in the planning stage, what ideas are you considering to help ensure that capability?

CHAPTER V.

16. OVERALL, how do you judge the degree of positive impact which the five-year Project has had on improving primary education in the pilot schools of your territory? Check one.

3 Very high 4 High 0 Medium 0 Slight 0 None

17. Mention any other comments which you believe would be helpful to the Evaluation Team:

SEE PAGE 2-A

THANK YOU FOR YOUR COOPERATION IN COMPLETING THIS QUESTIONNAIRE AND FOR MAILING IT TO DR. MASSANARI BY APRIL 1, 1985.

APPENDIX A - 2

USAID/UWI Primary Education Project

QUESTIONNAIRE FOR TERRITORIAL PROJECT IMPLEMENTATION OFFICERS (PIOs)

Project Implementation Officers (PIOs) are requested by the External Evaluation Team to complete this questionnaire. Your completed questionnaire is needed by the Team before it visits the participating territories. As soon as you have completed it, mail the questionnaire to the Team Chairman,-- DR. KARL MASSANARI, 4309 N.W. 39th Way, Gainesville, Florida, USA 32606. It should be in his hands no later than April 1 , 1985. In the final evaluation report, responses will not be attributed to individuals.

Name_____ Territory_____ Date_____

Number of years you have served as PIO for your territory ____

If you have not served for the life of the Project, name the person(s) who preceded you: _____

1. Indicate the approximate percentage of time during the life of the Project which you have devoted to the various responsibilities noted. The figures should total up to 900.

	Summation of percents	Range	
a. planning and conducting territorial/local workshops.	102	7	25
b. participating in or serving as a resource person in regional/territorial/local workshops	108	5	35
c. visiting pilot schools to provide help for Project teachers and/or principals	334	20	50
d. collecting data and information for internal and external evaluation	54	2	10
e. preparing reports for Project Staff	54	1	10
f. doing Project work for the Ministry of Education....	67	2	25
g. doing non-Project work for the Ministry of Education	44.5	.5	20
h. general administrative duties	67	2	20
i. travel	48.5	2	10
j. (other)	14	2	5
k. (other)	7	2	5
Total	900		

What suggestions do you have, if any, for reallocation of time which would improve the effectiveness of a PIO's work in future projects?
MOST REPORTED THAT MORE TIME WAS NEEDED TO VISIT PILOT SCHOOLS.

2. How satisfied are you with the support you have received in the implementation of the Project? By support, we mean the clarity and frequency of communications, time to do your tasks, support staff, money, travel, availability of Project materials, staff for workshops, etc. Please check the appropriate cells.

Support from:	Degree of satisfaction				
	Very satisfied	Satisfied	Somewhat	Mostly dissat-isfied	Completely dissatisfied
Ministry of Education	4	2	3		
Project Central Staff	4	5			
Your P I U		7	2		
Pilot school principals	3	4	2		
Pilot school teachers	2	4	3		

3. What are the main problems you have encountered in your role as PIO and what was done to resolve them? (Use other side of page if needed)

Main problems	What was done to resolve them
See PIOs (3)	

SUMMARY BELOW

4. As you know, the main vehicle for Project implementation was workshops.

a. In how many workshops have you participated during the life of the Project?

Regional 39 Territorial 128 Local 205 Total 372

b. In how many workshops have you served as resource person?

Regional 9 Territorial 49 Local 83 Total 141

c. How many workshops have you organized or conducted?

Territorial 97 Local 168 Total 265

5. In general, what is your judgment about how helpful these workshops were to participants? Check the appropriate cells.

Type	Degree of helpfulness to participants				
	Very helpful	Helpful	Somewhat	Minimally	Not at all
Regional	7	1	0	0	1
Territorial	8	0	0	0	1
Local	6	2	0	0	1

6. In relation to giving guidance and direction to the implementation of the Project in your territory, how effective was the performance of your Project Implementation Unit (PIU)? Please check one.

___ Very effective 2 Effective 6 Somewhat 1 Minimally 0 Ineffective

Comments:

7. What is your judgment about the quality of curriculum materials produced by the Project? Base your judgment on comparing the quality of the new/revised materials with those used before the Project began. Check the appropriate cells.

Curriculum materials	Quality of curriculum materials produced by the Project					
	Very high	High	Average	Below average	Poor	Not applicable
LANGUAGE ARTS Syllabuses	1	4	4	0	0	0
Teacher manuals	1	4	4	0	0	0
Instructional aids		4	5	0	0	0
SOCIAL STUDIES Syllabuses	5	0	0	0	0	4
Teacher manuals	5	0	0	0	0	4
Instructional aids	3	2	0	0	0	4
SCIENCE Syllabuses	1	3	0	0	0	5
Teacher manuals	2	2	0	0	0	5
Instructional aids	2	2	0	0	0	5
MATHEMATICS Syllabuses	2	6	0	0	0	1
Teacher manuals	4	4	0	0	0	1
Instructional aids	1	6	1	0	0	1

Item 3: Main problems encountered

1. Financial: remittances slow (2)
2. Transportation in the rural areas of the territories
3. Delays in getting curricular materials
4. Inadequate office space
5. Getting teachers released for territorial workshops (2)
6. Untrained teachers, especially preparation for class instruction
7. Teacher turnover (2)
8. Principals not acquainted with the materials.
9. CEO unwillingness to allow the subject matter leaders to visit schools and to release teachers for workshops
10. Having PIO visits coincide with school schedules

In most cases, the problems were resolved by the PIOs pinch hitting for others or carrying extra loads. With respect to delays in financial remittances, two Ministries advanced payments, or in the case of materials production, advanced or loaned paper.

8. One of the anticipated outcomes of the Project was that there would be improvements in teacher performance.

a. Among the Project class teachers in the pilot schools of your territory, about how many have shown improvements in their performance? Check one.

___All ___6 75-99% ___3 50-74% ___0 25-49% ___0 1-24% ___0 None

b. Among those teachers who have shown improvements, what was the extent of improvement observed. Check the appropriate cells in the chart below.

Area by subject field		Extent of improvement observed					
		significant	considerable	some	minimal	none	not applicable
LANGUAGE ARTS	Use of appropriate content	2	4	2	0	0	0
	Instructional methods: appropriateness/variety	0	5	4	0	0	0
	Classroom testing	2	2	5	0	0	0
	Classroom management	2	3	4	0	0	0
	Self confidence	3	4	2	0	0	0
	Professionalism	1	4	3	1	0	0
	Imagination and creativity in teaching	1	1	6	0	0	0
SOC STUD	Use of appropriate content	4		1	0	0	4
	Instructional methods: appropriateness/variety	3	2	0	0	0	4
	Classroom testing	3	1	1	0	0	4
	Classroom management	2	2	1	0	0	4
	Self confidence	4	1	0	0	0	4
	Professionalism	2	2	0	1	0	4
	Imagination and creativity in teaching	3	0	1	0	0	4
SCIENCE	Use of appropriate content	1	1	1	0	0	5
	Instructional methods: appropriateness/variety	2	1	1	0	0	5
	Classroom testing	3		1	0	0	5
	Classroom management	2	1	1	0	0	5
	Self confidence	4	0	0	0	0	5
	Professionalism	1	1	0	1	0	5
	Imagination and creativity in teaching	2	2	0	0	0	5
MATH	Use of appropriate content	5			0	0	1
	Instructional methods: appropriateness/variety	5	2	1	0	0	1
	Classroom testing	4	4	0	0	0	1
	Classroom management	2	6	0	0	0	1
	Self confidence	4	4	0	0	0	1
	Professionalism	2	4	2	0	0	1
	Imagination and creativity in teaching	0	5	3	0	0	1
COMMENTS:		69	62	40	3	0	

9. Has the Project Central Office disseminated curriculum materials to the Project participants in your territory? Respond by answering the questions below:

   a. Does each pilot school now have a copy of each syllabus? 9 Yes 0 No

   b. Does each Project class teacher now have a copy of the appropriate syllabuses? 9 Yes 0 No

   c. Does each Project class teacher now have a copy of the appropriate teacher manuals? 9 Yes 0 No

   d. Does each Project class teacher now have a copy of appropriate instructional aids? 6 Yes 3 No

   COMMENTS:

   (12, 5, 5, 5, 5, 8, 5, 5, 5, = 55) (57, 7, 25, 70, 25, 13, 56, 21, 27, = 301)

10. As you know, another component of the Project was the training of school principals/ administrators. Approximately how many principals/head teachers/administrators/ supervisors in your territory participated in such training workshops?

    From Project pilot schools? 55 From non-Project schools? 301

    In the context of improvements you have observed in the performance of the principals of your pilot schools, how effective was this training? Check one.

    1 Very effective 5 Effective 3 Somewhat 0 Minimally 0 Not at all

11. To what extent has there been a desirable spread effect of Project outcomes in your territory:

    a. to non-Project classes in the pilot schools? Check one.

    1 Significant 4 Considerable 4 Some 0 Little 0 None

    b. to non-Project schools in your territory? Check one.

