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Report No: 22460

IMPLEMENTATION COMPLETION REPORT
(35800; 3580A; 24815)

ON

A LOAN

IN THE AMOUNT OF US\$ 32 MILLION

AND

A GRANT

IN THE AMOUNT OF 4,923,199 DUTCH GULDERS

TO

JAMAICA

FOR

REFORM OF SECONDARY EDUCATION

06/29/2001

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CURRENCY EQUIVALENTS

(Exchange Rate Effective)

Currency Unit = Jamaican Dollar (JMD)

1JMD = US\$.022

US\$ 1 = 45 J\$

FISCAL YEAR

April 1 -- March 31

ABBREVIATIONS AND ACRONYMS

CXC	Caribbean Examination Council
GOJ	Government of Jamaica
HEART	Human Employment and Resources Training
HRDP	Human Resources Development Program
ISER	Institute for Social and Economic Research
JBTE	Joint Board of Teacher Education
JHSC	Junior High School Certificate
JSC	Jamaica School Certificate
JSLC	Jamaican Survey of Living Conditions
MOEYC	Ministry of Education Youth and Culture
MOF	Ministry of Finance
MOH	Ministry of Health
NAP	National Assessment Program
ODA	Overseas Development Agency (U.K.)
P&JH	Primary and Junior High Schools
PDU	Policy Development Unit
PIOJ	Planning Institute of Jamaica
PIU	Project Implementation Unit
PSIP	Public Sector Investment Program
RMC	Reform Management Committee
ROSE	Reform of Secondary Education
SALISES	Sir Author Lewis Institute of Social and Economic Studies
SESP	Social and Economic Support Program
SLC	Survey of Living Conditions
SPA	Social Policy Analysis
SSC	Secondary School Certificate
STATIN	Statistical Institute of Jamaica
UWI	University of the West Indies

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JAMAICA REFORM OF SECONDARY

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<i>Project ID:</i> P007479	<i>Project Name:</i> REFORM OF SECONDARY
<i>Team Leader:</i> Kin Bing Wu	<i>TL Unit:</i> LCSHE
<i>ICR Type:</i> Intensive Learning Model (ILM) of ICR	<i>Report Date:</i> June 29, 2001

1. Project Data

Name: REFORM OF SECONDARY *L/C/TF Number:* 35800; 3580A; 24815
Country/Department: JAMAICA *Region:* Latin America and Caribbean Region
Sector/subsector: ES - Secondary Education

KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 05/07/91	<i>Effective:</i> 11/02/93	
<i>Appraisal:</i> 10/12/92	<i>MTR:</i> 03/25/96	
<i>Approval:</i> 03/25/93	<i>Closing:</i> 12/31/2000	

Borrower/Implementing Agency: GOVERNMENT OF JAMAICA/MINISTRY OF EDUCATION YOUTH & CULTURE; PLANNING INSTITUTE OF JAMAICA
Other Partners: GOVERNMENT OF THE NETHERLANDS

STAFF	Current	At Appraisal
<i>Vice President:</i>	David de Ferranti	
<i>Country Manager:</i>	Orsalia Kalantzopoulos	
<i>Sector Manager:</i>	Xavier E. Coll	
<i>Team Leader at ICR:</i>	Kin Bing Wu	Linda McGinnis and Jill Armstrong
<i>ICR Primary Author:</i>	Kin Bing Wu; Margaret Ellen Grosh; Lorraine Blank	

2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome: S
Sustainability: HL
Institutional Development Impact: SU
Bank Performance: S
Borrower Performance: S

Quality at Entry: QAG (if available) ICR
 S
Project at Risk at Any Time: Yes

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

The Reform of Secondary Education Project (ROSE) aims: (a) to implement the first phase of the ROSE Program in order to improve the quality and equity of Grades 7 through 9, with emphasis on schools

serving the poorest students; (b) to strengthen the capacity of the Ministry of Education, Youth and Culture (MOEYC) to plan and monitor the impact of the ROSE Program; and (c) to improve the quality and cost effectiveness of public provision of social services.

The key objectives of the project are to:

- (i) introduce a major reform of the junior secondary education system (i.e. Grades 7-9) with a focus on the poorest groups within these grades;
- (ii) strengthen the MOEYC's capacity to manage and evaluate the impact of such a reform; and
- (iii) strengthen the Planning Institute of Jamaica's (PIOJ) capacity to carry out relevant and timely social policy analysis (in order to formulate more effective social programs in targeted areas).

It is important to note that the first two of these objectives pertained to ROSE, which was financed by the World Bank loan, with counterpart funding from the Government of Jamaica (GOJ). ROSE was implemented by the MOEYC. The last objective referred to the Social Policy Analysis component (SPA), which was funded by a grant from the Government of the Netherlands, with counterpart funding from GOJ. The Bank was the administrator of the Dutch Grant on behalf of the Minister for Development Cooperation of the Netherlands. SPA was implemented by the PIOJ. Although SPA was viewed administratively as one sub-component of the ROSE project, in goals, implementing agencies and financing, it operated as a freestanding project. This report made separate references to ROSE and SPA.

3.2 Revised Objective:

N/A

3.3 Original Components:

The IBRD loan was US\$32 million; GOJ Fund was equivalent to US\$6 million; the Netherland Grant was 4,923,199 Dutch Guilders which was equivalent to about US\$2.7 million. The total project cost was US\$40.7 million

Component Rating	Total Cost	Rating
Secondary Reform Support	\$33.5 Million	S
Evaluation and Management Strengthening	\$3.5 Million.	S
Social Policy Analysis Support	\$3.6 Million	S

3.4 Revised Components:

N/A

3.5 Quality at Entry:

N/A

4. Achievement of Objective and Outputs

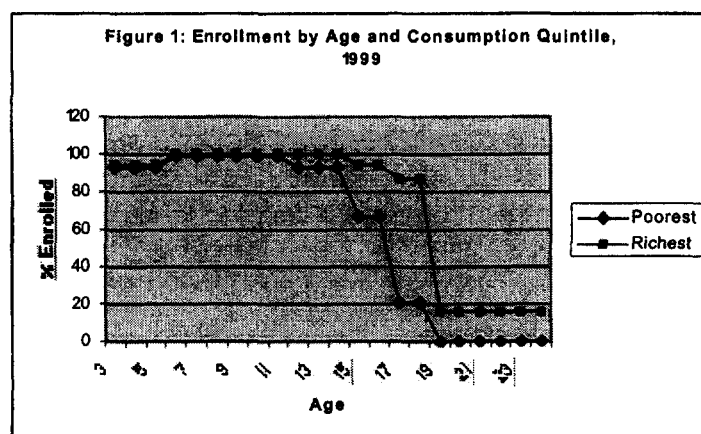
4.1 Outcome/achievement of objective:

The development objectives of ROSE can be considered to have been achieved. The foundation for the reform has been laid for it to be deepened at the school level in future. This will be taken up by the follow-on project, ROSE II.

The development objectives of SPA can also be considered to have been achieved. The project has helped to build the policy analysis capacity, raise the level of debate around poverty and other social issues, and increase the emphasis on data driven policy analysis.

(a) Improve quality and equity of lower secondary education

Access to secondary education. The annual Jamaican Survey of Living Conditions (JSLC) undertaken by PIOJ in 1999 confirmed that access to schooling among students between the ages of 12 and 14 was approaching universal (Figure 1). Since this is the main age-group for junior secondary education, beneficiaries of ROSE encompass the entire junior secondary education population. However, access to upper secondary education and tertiary education still reflects the socioeconomic divide of the society, as enrollment among students from the poorest quintile declined sharply after age 14. Extending access to upper secondary education will depend on improved quality of lower secondary education, expanded supply of school places and increased demand for schooling among the adolescents. These challenges will be taken up by the next phase of ROSE.