    0 Significant 4 Considerable 3 Some 2 Little 0 None

12. In your role as PIO for your territory, what non-Project responsibilities have you been assigned, if any, and by whom?

13. To what extent have Project outcomes had a positive effect on the content and nature of the 11+ examinations in your territory? Check the appropriate cells.

Subjects	Extent of the effect					
	Significant	Considerable	Some	Little	None	Not applicable
Language Arts	0	2	4	1	0	2
Social Studies	0	1	4	0	0	3
Science	0	1	2	0	0	3
Mathematics	1	2	2	1	0	3

COMMENT on the nature of the effect(s):

14. Another of the anticipated outcomes of the Project was that there would be improvements in pupil performance. Among the pupils in Project classes in the pilot schools of your territory, in general, about how many have shown improvements in their performance? Check one.

__All __3 75-99% __6 50-74% __0 25-49% __0 1-24% __0 None

What has been the extent of improvements in pupil performance which you have observed? Check the appropriate cells in the chart below.

Area	Extent of improvement observed					
	Significant	Considerable	Some	Little	None	No opinion
Pupil attitudes toward school and learning	3	6	0	0	0	0
Pupil attendance	1	3	2	1	0	0
Pupil participation in class work	3	6	0	0	0	0
Pupil self-confidence	4	4	1	0	0	0
Pupil performance on classroom tests	0	5	4	0	0	0
Pupil performance on other tests	0	2	3	0	0	4
Other: Pupil enthusiasm Verbal Communication	1	1				

15. To what extent has the Project strengthened UWI to enable that institution to expand and extend its assistance to your territory in improving educational programs? Check one.

__2 Significantly __4 Considerably __2 Some __0 Little __0 Not at all __1 No opinion

16. Another of the anticipated outcomes of the Project was that each territory would develop an on-going capability for curriculum development after the termination of the Project. Please comment on what specific steps for the immediate future and what long-range plans are being considered to ensure that capability.

INCORPORATED IN CHAPTER V

17. List below any unplanned developments or outcomes resulting from the implementation of the Project in your territory: (Use other side of page if needed)

INCORPORATED IN CHAPTER IV

18. One of the secondary anticipated outcomes of the Project was to develop a corps of education leaders in each territory who could serve as resource persons or consultants in future workshops, or as consultants to schools/teachers. Please list on a separate sheet, and attach to the questionnaire, the names, positions, schools, and addresses of head teachers, teachers, supervisors, principals, and others who you believe might be included in that corps of educational leaders. The final report will include a composite of the persons named by territory.

19. The team's report will include a section on lessons learned through the implementation of the Project, together with implications for Ministries of Education, UWI, and USAID. On the back of this page, please list what you consider to be the main lessons learned under the following three categories: STRATEGIES USED IN THE IMPLEMENTATION OF THE PROJECT WHICH -- (a) worked well and which would be transferable to future projects of a similar nature; (b) could have worked well if certa conditions were present; state the conditions; (c) did not work well or simply did not work; indicate why you think they did not work. INCORPORATED IN CHAPTER VI

20. OVERALL, how do you judge the degree of impact which the five-year Project has had on improving primary education in the pilot schools of your territory? Check the appropriate cells in the chart below.

Area	Degree of impact on primary education in the pilot schools of your territory					
	Very high	High	Medium	Slight	None	No opinion
a. Using a curriculum process which involved teachers	3	6	0	0	0	
b. The curriculum products	2	6	1	0	0	
c. "Caribbeanization" of the curriculum	5	4	0	0	0	
d. Inservice training of teachers	3	6	0	0	0	
e. Upgrading teacher performance	2	4	3	0	0	
f. Upgrading principal performance	1	4	4	0	0	
g. Developing professionalism among educators	1	4	3	1	0	
h. Raising levels of awareness in your Ministry of Education regarding its responsibilities for curriculum development and teacher training	0	7	2	0	0	
i. Upgrading pupil performance	0	8	1	0	0	
j. Other: Pupil interest	1	0	0	0	0	
OVERALL RATING OF PROJECT IMPACT	1	8	0	0	0	0

21. Please add other comments which you think would be helpful to the team in comprehending and evaluating the total Project and its implementation.

THANK YOU FOR YOUR COOPERATION IN COMPLETING THIS QUESTIONNAIRE AND MAILING IT TO DR. MASSANARI BY APRIL 1, 1985

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USAID/UVI Primary Education Project

QUESTIONNAIRE FOR TERRITORIAL SUBJECT MATTER LEADERS

Subject Matter Leaders are requested by the Evaluation Team to complete this form prior to the arrival of the team, May 1985. The completed form should be handed to the PIO of your territory, who will transmit it to the visiting team member. The form should be completed no later than May 15, 1985. In the final evaluation report, responses will not be attributed to individuals.

Territory _____ Subject Area _____

Date _____ Your professional position _____

1. Workshops. During the life of the Project, in how many workshops sponsored by the Primary Education Project have you participated in, served as resource person for, or planned/conducted? Enter the appropriate number in each cell in the chart below; please elminate duplication in reporting number of workshops.

Type	participated in	served as resource person	planned / conducted	Total
Regional				
Territorial				
Local				
Total				

2. Considering all of the Project workshops reported in #1, what in your opinion was their overall quality? Compare their quality to other non-Project workshops or meetings you have attended. Check one.

16 very high 17 high 7 average 3 below average 0 poor

3. During the life of the Project, about how many visits did you make to the five pilot schools in your territory? Check one.

0 none 4 1 to 9 7 10 to 19 10 20 to 29 3 30 to 39 13 40 or more

4. How effective was the performance of the Project Implementation Officer (PIO) of your territory? Check one.

29 very effective
12 effective
1 somewhat effective
0 minimally effective
0 not at all

5. How effective was the performance of the Project's Subject Matter Specialist in your subject area? Check one.

___ very effective
___ effective
___ somewhat effective
___ minimally effective
___ not at all

RESPONSES: For all four subject areas, the responses were either VE or E.

6. To what extent has there been a spread effect of Project outcomes in your territory and in your subject area:

a. to non-Project classes in pilot schools? Check one.

6 significant amount
16 considerable amount
17 moderate amount
1 small amount
___ none
1 no opinion

6. continued

b. to non-Project schools in your territory? Check one.

3 significant amount	8 small amount
6 considerable amount	none
19 moderate amount	2 no opinion

7. In relation to the quality of the curriculum materials used in the primary schools of your territory before the Project began, how do you judge the quality of curriculum materials produced by the Project in your subject area? Check the appropriate cells below. SUBJECT AREA: [ ]

Curriculum materials	Very High	High	Average	Below Average	Poor
Syllabuses		SEE QUESTION NO. 7			
Teachers manuals		ON PAGE 2-B			
Instructional aids					

8. To what extent have Project outcomes had a positive impact on the content and nature of the 11+ examinations in your subject area in your territory? Check one.

3 significant 8 considerable 13 moderate 2 small 1 none

9. What were the major problems you encountered in your position as Subject Matter Leader in your territory and what was done to resolve them? List below.

(Use other side of sheet if needed)

Major Problems	What was done to resolve them
1. Transfer of teachers. 2. Inadequate time for visits. 3. Unavailability of materials. 4. Early: reluctance of teachers to use materials 5. Travel problems to schools	

10. The team's report will include a section on lessons learned through the implementation of the Project, together with implications for UWI, USAID, and the Ministries of Education. Please list what you consider to be the main lessons learned under the three categories noted.

a. Strategies used in implementing the Project which worked well and which would be transferable to future projects of a similar nature:

Reported elsewhere in separate chapter VI.

SMLs questionnaire
Item No. 7 page 2-B

Number of Subject Matter Leaders reporting

	Very high	High	Average	Below Average	Poor
LANGUAGE ARTS syllabuses	3	7	4	0	0
teachers manuals	4	6	1	1	0
instructional aids	2	5	4	1	
MATH syllabuses	11	5	0	0	0
teachers manuals	12	3	0	0	0
instructional aids	3	8	2	0	0
SCIENCE syllabuses	1	3	3	0	0
teachers manuals	3	3	1	0	0
instructional aids	3	2	2	0	0
SOCIAL STUDIES syllabuses	5	1	1	0	0
teachers manuals	5	2	0	0	0
instructional aids	4	3	0	0	0

b. Strategies used which could have worked well if certain conditions had been present; please state the conditions also.

SEE CHAPTER VI

c. Strategies used which did not work well or simply did not work; please indicate why you think they did not work.

SEE CHAPTER VI

11. Overall, how do you judge the degree of positive impact which the five-year Primary Education Project has had on improving primary education in the pilot schools of your territory? Check the appropriate cells in the chart below.