Targeting and equity. The project has targeted disadvantaged schools (All-Age Schools in rural areas and New Secondary Schools in urban areas) for special assistance, by providing new and unified curricula in core subjects, by promoting activity-based teaching and cooperative learning, and by supplying curriculum guides, teachers guides, textbooks, and infrastructure upgrading. These approaches and inputs are valued and sought after even by teachers and students of academic-oriented Traditional High Schools. During the life of the project, targeted All-age schools were upgraded to Primary and Junior High schools (P&JH), while New Secondary schools were eliminated as a category and upgraded to Comprehensive Highs in September, 1999.

A greater proportion of poor students are attending better secondary schools at the end of the project than at the beginning. Table 1 shows that the percentage of students from lower consumption quintiles attending All-Age schools has been reduced between 1993 and 1999. Although this reduction is largely due to upgrading of All-Age schools to Primary and Junior High schools, the combined enrollment of students from the poorer quintiles in these two school types in 1999 was still lower than that in 1993. The increase in enrollment among students from the lower quintiles in Comprehensive Highs was also due to an expansion of these types of schools. However, *the increase in enrollment of students from the bottom three quintiles in the academic, Traditional High Schools could most likely be attributable to increased access for under-privileged students to better schools.* This trend identified by the JSLC is corroborated by the placement records from Grade 9 to Grade 10 of the Student Assessment Unit and the Evaluation Unit.

**Table 1: Enrollment by School Type and by Consumption Quintile (%),
1993 and 1999**

	Q1 (poorest)	Q2	Q3	Q4	Q5
1993					
All-Age (7-9)	44.6	32.9	26.6	19.7	16.0
New Secondary	33.8	37.1	39.0	24.3	16.8
Comprehensive	3.9	6.3	4.6	3.0	2.5
Secondary High	10.2	16.1	23.4	41.4	47.1
Technical High	3.2	3.5	3.9	4.0	3.4
Voc/Agricultural	3.2	2.1	0.7	2.5	4.2
Post Secondary	1.9	2.1	2.0	4.0	10.1
Total	100	100	100	100	100
1999					
All-Age	34.4	21.1	12.9	7.9	3.5
Primary & Junior High	6.9	8.6	5.3	11.8	4.2
New Secondary	11.5	8.6	8.8	5.1	0.7
Comprehensive	26.0	39.5	30.0	25.3	16.9
Secondary High	16.0	17.1	30.0	35.4	47.9
Technical High	3.1	2.6	5.9	5.6	4.2
Vocational / Agricultural	0.8	0.7	2.9	2.3	2.1
Adult/Night	0.8	0.7	1.8	1.1	1.4
Tertiary	0.8	1.3	2.4	5.6	19.0
Total	100	100	100	100	100

Source: Data for 1993 were taken from Reform of Secondary Education Project Staff Appraisal Report, No. 11534-JM, Annex 1, Table 8; data for 1999 were taken from PIOJ, 2000, *Jamaica Survey of Living Conditions 1999*, Table E-4.

Less clear in terms of accomplishments are school attendance, internal efficiency (repetition and retention), external efficiency (labor market outcomes), and academic achievement. Although the project did not state improving these indicators as its objectives, it aimed at improving achievement as a key outcome measure. Since higher attendance and better efficiency directly impact on achievement, these indicators should be considered as well.

School attendance (or absenteeism) has remained a problem. In 1999-2000, the average daily attendance in Grades 7-9 was 68 percent in All-Age Schools, 73 percent in P&JH, and 72 percent in ROSE Project schools (MOEYC statistics).

According to the JSLC of 1998, 60 percent of students were absent between 2-5 days in a one-month period, while 19 percent were absent between 6-10 days and 7 percent for 10-20 day (Table 2a). Absenteeism varied among Parishes. Nearly 40 percent of the students in Portland, Trelawny and St. James did not attend schools for more than 5 days of the 20 day reference period.