Area	Degree of impact on improving primary education in the pilot schools of your territory					
	Very High	High	Medium	Slight	None	No Opinion
a. Using a curriculum development process involving teachers	15	22	3			
b. The curriculum products	14	20	2			
c. "Caribbeanization" of the curriculum	14	14	8			2
d. Inservice training of teachers	10	15	1			
e. Upgrading teachers' performance	5	30	3			
f. Upgrading principals' performance	3	19	10	3		2
g. Developing professionalism among educators	2	26	4	1		1
h. Raising levels of awareness among the Ministry of Education regarding its responsibilities for curriculum development and teacher training	4	21	10	1		1
i. Upgrading the performance of pupils	2	24	1			
j. OVERALL RATING OF PROJECT IMPACT	2	21	2			

12. On the back of this page, please list any recommendations or suggestions you have for your territory which you believe would ensure that the positive impact of the Project continues after its termination. List any other comments you care to make.

REPORTED ELSEWHERE IN REPORT CHAPTER VIII

THANK YOU FOR TAKING TIME TO COMPLETE THIS FORM
AND GIVING IT TO YOUR P I O NO LATER THAN ... MAY 15. 1985

QUESTIONNAIRE FOR PROJECT PILOT SCHOOL PRINCIPALS

Principals of Project pilot schools are requested by the Evaluation Team to complete this form prior to the arrival of the team, May 1985. A team member will visit 3 of the 5 pilot schools in each territory; however, all principals are requested to complete this form. The completed form should be handed to the PIO of your territory who will transmit it to the visiting team member. This form should be completed no later than May 15, 1985. In the final evaluation report, responses will not be attributed to individuals.

Territory _____ School _____

Number of pupils _____ Total number of teachers in your school _____

Number of teachers during the entire Project who have taught Project classes _____

(This questionnaire is not applicable to Jamaica)

1. During the life of the Primary Education Project, have you participated in any administrators training workshops or meetings sponsored by the Project?

   If you answered "Yes", continue to #2.
   If you answered "No", skip to item #9.

   34 Yes 5 No

2. How many such workshops or meetings did you attend?

Workshops	Principals
1-5	28
6-12	4

3. What topics were included in the administration workshops, how effectively were they treated, and how relevant were they to your work? Complete the chart below.

Topic	Included: write "Yes" or "No"	Effectiveness: Use code 5 = very effective 4 = effective 3 = somewhat 2 = minimally 1 = ineffective	Relevance: Use code 5 = very relevant 4 = relevant 3 = somewhat 2 = minimally 1 = not relevant
a. School management		MAJORITY OF ALL RESPONSES RATED ALL TOPICS VERY EFFECTIVE OR EFFECTIVE WITH THE EXCEPTION OF ITEM F.	MAJORITY OF ALL RESPONDENTS RATED ALL TOPICS AS VERY RELEVANT OR RELEVANT.
b. Human relations			
c. Decision making			
d. Supervision			
e. Instructional leadership			
f. School finance			
g. Communication			
h. Curriculum development			
i. Staff inservice training			
j. Community-parent relationships			
k. Evaluation			
l. Time management			

4. How much attention in the administration workshops was given to the curriculum development and teacher training aspects of the Primary Education Project? Check one.

5 Very much 14 Much 10 Some 3 Little 2 None

Give some examples, if applicable:

5. How helpful was this involvement of curriculum development and teacher training aspects of the Project in the training workshops to you in your role in managing and supporting Project classes and teachers? Check one.

9 Very helpful 15 Helpful 2 Somewhat 0 Of little help 0 None 3 N.A.

Give some examples, if applicable:

6. What instructional techniques were used in the workshops on administration and how effective were they? Complete the chart below.

Instructional Technique	Used: write "Yes" or "No"	Effectiveness: Use code 5 = very effective 4 = effective 3 = somewhat effective 2 = minimally effective 1 = ineffective
a. Lectures	Yes	6-5s; 17-4s; 5-3s;
b. Small group discussions	"	15-5s; 13-4s; 1-3 ;
c. Case studies	"	2-5s; 10-4s; 5-3s; 2-2s; 1-1;
d. Handouts	"	6-5s; 15-4s; 3-3s; 1-2 ;
e. Reading assignments	"	1-5 ; 10-4s; 6-3s;
f. Group involvement in selection of topics	"	5-5s; 7-4s; 5-3s; 1-1;
g. Group involvement in solution of identified problems	"	5-5s; 20-4s; 3-3s;
h. Follow up consultation visits to provide on-site assistance	"	2-5s; 5-4s; 7-3s; 3-2s; 1-1;
i. Other:	"	

Summary shown indicates number of persons giving each rating; e.g. 6-5s = 6 persons rating it 5

7. How much attention in the administration workshops was given to what you believe are the real tasks and problems of the principal? Check one.

___Very much ___Much ___Some ___Little ___None

a. Give some examples of tasks/problems which were included:

b. Give examples of tasks/problems you believe are important but which were not included in the workshop(s):

8. Overall, how much do you believe that your performance as a school principal has improved as a result of training received in the Project workshops? Check one.

5 Very much 17 Much 7 Some 1 Little 0 None

9. One of the anticipated outcomes of the Project was the development and production of new or revised curriculum materials in four subject areas. What is your judgment about the quality of these materials compared to curriculum materials used before the beginning of the Project? Check the appropriate cells in the chart.

Curriculum materials by subject area	Quality of curriculum materials					
	Very high	High	Average	Below average	Poor	Not applicable
LANGUAGE ARTS						
Syllabuses	5	30	13	0	0	
Teacher manuals	4	28	13	1	0	
Instructional aids	6	13	13	1	3	
SOCIAL STUDIES:						
Syllabuses	12	8	1	0	0	
Teacher manuals	15	5	0	1	0	
Instructional aids	9	8	1	1	0	
SCIENCE:						
Syllabuses	5	10	1	0	0	
Teacher manuals	2	15	1	0	0	
Instructional aids	2	13	2	0	0	
MATHEMATICS:						
Syllabuses	11	11	4	0	0	
Teacher manuals	9	13	4	0	0	
Instructional aids	7	15	3	0	0	

10. How much has been the positive impact on your school resulting from teacher involvement in the curriculum development process and in-service training received at Project workshops? Check one.

14 Very much 16 Much 15 Some 0 Little 0 None

11. In your judgment, what was the quality of in-service training provided in Project workshops? Check one.

10 Very high 18 High 7 Average 0 Below average 0 Poor

12. Another anticipated outcome of the Project was that the performance of project class teachers would be improved. During the life of the Project, what has been the degree of improvement you have observed in the performance of project class teachers in your school? Check the appropriate cells in the chart.

Subject area	Degree of improvement					
	Significant	Considerable	Some	Minimal	None	Not applicable
Teaching language arts	7	13	16	1	0	
Teaching social studies	12	8	1	0	0	
Teaching science	4	13	4	0	0	
Teaching mathematics	7	15	10	0	0	

-more-

13. To what extent has there been a spread effect of Project outcomes in

a. to non-Project classes in your school? Check one.

2 significant amount	4 small amount
17 considerable amount	0 none
10 moderate amount	

b. to non-Project schools in your territory? Check one.

2 significant amount	4 small amount
7 considerable amount	1 none
7 moderate amount	8 no opinion

14. The team's report will include a section on lessons learned through the implementation of the Project, together with implications for Ministries of Education, UWI, and USAID. Please list below what you consider to be the main lessons learned under the three categories noted. Use back of page if needed.

Strategies used in implementing the Project which

a. worked well and which would be transferable to future projects of a similar nature:

REPORTED IN CHAPTER VI.

b. could have worked well if certain conditions were present; state the conditions:

c. did not work well or simply did not work; indicate why you think they did not work:

15. From your observations and in your judgment, to what extent has the Project had a positive effect on pupil attendance in Project classes when compared to pupil attendance in non-Project classes? Check one.

7 significant effect	7 some effect	10 no effect
3 considerable effect	4 minimal effect	3 no opinion

16. List any unplanned developments or outcomes which emerged during the life of the Project:

REPORTED IN CHAPTER IV.

17. Below and on the back of this page, please list any recommendations or suggestions you have for your territory which you believe would ensure that the positive impact of the Project continues after its termination. List any other comments you care to make.

INCORPORATED IN CHAPTER V.

9. OVERALL, how do you judge the degree of positive impact which the five-year Primary Education Project has had on improving primary education in your pilot school? Check the appropriate cells in the chart below.

Area	Degree of impact on improving primary education in your pilot school					
	Very high	High	Medium	Slight	None	No opinion
a. Using a curriculum development process involving teachers	13	19	3	2	0	2
b. The curriculum products	8	19	5	0	0	4
c. "Caribbeanization" of the curriculum	[illegible]	10	7	0	0	4
d. Inservice training of teachers	5	23	10	1	0	1
e. Upgrading teachers' performance	7	25	7	0	0	2
f. Upgrading principal's performance	5	22	7	2	0	3
g. Developing professionalism among educators	4	22	8	1	0	4
h. Raising levels of awareness among the Ministry of Education regarding its responsibilities for curriculum development and teacher training	5	20	3	[illegible]	0	6
i. Upgrading the performance of pupils	[illegible]	26	4	0	0	2
j. OVERALL RATING OF PROJECT IMPACT	3	24	2	0	0	2

THANK YOU FOR TAKING TIME TO COMPLETE THIS QUESTIONNAIRE
no later than May 15, 1985

QUESTIONNAIRE FOR PROJECT PILOT SCHOOL **T E A C H E R S**

Teachers of Project classes in pilot schools are requested by the Evaluation Team to complete this questionnaire prior to the arrival of the team, May 1985. A team member will visit 3 of the 5 pilot schools in each territory; however, all Project teachers are requested to complete the questionnaire. The completed form should be handed to the PIO of your territory who will transmit it to the visiting team member. This questionnaire should be completed no later than May 15, 1985. In the final evaluation report, responses will not be attributed to individuals or schools.

Name_____ Territory_____ School_____

Number of years you taught Project classes____ Subject(s)_____ Age levels____

1. Have you used and are you now using new or revised syllabuses in your Project classes? Check the appropriate cells in the chart below.

Subject	Yes	No
Language Arts	182	13
Social Studies	113	22
Science	100	11
Mathematics	149	14

If you checked "No" in any cell(s), please explain why:

2. How helpful are the new or revised syllabuses which you have used? Check the appropriate cells in the chart.

Subject	Very helpful	Helpful	Of some help	Of little help	Not at all	Not applicable
Language Arts	36	83	34	5	2	
Social Studies	81	39	2	1	1	
Science	54	43	10	1	2	
Mathematics	53	64	8	1	1	

COMMENTS:

3. Do you now have a copy of:

   a. the new/revised syllabus for each subject you teach? 143 Yes 58 No
   b. the teacher manual which accompanies each syllabus? 89 Yes 168 No

4. How helpful are the teacher manuals? Check the appropriate cells in the chart.

Subject	Very helpful	Helpful	Of some help	Of little help	Not at all	Not applicable
Language Arts	80	37	42	3	0	
Social Studies	78	9	3	0	0	
Science	61	19	10	2	0	
Mathematics	84	43	15	0	0	

5. How many pupil learning/instructional aids for your Project classes have you helped develop, or developed on your own, during the life of the Project? Indicate number in the chart below.

Subject	Number which you have helped to develop	Number which you have developed on your own	Not applicable (N.A.)
Language Arts	54	66	
Social Studies	42	48	
Science	34	34	
Mathematics	38	60	
Other:			

6-a. How helpful for pupil learning are these instructional aids? Check one.

39 Very helpful 53 Helpful 3 Somewhat 1 Minimally 0 Not at all

b. How helpful for providing instruction are these aids? Check one.

70 Very helpful 74 Helpful 11 Somewhat 1 Minimally 0 Not at all

7. Indicate the extent to which your knowledge of subject matter has increased, if any, as a result of participating in the Project. Check the appropriate cells.

Subject	Extent of increase: Significant	Considerable	Some	Minimal	None	N.A.
Language Arts	28	94	76	16	15	
Social Studies	55	56	23	2	6	
Science	30	81	32	4	6	
Mathematics	43	77	53	15	7	

What factors were most influential in helping you to increase your knowledge of subject matter? Please list.

8. To what extent has your participation in the Project helped you to improve your performance in the areas noted in the chart below? Check the appropriate cells.

Area	Extent of improvement: Significant	Considerable	Some	Minimal	None
Curriculum development	42	83	56	4	8
Using new and appropriate teaching methods	54	97	57	1	1
Devising better tests	48	95	64	7	2
Classroom management	20	77	71	23	7
Other:					

COMMENTS:

9. Indicate which teaching methodologies you have used and how often before and after participating in the Primary Education Project. Check the appropriate cells.

Methods	Methods used before participating in the Project		Methods used after participating in the Project	
	Frequently	Occasionally	Frequently	Occasionally
a. Lecture, talking to, telling	116	88	58	127
b. Small group work	79	125	145	49
c. Project work	26	120	75	71
d. Games	68	120	102	91
e. Discussion	159	53	158	25
f. Role play	43	127	90	89
g. Field trips	17	160	35	134
h. Laboratory work	12	63	43	34
i. Oral reports	66	94	111	60
j. Problem solving	110	69	119	39
k. Charts and maps	100	83	151	39
l. Other AV aids	41	70	85	40
m. Pupil worksheets	43	102	150	42
n. Specially prepared learning aids	55	98	104	56
o. Debates	7	68	26	62
p. Community resource people	17	125	43	116
q. OTHER:				
r. OTHER:				

COMMENTS:

10. For your subject area [Indicate:], list the types of tests/test items which you now use in your Project classes, and which you did not use before participating in the Project:

OMITTED BY MOST RESPONDENTS

11. For the life of the Project, in how many workshops did you participate, and for how many did you serve as a resource person? Write the numbers in the chart. Please eliminate duplication in reporting numbers.

Type	Number in which you:		
	Participated	Served as resource person	Total
Regional	RESPONSES		
Territorial	WERE NOT USEFUL. MANY DID		
Local	NOT ELIMINATE THE DUPLICATIONS.		
TOTAL			

12. To what extent are you now a BETTER TEACHER as a result of participating in the project? Check one.

14 Significantly better 80 Considerably better 93 Somewhat better 14 A little better 2 No better

13. What were the major problems/constraints you encountered in participating in the project? State how these were resolved. (Use other side of page if needed)

14. Indicate in the chart below the extent of improvements in pupil performance in your Project classes. Answer in relation to pupils you have had in non-Project classes and in terms of all pupils you have had in Project classes. Check appropriate cells.

Aspect of pupil performance	Extent of improvement observed					COMMENTS
	Significant	Considerable	Some	Minimal	None	
Attendance	46	54	38	16	29	
Punctuality	38	60	38	17	18	
Participation in class work	57	99	35	5	1	
Self-confidence	26	94	59	5	2	
Completing assignments	30	70	58	5	4	
Creativity	27	78	62	8	0	
Classroom behavior	30	62	60	10	11	
Working cooperatively in group activity	56	83	49	4	1	
Quality of written assignments	17	83	71	10	2	
Problem solving	23	79	64	11	1	
Thinking process	20	90	55	5	1	
Motivation	57	95	21	4	2	
Results on classroom tests	30	100	50	4	3	
Results on other tests or examinations	15	67	62	5	1	
Attitudes toward school and learning	32	72	62	10	4	
Out of class behavior	10	38	84	17	10	
Other:						
Other:						

15. On a separate sheet of paper, describe briefly a sample of interesting/exciting anecdotes about pupil learning and performance which reflect the positive outcomes of the Project in your school. These outcomes may result from your teaching and/or from using new curriculum materials. Attach the sheet to the questionnaire.

- one more page -

6. OVERALL, how do you judge the degree of impact which the five-year Primary Education Project has had on improving primary education in your pilot school? Check the appropriate cells in the chart below.

Area	Degree of impact on primary education in your pilot school					
	Very high	High	Medium	Slight	None	No opinion
a. Using a curriculum development process which involved teachers	39	102	39	3	0	
b. The curriculum products	28	93	47	3	0	
c. "Caribbeanization" of the curriculum	56	69	39	2	1	
d. Inservice training of teachers	34	77	44	3	0	
e. Upgrading the performance of teachers	35	102	39	3	0	
f. Upgrading the performance of principals	21	56	45	12	2	
g. Developing professionalism among educators	19	72	31	8	4	
h. Raising levels of awareness in the Ministry of Education regarding its responsibility for curriculum development and teacher training	26	66	34	13	1	
i. Upgrading/improving the performance of pupils	46	104	37	3	0	
j. Other:						
k. OVERALL RATING OF IMPACT	29	94	28	1	1	

17. Please add any other comments which you think would be helpful to the Evaluation Team in comprehending and evaluating the total Project and its implementation. (Use other side of page, if needed)

FEW COMMENTS. THOSE MADE ARE INCORPORATED ELSEWHERE IN THE REPORT.