The reasons for non-attendance varied among consumption quintiles (Table 2b). "Money problems" were cited as the main reason by 62 to 70 percent of students in the lowest two quintiles. For the top quintile, illness was cited as the main reason for missing school. The JSLC's data on household expenditure on education confirms that poor households bear a heavier burden on education of their children than richer households. However, the JSLC questionnaire did not pinpoint more precisely in what way money problems had affected students adversely, for example, whether it was the lack of money for lunch and snacks or for extra tutoring needed to pass examination. The JSLC also did not contain questions on whether non-attendance is due to students' falling too behind to be bothered with school, or being discouraged by the lack of employment prospects. To facilitate policy intervention, it would be helpful if future surveys include questions to disentangle whether non-attendance is due to demand side (academic failure, social or physiological reasons such as pregnancy) or supply side (availability of places in Grades 10 to 11 for students to continue) problems.

Table 2a: Percentage of School Absenteeism by Parish and Period of Absence, 1998					
PARISH	1 DAY	2-5 DAYS	6-10 DAYS	11-20 DAYS	TOTAL
Kingston (N=36)	27.8	55.5	11.1	5.6	100
St. Andrew (N=63)	17.4	66.7	12.7	3.2	100
St. Thomas (N=87)	12.6	66.7	13.8	6.9	100
Portland (N=87)	6.9	54.0	25.3	13.8	100
St. Mary (N=149)	22.8	60.4	11.4	5.4	100
St. Anne (N=91)	16.5	52.7	23.1	7.7	100
Trelawny (N=100)	9.0	52.0	27.0	12.0	100
St. James (N=64)	9.4	50.0	35.9	4.7	100
Hanover (N=96)	9.4	72.9	11.5	6.2	100
Westmoreland (N=56)	10.7	73.2	7.1	8.9	100
St. Elizabeth (N=122)	18.9	58.2	14.7	8.2	100
Manchester (N=155)	5.8	67.7	20.0	6.5	100
Clarendon (N=189)	6.4	60.3	23.8	9.5	100
St. Catherine (N=192)	13.0	53.1	30.2	3.7	100
Jamaica (N=1,487)	13.3	60.3	19.1	7.3	100

Source: PIOJ, 1999, *Jamaica Survey of Living Conditions 1998*. p. 178.

Table 2b: Reasons for Absence from School by Quintile, 1998 (Percentage) (N=1,487)									
Quintiles	Illness	Truancy	Working, market or Needed at home	Transport problems	School closed	Uniform unavailable	Rain	Money Problems	Others
Q1	13	1	5	1	1	2	4	70	3
Q2	20	1	5	1	2	1	4	62	5
Q3	25	3	6	0	3	2	1	45	14
Q4	28	2	8	1	1	3	3	42	14
Q5	41	1	4	3	6	2	0	21	22

Source: PIOJ, *Jamaica Survey of Living Conditions 1998*. p. 47.

Internal efficiency. The school system in Jamaica traditionally has low repetition rates, largely due to the practice of moving students through the system in order to make space for incoming cohorts. This practice is changing with the implementation of the national assessment program and the institution of testing for achievement at Grade 4 to determine whether students should repeat. The new policy was introduced towards the end of the project and hence, does not affect the repetition rates of lower secondary education. However, the fact that students from lower quintiles tend not to remain in school points to retention as a serious issue in secondary education. At-risk-youths stand out as the most serious challenge to secondary education.

External efficiency. Economic stagnation reduces the employment prospects of graduates from secondary schools. While improving the employment prospects does not rest on the education sector alone, a more skilled and flexible labor force capable of adapting to changing world market and technological conditions could mitigate the adverse effects of the economic downturn. The fact that reading below grade level even at the end of junior secondary education has remained widespread does not help young people break the cycle of poverty. (See the percentage correct in Mathematics and Language Arts JHSC Examination in Table 3 for a quantitative indication of the level of mastery of cognitive skills).

Academic achievement. Formative evaluation studies were undertaken by MOEYC to compare students from ROSE and non-ROSE schools by a number of criteria. These studies found discernible differences the project has made in terms of improving student self-image, better test scores, better opportunity for placement, and higher success rates in the next level of education. However, the samples of these formative evaluation studies were relatively small, and the reliability and validity of the instruments and the vigor of the analysis had yet to be established.

To establish a trend line of student achievement, test scores of the Junior High School Certificate (JHSC) Examination at the end of Grade 9 from 1995 to 2000 were used. (See Table 3). Since all ROSE students participated in this examination, the JHSC data captured the entire ROSE student population. Moreover, the validity and reliability of the JHSC examination had been well established; hence, it is a good measure of achievement.

The statistics on the total number of schools and Grade 9 students in secondary education in Jamaica and the number of schools and Grade 9 students participating in the JHSC examination are indicative of the participation rates in the JHSC examination (Table 3). The percentage correct statistics provide an approximation of the extent to which students master the curriculum. Nonetheless, percentage correct does not reflect whether the level of difficulty in the test was comparable from year to year. To measure progress over time, the mean raw scores (not the percent correct) and the standard deviations have to be equated with those of a single year. Since the 1995 and 1996 tests were still at the pilot stage, these scores were not equated. The test of 1998 was used for calibration with those in 1997, 1999, and 2000.

The positive points revealed by the trend are as follows:

- In countries that have introduced reform, as in Jamaica, student performance does not change overnight when a school begins implementing innovations. As the reform scales up and as new schools participate in the program and the end-of-cycle examination process, their inclusion is likely to affect the average student performance. Similarly, as the number of students participating in a test increases, the range of test scores tend to widen and the average scores tend to decrease. In the JHSC examination, however, the percentage correct had not declined, in spite of the overall 69 percent increase in the number of students taking the test between

1997 and 2000. In fact, P&JH made small but noticeable gains in percentage correct in Mathematics, albeit an increase in participation by 84 percent during the same period.

- The equated scores confirmed that the decline in percentage correct in 1999 was due to the increasing difficulty of the tests rather than poorer performance of the candidates. The stability of the equated scores over time, when taken into account the increase in participation rates, essentially conveys a positive message.

Nonetheless, the data also revealed a number of weaknesses:

- The difference in achievement was large across and within different school types. Large standard deviation within each school type indicated high variability in learning outcomes. Reducing the variability in achievement has remained a major challenge to education.
- The low percentage correct in Mathematics and Language Arts suggests that on average, students have not fully mastered the most basic of cognitive skills. Even in Traditional High Schools, which are the most academically oriented, complete mastery by all students has yet to be achieved.
- Students were much weaker in Mathematics than in Language Arts. Given that reading literacy has persistently been a serious issue even in secondary education, the weakness in mathematics must be considered as equally serious as a challenge to education, as it has implications for building the capacity for science and technology in the country.

The key question for the project is: Has ROSE inputs made any difference in student performance if prior learning was controlled for? The loan agreement stipulated that the single output indicator to judge the success of the reform should be a difference of at least 25 percent between the pre-test and post-test scores within the classroom and positive and statistically significant post-test scores for Project schools in relation to comparison schools. However, in light of the lack of synchronization of delivery of ROSE inputs, the countrywide expansion of the ROSE project (leaving virtually no schools untouched by the ROSE project) and the upgrading in quality of available national examinations (coupled with the absence of validated classroom “pre-tests” and “post-tests”), the method proposed in the loan agreement was judged to be inappropriate to evaluate the impact of ROSE. Instead, another methodology was used in a study undertaken by the University of Cambridge Local Examinations Syndicates (UCLES) of the United Kingdom (Bramley, 2000).

This method used the scores of JHSC examination in Mathematics and Language Arts at the end of Grade 9 as the outcome measure and the test scores of this cohort which took the Grade Six Achievement Test (GSAT) three years ago to control for their prior achievement, in order to assess the effects of factors associated with ROSE implementation. The sample comprised several thousand students who took the 1996 GSAT in 1996 and the JHSC in 1999. The analysis used the hierarchical linear modeling to examine whether teacher in-service training and teacher attitude (which were some of the key ROSE interventions) made a difference on learning outcomes in Mathematics and Language Arts. Data on infrastructure, textbook availability, and principals attitude were collected but were not used because delivery of these inputs was not synchronized with teacher training and the record was incomplete.