THANK YOU FOR YOUR COOPERATION IN COMPLETING THIS QUESTIONNAIRE BY MAY 15

TOPICS	COUNTRY				BVI					
	TCHRS->	:	49		26	61				
	PUPLS->	:	202		222	267	122			
TEACHERS' MATERIALS	PAGES									
CORE CURRICULUM 7-8+	12	:	468	444	312	612	312	252	444	372	300
T/L EXPERIENCES 7-8+	88	:	3432	3256	2288	4488	2288	1848	3256	2728	2200
CORE CURRICULUM 8-9+	15	:	585	555	390	765	390	315	555	465	375
T/L EXPERIENCES 8-9+	90	:	3510	3330	2340	4590	2340	1890	3330	2790	2250
READING SYLLABUS	41	:	1599	1517	1066	2091	1066	861	1517	1271	1025
COLUMN TOTALS		:	9594	9102	6396	12546	6396	5166	9102	7626	6150
STENCILS	246	:									
OVERALL TOTAL (LANGUAGE ARTS)		:	PAGES								80934
			STENCILS								246

MATERIALS PRODUCED 1981 (SOCIAL STUDIES)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	49				61	26		47	41	25
	PUPLS->	:	202				267	122		461	292	25
TEACHERS' MATERIALS	PAGES											
CORE CURRICULUM 7-8+	24	:	1176				1464	624		1128	984	600
T/L EXPERIENCES 7-8+	93	:	4557				5673	2418		4371	3813	2325
T/L EXPERIENCES 8-9+	199	:	9751				12139	5174		9353	8159	4975
COLUMN TOTALS		:	15484				19276	8216		14852	12956	7900
STENCILS	316	:										
OVERALL TOTAL (SOCIAL STUDIES)		:	PAGES									78684
			STENCILS									316

MATERIALS PRODUCED IN 1981 (MATHEMATICS)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	39	37	36	26	51	26	21		41	25
	PUPLS->	:	202	402	357	222	267	122	237		292	25
TEACHERS' MATERIALS	PAGES											
CORE CURRICULUM 7-8+	6	:	234	222	216	156	306	156	126		246	150
T/L EXPERIENCES 7-8+	53	:	2067	1961	1908	1378	2703	1378	1113		2173	1325
CORE CURRICULUM 8-9+	6	:	234	222	216	156	306	156	126		246	150
T/L EXPERIENCES 8-9+	78	:	3042	2886	2808	2028	3978	2028	1638		3198	1950
SUBTOTALS		:	5577	5291	5148	3718	7293	3718	3003		5863	3575
STENCILS	143	:										
PUPILS' MATERIALS												
.....WORKSHEETS 7-8+	34	:	8194	14926	12682	8432	10812	5032	8772		11322	850
COUNTING ODD/EVEN NOS	11	:	2651	4829	4103	2728	3498	1628	2838		3663	275
EXP NOTATION & PLACE VALUE	9	:	2169	3951	3357	2232	2862	1332	2322		2997	225
GRAPHS	5	:	1205	2195	1865	1240	1590	740	1290		1665	125
MONEY	15	:	3615	6585	5595	3720	4770	2220	3870		4995	375
SHAPES	8	:	1928	3512	2984	1984	2544	1184	2064		2664	200
TESTS ON COUNTING	11	:	2651	4829	4103	2728	3498	1628	2838		3663	275
TIME	10	:	2410	4390	3730	2480	3180	1480	2580		3330	250
.....WORKSHEETS 8-9+		:										
FRACTIONS	18	:	4338	7902	6714	4464	5724	2664	4644		5994	450
GRAPHS	20	:	4820	8780	7460	4960	6360	2960	5160		6660	500
MONEY	10	:	2410	4390	3730	2480	3180	1480	2580		3330	250
OPERATIONS	28	:	6748	12292	10444	6944	8904	4144	7224		9324	700
SETS	10	:	2410	4390	3730	2480	3180	1480	2580		3330	250
TIME	28	:	6748	12292	10444	6944	8904	4144	7224		9324	700
SUBTOTALS		:	52297	95263	80941	53816	69006	32116	55986		72261	5425
STENCILS	217	:										
COLUMN TOTALS		:	57874	100554	86089	57534	76299	35834	58989		78124	9000
STENCILS	360	:										
OVERALL TOTAL (MATHEMATICS):			PAGES									560297
			:STENCILS									360

MATERIALS PRODUCED IN 1981 (SCIENCE)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:		47	46				31	47		25
	PUPLS->	:		390	351				230	461		25
TEACHERS' MATERIALS	PAGES											
AIR	19	:		893	874				589	893		475
ENERGY & FORCES	21	:		987	966				651	987		525
HEAT	11	:		517	506				341	517		275
LIGHT	11	:		517	506				341	517		275
LIVING THINGS	13	:		611	598				403	611		325
MACHINES	18	:		846	828				558	846		450
MAGNETS	9	:		423	414				279	423		225
MAKING MUSICAL INSTR	11	:		517	506				341	517		275
MATTER	16	:		752	736				496	752		400
MATTER: AIR	19	:		893	874				589	893		475
MATTER: SOUND & LIGHT	16	:		752	736				496	752		400
MEASUREMENT	19	:		893	874				589	893		475
ROCKS & SOILS	8	:		376	368				248	376		200
SOUND	9	:		423	414				279	423		225
SOUND	8	:		376	368				248	376		200
TIME	13	:		611	598				403	611		325
TIME SEQUENCE PICTURES	10	:		470	460				310	470		250
WEATHER/WATER/ANIMALS	13	:		611	598				403	611		325
SUBTOTALS		:		11968	11224				7564	11468		6100
STENCILS	244	:										
PUPILS' MATERIALS												
MATERIALS AROUND US	14	:		6110	5270				3654	7112		350
WATER	16	:		6992	6032				4176	6352		400
WEATHER	18	:		7866	6786				4698	7144		450
YOU	16	:		6992	6032				4176	6352		400
SUBTOTALS		:		27960	24128				16704	25312		1600
STENCILS	61	:										
COLUMN TOTALS	305	:		39456	35352				24268	36780		7700
OVERALL TOTAL (SCIENCE)		: PAGES										150736
		:STENCILS										305

MATERIALS PRODUCED IN 1982 (LANGUAGE ARTS)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	49	47	46	26	61	26	31	47	41	25
	PUPLS->	:	191	390	331	200	250	200	230	461	375	25
	READERS*	:	96	195	166	100	115	100	115	232	188	25
TEACHERS' MATERIALS	PAGES											
T/L EXPERIENCES 7-8+	98	:	4802	4606	4508	2548	5978	2548	3038	4606	4018	2450
T/L EXPERIENCES 8-9+	102	:	4998	4794	4692	2652	6222	2652	3162	4794	4182	2550
T/L EXPERIENCES 9-10+	106	:	5194	4982	4876	2756	6466	2756	3286	4982	4346	2650
PUPILS' MATERIALS												
COMMUNITY HELPERS A*	12	:	4032	5220	4872	4080	4260	4080	4260	5664	5136	300
COMMUNITY HELPERS B*	19	:	6384	8265	7714	6460	6745	6460	6745	8968	8132	475
IS THIS YOUR DOG?*	15	:	5040	6525	6090	5100	5325	5100	5325	7080	6420	375
MICE AND RATS*	15	:	5040	6525	6090	5100	5325	5100	5325	7080	6420	375
COLUMN TOTALS		:	35490	40917	38842	28696	40321	28696	31141	43174	38654	9175
STENCILS	367	:										
OVERALL TOTAL (LANGUAGE AR*		:	PAGES									335106
		:	STENCILS									367

MATERIALS PRODUCED IN 1982 (SOCIAL STUDIES)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	49	10	10	10	61	26	10	47	41	25
	PUPLS->	:	191	0	0	0	230	200	0	461	375	25
TEACHERS' MATERIALS	PAGES											
T/L EXPERIENCES 8-9+	196	:	9604	1960	1960	1960	11956	5096	1960	9212	8036	4900
T/L EXPERIENCES 9-10+	250	:	12250	2500	2500	2500	15250	6500	2500	11750	10250	6250
PUPILS' MATERIALS												
PUPILS' BOOK TERM 1	12	:	2880	120	120	120	3492	2712	120	6096	4992	300
PUPILS' BOOK TERM 2	18	:	4320	180	180	180	5238	4068	180	9144	7488	450
PUPILS' BOOK TERM 3	14	:	3360	140	140	140	4074	3164	140	7112	5824	350
COLUMN TOTALS		:	32414	4900	4900	4900	40010	21540	4900	43314	36590	12250
STENCILS	490	:										
OVERALL TOTAL (SOCIAL STUDIES)			PAGES									205718
			STENCILS									490

MATERIALS PRODUCED IN 1982 (MATHEMATICS)

TOPICS	COUNTRY		AGUA	GUDS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	49	47	46	26	61	26	31	10	41	25
	PUPLS->	:	191	550	531	200	230	200	230	0	375	25
TEACHERS' MATERIALS	PAGES											
AREA	10	:	490	470	460	260	610	260	310	100	410	250
CAPACITY	10	:	490	470	460	260	610	260	310	100	410	250
CORE CURRICULUM 7-8+	6	:	294	282	276	156	366	156	186	60	246	150
CORE CURRICULUM 8-9+	6	:	294	282	276	156	366	156	186	60	246	150
FRACTIONS	22	:	1078	1034	1012	572	1342	572	682	220	902	550
FRACTIONS	28	:	1372	1316	1288	728	1708	728	868	280	1148	700
GEOMETRY	10	:	490	470	460	260	610	260	310	100	410	250
GRAPHS	12	:	588	564	552	312	732	312	372	120	492	300
GRAPHS	16	:	784	752	736	416	976	416	496	160	656	400
GRAPHS EVALUATION	8	:	392	376	368	208	488	208	248	80	328	200
LENGTH	10	:	490	470	460	260	610	260	310	100	410	250
MASS	12	:	588	564	552	312	732	312	372	120	492	300
MONEY	14	:	686	658	644	364	854	364	434	140	574	350
NUMBER CONCEPTS	18	:	882	846	828	468	1098	468	558	180	738	450
OPERATIONS	16	:	784	752	736	416	976	416	496	160	656	400
OPERATIONS EVALUATIONS	10	:	490	470	460	260	610	260	310	100	410	250
SETS	22	:	1078	1034	1012	572	1342	572	682	220	902	550
T/L EXPERIENCES 7-8+	52	:	2548	2444	2392	1352	3172	1352	1612	520	2132	1300
T/L EXPERIENCES 8-9+	78	:	3822	3666	3588	2028	4758	2028	2418	780	3198	1950
T/L EXPERIENCES 9-10+	90	:	4410	4230	4140	2340	5490	2340	2790	900	3690	2250
TIME	16	:	784	752	736	416	976	416	496	160	656	400
TIME	26	:	1274	1222	1196	676	1586	676	806	260	1066	650
TIME	16	:	784	752	736	416	976	416	496	160	656	400
COLUMN TOTALS		:	24892	25026	23568	13208	30988	13208	15748	5080	20828	12700
STENCILS	508	:										

OVERALL TOTAL (MATHEMATICS)	PAGES	103896
	STENCILS	500

MATERIALS PRODUCED IN 1982 (SCIENCE)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	10	47	46	10	10	10	31	47	10	25
	PUPLS->	:	0	390	331	0	0	0	230	461	0	25
TEACHERS' MATERIALS	PAGES											
ELECTRICITY	50	:	500	2350	2300	500	500	500	1550	2350	500	1250
ENERGY & FORCES	22	:	220	1034	1012	220	220	220	682	1034	220	550
ENERGY: BEGIN & END	18	:	180	846	828	180	180	180	558	846	180	450
HEAT	14	:	140	658	644	140	140	140	434	658	140	350
LIGHT	14	:	140	658	644	140	140	140	434	658	140	350
LIGHT 2	18	:	180	846	828	180	180	180	558	846	180	450
LIVING THINGS	18	:	180	846	828	180	180	180	558	846	180	450
MACHINES	22	:	220	1034	1012	220	220	220	682	1034	220	550
MAGNETS	22	:	220	1034	1012	220	220	220	682	1034	220	550
MATERIALS AROUND US	14	:	140	658	644	140	140	140	434	658	140	350
MATTER	20	:	200	940	920	200	200	200	620	940	200	500
MATTER: AIR	26	:	260	1222	1196	260	260	260	806	1222	260	650
MATTER: SOUND & LIGHT	18	:	180	846	828	180	180	180	558	846	180	450
MOVEMENT 1	10	:	100	470	460	100	100	100	310	470	100	250
PLANTS	20	:	200	940	920	200	200	200	620	940	200	500
ROCKS AND SOILS	12	:	120	564	552	120	120	120	372	564	120	300
SOUND	10	:	100	470	460	100	100	100	310	470	100	250
THE SKY ABOVE	14	:	140	658	644	140	140	140	434	658	140	350
THREE INVESTIGATIONS	38	:	380	1786	1748	380	380	380	1178	1786	380	950
TIME	14	:	140	658	644	140	140	140	434	658	140	350
YOU	16	:	160	752	736	160	160	160	496	752	160	400
SUBTOTALS		:	2120	9964	9752	2120	2120	2120	6572	9964	2120	5300
STENCILS	410	:										
PUPILS' MATERIALS												
ELECTRICITY	34	:	340	14858	12818	340	340	340	8074	17272	340	850
MATERIALS AROUND US	32	:	320	13984	12064	320	320	320	8352	16256	320	800
MOVEMENT 1	34	:	340	14858	12818	340	340	340	8074	17272	340	850
THE SKY ABOVE	16	:	160	6992	6032	160	160	160	4176	8128	160	400
YOU	22	:	220	9614	8294	220	220	220	5742	11176	220	550
SUBTOTALS		:	1380	60306	52026	1380	1380	1380	36018	70104	1380	3450
STENCILS	138	:										
COLUMN TOTALS	548	:	3500	70270	61778	3500	3500	3500	42590	80068	3500	8750
OVERALL TOTAL (SCIENCE)		: PAGES										280956
		:STENCILS										548

MATERIALS PRODUCED IN 1983 (LANGUAGE ARTS)

TOPICS		COUNTRY	ANGA	DOMS	BLZE	BVI	GNDA	MRAT	STKN	STLU	STVI	MISC
		TCHRS-> :	49	47	46	26	61	26	31	57	41	25
TOPICS		PUPLS-> :	210	380	326	210	220	200	238	461	375	25
TEACHERS' MATERIALS	PAGES											
CORE CURRICULUM 10-11+	42	:	2058	1974	1932	1092	2562	1092	1302	1664	1722	1050
T/L EXPERIENCES 10-11+	76	:	3724	5672	3496	1976	4636	1976	2356	2012	3116	1900
PUPILS' MATERIALS	38	:	9842	16226	14136	8968	10678	8588	10222	16924	15808	960
COLUMN TOTALS		:	15624	21772	19564	12036	17876	11656	13880	23250	20646	3900
STENCILS	156	:										
OVERALL TOTAL (LANGUAGE ARTS)		PAGES										160244
		: STENCILS										156

MATERIALS PRODUCED IN 1983 (SOCIAL STUDIES)

TOPICS		COUNTRY	ANGA	ODUS	BLZE	BVI	GNDA	MRAT	STKN	STLU	STVI	MISC
		TCHRS-> :	49				61	26		57	41	25
TOPICS		PUPLS-> :	210				220	200		461	375	25
TEACHERS' MATERIALS	PAGES	:										
CORE CURRICULUM AND T/L EXPERIENCES 9-10	205	:	11025				13725	5850		8525	9225	5625
CORE CURRICULUM AND T/L EXPERIENCES 10-11+	216	:	10682				13298	5668		8036	8938	5450
COLUMN TOTALS		:	21707				27023	11518		16391	18163	11075
STENCILS	443	:										
OVERALL TOTALS (SOCIAL STUDIES)		PAGES										108877
		. STENCILS										443

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MATERIALS PRODUCED IN 1983 (MATHEMATICS)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	49	47	46	26	61	26	31	10	41	25
	PUPLS->	:	210	380	326	210	220	200	238	0	375	25
TEACHERS' MATERIALS	PAGES											
T/L EXPERIENCES 9-10+	90	:	4410	4230	4140	2340	5490	2340	2790	900	3690	2250
T/L EXPERIENCES 10-11+	68	:	3332	3196	3128	1768	4148	1768	2108	680	2788	1700
SUBTOTALS		:	7742	7426	7268	4108	9638	4108	4898	1580	6478	3950
STENCILS	158	:										
PUPILS' MATERIALS												
AREA	8	:	2072	3416	2976	1888	2248	1808	2152	80	3328	200
CAPACITY	6	:	1554	2562	2232	1416	1686	1356	1614	60	2496	150
DECIMALS	9	:	2331	3843	3348	2124	2529	2034	2421	90	3744	225
GEOMETRY	12	:	3108	5124	4464	2832	3372	2712	3228	120	4992	300
LENGTH	10	:	2590	4270	3720	2360	2810	2260	2690	100	4160	250
MASS	9	:	2331	3843	3348	2124	2529	2034	2421	90	3744	225
MONEY	7	:	1813	2989	2604	1652	1967	1582	1883	70	2912	175
NUMBER CONCEPTS	8	:	2072	3416	2976	1888	2248	1808	2152	80	3328	200
OPERATIONS	12	:	3108	5124	4464	2832	3372	2712	3228	120	4992	300
PERCENT, RATIO, PROPOR	19	:	4921	8113	7068	4484	5339	4294	5111	190	7904	475
SETS	13	:	3367	5551	4836	3068	3653	2938	3497	130	5408	325
TIME	15	:	3885	6405	5580	3540	4215	3390	4035	150	6240	375
SUBTOTALS		:	33152	54656	47616	30208	35968	28928	34432	1280	53248	3200
STENCILS	128	:										
COLUMN TOTALS	286	:	40894	62082	54884	34316	45606	33036	39330	2860	59726	7150
OVERALL TOTAL (MATHEMATICS):			PAGES									379804
		:	STENCILS									286

MATERIALS PRODUCED IN 1983 (SCIENCE)