The analysis concluded that once prior achievement was controlled for, teacher training and teacher attitude had no statistically significant impact on student performance. This finding did not

invalidate the ROSE curriculum or methodology, particularly given the lack of synchronization of delivery of other ROSE inputs such as textbooks and civil works, and the movement of teachers to other schools or other grades after training. However, the findings did raise serious questions on (a) how to improve the effectiveness of in-service training; (b) whether there should be more emphasis on subject matter content; and (c) whether the training should be school-based to enable addressing specific issues in the classroom and of the students, thus ensuring that the reform take root in the school.

In conclusion, these analyses showed that raising the overall academic achievement and reducing the variability of learning outcomes remain the most important challenge for ROSE II.

**Table 3: Test Scores of Mathematics and Language Arts in JHSC Examination,
1995 - 2000**

School Type	1995	1996	1997	1998	1999	2000
Number of secondary schools in Jamaica						
All schools	599	596	596	598	597	595
P&JH	40	54	54	54	90	91
Comprehen.	75	75	75	75	75	75
Traditional	59	59	59	59	59	59
Number of schools participating in JHSC						
All schools	11	41	69	107	132	134
P&JH	7	20	25	39	55	56
Comprehen.	2	14	29	41	49	49
Traditional	2	7	15	27	28	29
Number of Grade 9 students in Jamaica						
All schools	47,333	48,790	47,867	51,222	51,116	50,938
P&JH	1,888	2,301	2,846	2,912	7,410	6,209
Comprehen.	13,600	16,716	17,435	17,268	17,574	35,366
Traditional	13,302	14,000	14,687	14,773	14,922	
Number of Grade 9 students taking JHSC						
All schools	1,542	5,979	12,491	20,170	20,903	21,081
P&JH	395	978	1,391	2,111	2,535	2,556
Comprehen.	694	3,530	7,511	10,841	11,387	11,515
Traditional	453	1,471	3,589	7,218	6,981	7,010
Mathematics Percent Correct						
All schools	41 (16.9)	44 (18.8)	47 (17.6)	51 (18.3)	44 (15.3)	53 (14.5)
P&JH	31 (9.8)	33 (12.5)	37 (13.6)	40 (16.8)	37 (13.7)	45 (13.8)
Comprehen.	34 (11.8)	39 (15.4)	43 (12.6)	45 (15.1)	40 (13.6)	49 (14.1)
Traditional	59 (11.2)	64 (14.9)	62 (13.3)	62 (9.1)	53 (13.8)	61 (11.1)
Language Art Percent Correct						
All schools	50 (19.1)	50 (19.0)	52 (19.0)	66 (22.3)	59 (19.6)	63 (20.0)
P&JH	36 (10.9)	37 (13.6)	39 (14.9)	51 (21.3)	46 (18.0)	52 (18.8)
Comprehen.	40 (12.3)	46 (16.4)	47 (17.1)	53 (16.8)	54 (18.8)	58 (18.5)
Traditional	71 (7.6)	69 (13.5)	68 (12.5)	80 (15.5)	72 (14.5)	75 (14.6)
Mathematics Equated Mean Scores						
All schools	N/A	N/A	54.5 (8.4)	55.1 (9.3)	53.9 (7.2)	51.1 (6.9)
P&JH	N/A	N/A	49.4 (6.8)	49.7 (8.07)	50.7 (6.5)	49.4 (6.7)
Comprehen.	N/A	N/A	52.2 (7.5)	52.1 (8.20)	52.0 (6.6)	51.6 (6.7)
Traditional	N/A	N/A	61.3 (6.5)	60.1 (7.90)	58.0 (6.6)	57.0 (5.2)
Language Arts Equated Mean Scores						
All schools	N/A	N/A	63.8 (8.8)	64.7(10.4)	63.8 (10.2)	64.6 (10.6)
P&JH	N/A	N/A	57.5 (6.8)	55.3(10.9)	57.5 (9.0)	58.4 (9.6)
Comprehen.	N/A	N/A	61.4 (7.9)	61.6(10.7)	61.3 (9.6)	61.9 (10.1)
Traditional	N/A	N/A	71.1 (6.2)	72.2 (9.7)	70.2 (9.9)	71.2 (8.4)

Source: Student Assessment Unit, MOEC

Note: Standard deviation is reported in the parenthesis.