TOPICS	COUNTRY		AGUA	ANGS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->	:	10	47	46	10	10	10	51	47	10	25
	PUPLS->	:	0	590	551	0	0	0	250	461	0	25
TEACHERS' MATERIALS	PAGES											
ANIMALS WITH WINGS	19	:	190	893	874	190	190	190	589	893	190	475
CHEMISTRY IN THE HOME	21	:	210	987	966	210	210	210	651	987	210	525
ELECTRICITY	42	:	420	1974	1932	420	420	420	1302	1974	420	1050
ENERGY:BEGINNING & END	10	:	100	470	460	100	100	100	310	470	100	250
KEEPING CLEAN	12	:	120	564	552	120	120	120	372	564	120	300
LIGHT	20	:	200	940	920	200	200	200	620	940	200	500
MAKING THINGS MOVE	21	:	210	987	966	210	210	210	651	987	210	525
MATERIALS AROUND US	16	:	160	752	736	160	160	160	496	752	160	400
MATERIALS AROUND US 2	13	:	130	611	598	130	130	130	403	611	130	325
MORE ABOUT WEATHER	27	:	270	1269	1242	270	270	270	837	1269	270	675
MOVMENT:LIVING THINGS	13	:	130	611	598	130	130	130	403	611	130	325
PLASTICS	18	:	180	846	828	180	180	180	558	846	180	450
SOILS & LIVING THINGS	16	:	160	752	736	160	160	160	496	752	160	400
THE SKY ABOVE	35	:	350	1645	1610	350	350	350	1085	1645	350	875
THREE INVESTIGATIONS + WORK	39	:	390	1833	1794	390	390	390	1209	1833	390	975
YOU	28	:	280	1316	1288	280	280	280	868	1316	280	700
SUBTOTALS		:	2320	10904	10672	2320	2320	2320	7192	10904	2320	5800
STENCILS	350											
PUPILS' MATERIALS												
ANIMALS	10	:	100	470	460	100	100	100	310	470	100	250
ELECTRICITY WORKSHEETS	32	:	320	1504	1472	320	320	320	992	1504	320	800
MATERIALS AROUND US 1	17	:	170	799	782	170	170	170	527	799	170	425
MOVEMENT:LIVING THINGS	18	:	180	846	828	180	180	180	558	846	180	450
PLANTS	24	:	240	1128	1104	240	240	240	744	1128	240	600
THE SKY ABOVE	14	:	140	658	644	140	140	140	434	658	140	350
YOU	19	:	190	893	874	190	190	190	589	893	190	475
SUBTOTALS		:	1340	6298	6164	1340	1340	1340	4154	6298	1340	3350
STENCILS	154											
COLUMN TOTALS	404	:	3660	17202	16836	3660	3660	3660	11346	17202	3660	9150
OVERALL TOTAL (SCIENCE)		: PAGES										279214
		:STENCILS										404

DISSEMINATION PERIOD JUNE 1984 - AUGUST 1985
LANGUAGE ARTS MATERIALS
(PUPILS 7-8+, 8-9+)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->		64	1	1	39	94	34	49	1	154	42
	PUPLS->		0	0	0	0	0	0	0	0	0	42
TEACHERS' MATERIALS	PAGES											
CORE CURRICULUM 7-8+	30	:	1920	30	30	1170	2820	1020	1470	30	226380	1260
T/L EXPERIENCES 7-8+	166	:	10624	166	166	6474	15604	5644	8134	166	25564	6972
INTEGRATED SCHEME 7-8+	14	:	896	14	14	546	1316	476	686	14	2156	588
CORE CURRICULUM 8-9+	36	:	2304	36	36	1404	3384	1224	1764	36	5544	1512
T/L EXPERIENCES 8-9+	131	:	8384	131	131	5109	12314	4454	6419	131	20174	5502
INTEGRATED SCHEME 8-9+	14	:	896	14	14	546	1316	476	686	14	2156	588
		:										
PUPILS' MATERIALS 7-9+	116	:	116		116	116	116	116	116	116	116	116
COLUMN TOTALS: PAGES		:	25024	391		15249	36754	13294	19159		281974	16538
STENCILS	507	:	116		116	116	116	116	116	507	116	507
OVERALL TOTAL (LANGUAGE ARTS)		:	PAGES									408383
		:	STENCILS									1026

DISSEMINATION PERIOD JUNE 1984 - AUGUST 1985
SOCIAL STUDIES MATERIALS
(PUPILS 7-8+, 8-9+)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->		64			30	94	34	49	1	154	42
	PUPLS->											
TEACHERS' MATERIALS	PAGES											
T/L EXPERIENCES 7-8+	105	:	6720			3150	9870	3570	5145	105	16170	4410
T/L EXPERIENCES 8-9+	162	:	10368			4860	15228	5508	7938	162	24948	6804
COLUMN TOTALS: PAGES		:	17088			8010	25098	9078	13083		41118	11214
STENCILS	267	:								267		267
OVERALL TOTALS (SOCIAL STUDIES)			PAGES									124689
			STENCILS									534

DISSEMINATION PERIOD JUNE 1984 – AUGUST 1985
MATHEMATICS MATERIALS

(PUPILS 7-8+, 8-9+)

TOPICS	COUNTRY	AGUA	AUOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS-->	64	1	1	39	94	34	49		154	42
	PUPLS-->	1	1	1	1	1	1	1		1	42
TEACHERS' MATERIALS	**PAGES**										
T/L EXPERIENCES 7-8+	70 :	4480	70	70	2730	6580	2380	3430		10780	2940
T/L EXPERIENCES 8-9+	88 :	5632	88	88	3432	8272	2992	4312		13552	3696
PUPILS' MATERIALS											
FRACTIONS	17 :	17	17	17	17	17	17	17		17	714
GRAPHS	7 :	7	7	7	7	7	7	[illegible]		7	294
GRAPHS	13 :	13	13	13	13	13	13	13		13	546
MATHS TEST	14 :	14	14	14	14	14	14	14		14	588
MATHS TEST	13 :	13	13	13	13	13	13	13		13	545
MONEY	15 :	15	15	15	15	15	15	15		15	630
MONEY	8 :	8	8	8	8	8	9	6		8	336
ODD & EVEN NUMBERS	13 :	13	13	13	13	13	13	13		13	546
OPERATIONS	18 :	18	18	18	18	18	18	18		18	756
SETS	8 :	8	8	8	8	8	8	8		8	336
SHAPES	7 :	7	[illegible]	7	7	7	7	[illegible]		7	294
TIME	12 :	12	12	12	12	12	12	12		12	504
TIME	21 :	21	21	21	21	21	21	21		21	882
COLUMN TOTALS: PAGES	:	[illegible]			6162	14852	5572	7742		24332	13608
STENCILS	324 :	166	324	324	166	166	166	166		166	324

OVERALL TOTAL (MATHEMATICS)	PAGES	82180
	STENCILS	1960

BEST AVAILABLE COPY

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DISSEMINATION PERIOD JUNE 1984 - AUGUST 1985

SCIENCE MATERIALS

(PUPILS 7-8+, 8-9+)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->		10	1	1	30	10	5	49	1	10	42
	PUPLS->		1	1	1	1	1	1	1	1	1	42
TEACHERS' MATERIALS	PAGES											
IMPROVISATIONS IN SCIENCE	88	:	88	88	88	88	88	88	2288	88	88	3696
SCIENCE EDUC BOOKLET	46	:	46	46	46	46	46	46	2254	46	46	1932
ANIMALS	11	:	110	11	11	330	110	55	539	11	110	462
ENERGY AND FORCES	34	:	340	34	34	1020	340	170	1666	34	340	1428
HEAT	16	:	160	16	16	480	160	80	784	16	160	672
LIGHT	19	:	190	19	19	570	190	95	931	19	190	798
LIGHT 2	24	:	240	24	24	720	240	120	1176	24	240	1008
MACHINES	30	:	300	30	30	900	300	150	1470	30	300	1260
MAGNETS	24	:	240	24	24	720	240	120	1176	24	240	1008
MATTER	21	:	210	21	21	630	210	105	1029	21	210	882
MATTER: AIR	28	:	280	28	28	840	280	140	1372	28	280	1176
MATTER: SOUND & LIGHT	23	:	230	23	23	690	230	115	1127	23	230	966
PLANTS	43	:	430	43	43	1290	430	215	2107	43	430	1806
ROCKS AND SOILS	14	:	140	14	14	420	140	70	686	14	140	588
SOUND	18	:	180	18	18	540	180	90	882	18	180	756
SOUND: 2ND EXPERIMENTS	16	:	160	16	16	480	160	80	784	16	160	672
TIME	26	:	260	26	26	780	260	130	1274	26	260	1092
TIME SEQUENCE PICTURES	10	:	100	10	10	300	100	50	490	10	100	420
WATER	16	:	160	16	16	480	160	80	784	16	160	672
WATER/WEATHER/ANIMALS	25	:	250	25	25	750	250	125	1225	25	250	1050
WEATHER	16	:	160	16	16	480	160	80	784	16	160	672
COLUMN TOTALS: PAGES		:	4274	548		12554	4274	2204	24828		4274	23016
STENCILS	548	:			548					548		548
OVERALL TOTAL (SCIENCE)		PAGES										75972
		STENCILS										1644