(b) Capacity Strengthening in Management and Evaluation

The Project has adopted a management structure by forgoing the Project Implementation Unit approach used in earlier projects and by fully integrating the project activities with regular ministry activities to ensure ownership and sustainability. ROSE is guided by a Reform Management Committee

(RMC), chaired by the Permanent Secretary, with the ROSE National Coordinator as the deputy, and with participation of 5 divisional directors, 1 regional director, 10 officers from various units, 6 members of the project secretariat, and one representative from the Joint Board of Teacher Education (JBTE). The RMC collectively planned, implemented, and monitored the reform. The reform has become an integral part of daily education activities.

On the implementation front, valuable lessons have been learned with respect to project record keeping and accounting, contract writing and procurement. Future operations should pay close attention to these practices and to improve on forward planning, financial projection, and information flow within the Secretariat and with the rest of the Ministry.

The Student Assessment Unit has vastly improved its capacity to develop and administer the Junior High School Certificate Examination (JHSC). This examination has performed both placement and certification purposes and can be used, in combination of the Grade Six Achievement Test, to monitor student learning outcomes.

The Evaluation Unit has also generated a lot of studies to monitor the impact of the ROSE Project. However, the unit is seriously under staffed for the kind of work it does (which is not limited to the ROSE Project). Hence, there is a trade off between quantity and quality because of the constraints of time, resources and technical skills. How better to manage evaluation and integrate it with student assessment poses a challenge for the follow up operation.

(c) Capacity Strengthening in Social Policy Analysis

The objectives of building sound analytic capacity in the social sectors were important to the poverty reduction agenda of the country, which is, in turn, key in the country assistance strategy. The objectives remained valid through the life of the project and have achieved to a considerable extent. The project design called for interventions in four parts of the nascent policy analysis network:

(i) The project was to establish a **Social Policy Analysis Unit in the PIOJ** to build institutional linkages, disseminate information, coordinate training, carry out in-house analysis and contract additional research under a pipeline of funds dedicated to the purpose.

(ii) the **line ministries** of Health, of Education, and of Labor, Welfare and Sport were to participate in the definition of a program of social policy research, benefit from policy maker and staff seminars to upgrade their respective policy analysis skills and the Ministry of Labor, Social Security and Sports was also to benefit from a small amount of computer equipment and technical assistance.

(iii) at the **University of the West Indies**, faculty-upgrading courses (also open to senior staff from the line ministries) were to be offered in policy analysis methods, curriculum were to be upgraded in similar graduate courses to be taught permanently, fellowships in policy analysis were to be offered, and a program of social policy research was to be elaborated jointly between government and the university and carried out largely by the university, and a data bank was to be established at the Institute for Social and Economic Research (ISER) which was renamed during the life of the project and is now called the Sir Arthur Lewis Institute of Social and Economic Studies (SALISES).

(iv) support for the **Statistical Institute of Jamaica (STATIN)** to conduct annual Jamaica Survey of Living Conditions (JSLC) was to be provided.

The most notable achievements are the institutionalizing of the annual JSLC as the basis of social monitoring and poverty assessment in the country; improvements in the quality and timeliness of analysis of the JSLC; institutionalization of a social policy analysis unit, the PDU in the PIOJ; and establishment of a data bank at the University of the West Indies (UWI). Training in quantitative analysis has strengthened the quality of teaching in the UWI and also built the capacity of analysts in a number of line ministries. The research agenda fully utilized the pool of research talent of the country and reinforced the capacity built by training.

The implementation working paper contains many more monitoring indicators than those used in the staff appraisal report. Quarterly progress reports were done regularly and usually reported activities that underlay these indicators. But in most cases there were no explicit targets set in the implementation working paper, and thus no explicit judgment contained in the monitoring as to whether the progress was sufficient or not.