DISSEMINATION PERIOD JUNE 1984 - AUGUST 1985
LANGUAGE ARTS MATERIALS
(PUPILS 9-10+, 10-11+)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->		64	1	1	39	94	34	49	1	154	42
	PUPLS->		0	0	0	0	0	0	0	0	0	0
TEACHERS' MATERIALS	PAGES											
CORE CURRICULUM 9-10+	60	:	3840	60	60	2340	5640	2040	2940	60	9240	2520
T/L EXPERIENCES 9-10+	168	:	10752	168	168	6552	15792	6712	8232	168	25872	7056
CORE CURRICULUM 10-11+	75	:	4800	75	75	2925	7050	2550	3675	75	11550	3150
T/L EXPERIENCES 10-11+	142	:	9088	142	142	5538	13348	4828	6958	142	21868	5964
TEACHERS' RESOURCE BK	111	:	7104	111	111	4329	10434	3774	5439	111	17094	4662
PUPILS' MATERIALS												
.....FOR PUPILS 9-10+	35	:	35	35	35	35	35	35	35	35	35	35
.....FOR PUPILS 10-11+	74	:	74	74	74	74	74	74	74	74	74	74
COLUMN TOTALS: PAGES	668	:	35793	774		21793	52375	19015	27352		86735	24961
STENCILS	109	:	109		109	109	109	109	109	774	109	774
OVERALL TOTAL (LANGUAGE ARTS) PAGES												266193
STENCILS												2511

DISSEMINATION PERIOD JUNE 1984 - AUGUST 1985
SOCIAL STUDIES MATERIALS
(PUPILS 9-10+, 10-11+)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->		64	1	1	39	94	34	10	1	154	42
	PUPLS->		0	0	0	0	0	0	0	0	0	42
TEACHERS' MATERIALS	PAGES											
T/L EXPERIENCES 9-10+	243	:	15552	243	243	9477	22842	8262	2450	243	37422	10206
T/L EXPERIENCES 10-11+	221	:	14144	221	221	8619	20774	7514	2210	221	34034	9282
COLUMN TOTALS: PAGES		:	29696	464		18096	43616	15776	4660		71456	19488
STENCILS	464	:			464					464		464
OVERALL TOTAL (SOCIAL STUDIES) PAGES												203252
STENCILS												1392

DISSEMINATION PERIOD JUNE 1984 - AUGUST 1985
MATHEMATICS MATERIALS
(PUPILS 9-10+,10-11+)

TOPICS	COUNTRY		AGUA	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->		64	1	1	39	94	34	49		154	42
	PUPLS->		0	0	0	0	0	0	0		0	42
TEACHERS' MATERIALS	PAGES											
T/L EXPERIENCES 9-10+	107	:	6848	107	107	4173	10058	3638	5243		16478	4494
T/L EXPERIENCES 10-11+	119	:	7616	119	119	4641	11186	4046	5831		18326	4998
PUPILS' MATERIALS												
AREA	11	:	11	11	11	11	11	11	11		11	462
AREA	8	:	8	8	8	8	8	8	8		8	336
CAPACITY	9	:	9	9	9	9	9	9	9		9	378
CAPACITY	6	:	6	6	6	6	6	6	6		6	252
DECIMAL NUMBERS	8	:	8	8	8	8	8	8	8		8	336
FRACTIONS	26	:	26	26	26	26	26	26	26		26	1092
FRACTIONS	24	:	24	24	24	24	24	24	24		24	1008
GEOMETRY	6	:	6	6	6	6	6	6	6		6	252
GEOMETRY	12	:	12	12	12	12	12	12	12		12	504
GRAPHS	14	:	14	14	14	14	14	14	14		14	588
GRAPHS	9	:	9	9	9	9	9	9	9		9	378
LENGTH	11	:	11	11	11	11	11	11	11		11	462
LENGTH	9	:	9	9	9	9	9	9	9		9	378
MASS	10	:	10	10	10	10	10	10	10		10	420
MASS	9	:	9	9	9	9	9	9	9		9	378
MONEY	13	:	13	13	13	13	13	13	13		13	546
MONEY	6	:	6	6	6	6	6	6	6		6	252
NUMBER CONCEPTS	18	:	18	18	18	18	18	18	18		18	756
NUMBER CONCEPTS	7	:	7	7	7	7	7	7	7		7	294
OPERATIONS	31	:	31	31	31	31	31	31	31		31	1302
OPERATIONS	12	:	12	12	12	12	12	12	12		12	504
PERCENTAGE, RATIO, PRO	18	:	18	18	18	18	18	18	18		18	756
SETS	20	:	20	20	20	20	20	20	20		20	840
SETS	13	:	13	13	13	13	13	13	13		13	546
TIME	14	:	14	14	14	14	14	14	14		14	588
TIME	15	:	15	15	15	15	15	15	15		15	630
RAGE, RATIO, PRO EVAL	5	:	5	5	5	5	5	5	5		5	210
AREA EVALUATION	4	:	4	4	4	4	4	4	4		4	168
CAPACITY EVALUATION	7	:	7	7	7	7	7	7	7		7	294
DECIMAL NUMBERS EVAL	4	:	4	4	4	4	4	4	4		4	168
FRACTIONS EVALUATION	6	:	6	6	6	6	6	6	6		6	252
FRACTIONS EVALUATION	4	:	4	4	4	4	4	4	4		4	168
GRAPHS EVALUATION	5	:	5	5	5	5	5	5	5		5	210
GRAPHS EVALUATION	6	:	6	6	6	6	6	6	6		6	252
LENGTH EVALUATION	3	:	3	3	3	3	3	3	3		3	126
MASS EVALUATION	4	:	4	4	4	4	4	4	4		4	168
MONEY EVALUATION	4	:	4	4	4	4	4	4	4		4	168
NUMBER CONCEPTS EVAL	7	:	7	7	7	7	7	7	7		7	294
NUMBER CONCEPTS EVAL	4	:	4	4	4	4	4	4	4		4	168
OPERATIONS EVALUATION	18	:	18	18	18	18	18	18	18		18	756
OPERATIONS EVALUATION	4	:	4	4	4	4	4	4	4		4	168
SETS EVALUATION	7	:	7	7	7	7	7	7	7		7	294
TIME EVALUATION	5	:	5	5	5	5	5	5	5		5	210
COLUMN TOTALS (PAGES)	226	:	14464	226	226	8814	21244	7684	11074		34804	27804
STENCILS	436	:	436	436	436	436	436	436	436		436	662

OVERALL TOTAL (MATHEMATICS) PAGES 126340
STENCILS 4150

DISSEMINATION PERIOD: JUNE 1984 - AUGUST 1985

SCIENCE MATERIALS

(PUPILS 9-10+, 10-11+)

TOPICS	COUNTRY		MONT	BDOS	BLZE	BVI	DMCA	MRAT	STKN	STLU	STVI	MISC
	TCHRS->		14	1	1	30	9	9	49	1	10	42
	PUPLS->		0	0	0	0	0	0	0	0	0	42
TEACHERS' MATERIALS	PAGES											
ANIMALS WITH WINGS	28	:	392	28	28	840	252	252	1372	28	280	1176
CHEMISTRY IN THE HOME	25	:	350	25	25	750	225	225	1225	25	250	1050
ELECTRICITY	53	:	742	53	53	1590	477	477	2597	53	530	2226
ENERGY: BEGIN & END	23	:	322	23	23	690	207	207	1127	23	230	966
KEEPING CLEAN	16	:	224	16	16	480	144	144	784	16	160	672
MAKING THINGS MOVE	23	:	322	23	23	690	207	207	1127	23	230	966
MATERIALS AROUND US 1	16	:	224	16	16	480	144	144	784	16	160	672
MATERIALS AROUND US 2	18	:	252	18	18	540	162	162	882	18	180	756
MEASUREMENT	20	:	280	20	20	600	180	180	980	20	200	840
MORE ABOUT WEATHER	28	:	392	28	28	840	252	252	1372	28	280	1176
MOVEMENT IN LIV THINGS	13	:	182	13	13	390	117	117	637	13	130	546
PLASTICS	30	:	420	30	30	900	270	270	1470	30	300	1260
SOILS & LIVING THINGS	20	:	280	20	20	600	180	180	980	20	200	840
THE SKY ABOVE	36	:	504	36	36	1080	324	324	1764	36	360	1512
THREE INVESTIGATIONS	41	:	574	41	41	1230	369	369	2009	41	410	1722
YOU	31	:	434	31	31	930	279	279	1519	31	310	1302
PUPILS' MATERIALS												
ELECTRICITY	31	:	434	31	31	930	279	279	1519	31	310	1302
MATERIALS AROUND US 1	18	:	252	18	18	540	162	162	882	18	180	756
MORE ABOUT WEATHER	16	:	224	16	16	480	144	144	784	16	160	672
MOVEMENT IN LIV THINGS	18	:	252	18	18	540	162	162	882	18	180	756
THE SKY ABOVE	15	:	210	15	15	450	135	135	735	15	150	630
YOU	21	:	294	21	21	630	189	189	1029	21	210	882
COLUMN TOTALS: PAGES		:	7000			16200	4860	4860	26460		5400	22680
STENCILS	540	:		540	540					540		540
OVERALL TOTAL (X160=)			PAGES									86020
			STENCILS									2160