Most elements of the project led to moderate improvements in either the quantity or the quality of policy analysis, however, most improvements fell somewhat short of the generally poorly specified standards hoped for at the time of project design. Whether the failure is in the realism of expectation or the performance of the project is not wholly clear. It is probably a mixture of both.

The project has helped to raise the level of debate around poverty and other social issues and has improved the quality of social analysis across the social sectors. The project has also helped to increase the emphasis on data driven policy analysis. Discussions of poverty in Jamaica now rely on data from the JSLC. For example, a working group, comprised of the Cabinet Secretariat, line ministries and the PIOJ was established to look at the implications of the JSLC and to develop a set of policy recommendations based on the findings so that these could inform policy decisions. In addition, the findings of the JSLC are presented at Cabinet retreats.

The elements meant to involve the three line ministries were too small have a large impact on them, though the ministries report that what was delivered was generally useful. Ministry staff that participated in the advanced upgrading courses are, for the most part, still working in their respective ministries. The Ministry of Education would probably benefit most from the training and the Ministry of Health from the research agenda. The Ministry of Labor, Welfare and Sport found the small amount equipment purchased for them to be their biggest benefit from the project. One indication of the benefits of the project can be inferred from the fact that a significant number of line ministry staff who participated in the senior level training program and still working in their ministries and have expressed interest in taking a more advanced series of courses.

The project has helped to raise the standard of teaching and research at the University by raising expectations regarding access to data, the level of analysis and the need for policy relevance of research. It made data more available for research and teaching. Data analysis and research is now a more important element in teaching both at the graduate and undergraduate levels. The project also had the important though general and dispersed impact of improving the training of a couple of cohorts of graduate students. These impacts are hard to quantify and even harder to separate from a general trend due to improved computerization through the university and government. Nonetheless it is clear that project supported courses, the time series data provided by the Survey of Living Conditions and the Data Bank have been key catalysts for this trend.

One goal of the project was to facilitate a network of analysts, so that if there was not a critical mass in any one place, at least across the network there would be enough support to provide encouragement

and troubleshooting for problems encountered doing analytic work. The ministries were not very successfully integrated into this network, possibly because their involvement was relatively small. This in turn means that the general network and its most direct links into policymaking did not gel as intended. However, the project has helped to foster greater interaction between academic staff at the UWI and the PIOJ and sector ministries. The involvement and cooperation between PIOJ, STATIN and UWI was full-fledged and successful. This was facilitated by the SPA Coordinating Committee and now continues through the on-going SLC Steering Committee. In general, the policy analysis network as a whole benefited from the linkages of these institutions.

One objective of the project was to ensure that data from a variety of sources, including operational data from the ministries, financial data and economic data, be integrated into research. This has not happened. In addition, the project may have inadvertently created an artificial divide between social and economic analysis.

4.2 Outputs by components:

ROSE: Implementation was satisfactory overall. However, about 10 percent of the US\$32 million loan could not be disbursed mainly due to non-completion of all civil works contracts by some contractors, non-implementation of technical assistance in reading, and partial delivery of furniture.

Component 1: Secondary Reform Support:

The ROSE Project has exceeded many of the physical targets, although it lagged behind in civil works and did not implement reading improvement. Annex 1 provides a synopsis of the extent to which physical targets have been achieved. The following paragraphs take account of the process of implementation.

(a) A Common Curriculum for Grades 7 to 9

Coverage. The project supported the introduction of a common core curriculum (Language arts, mathematics, science, social studies and resource and technology and career education) which is learner-centered, which emphasizes cooperative learning, and which combines a basic skills focus with problem solving activities. The target was to implement this curriculum in 72 All-Age and New Secondary schools, encompassing 28,000 students. These physical targets have been exceeded.

Starting with 11 pilot schools in 1991 before the project began, 32 came on board in 1993, 28 in 1994, 36 in 1995, and 22 in 1996, totaling 129 schools shortly after the mid-term of the project. Among the schools that participated in the national ROSE Program, 90 All-Age schools were upgraded to Primary and Junior High schools (P&JH) and 75 New Secondary schools were upgraded to Comprehensive schools. In 1999, all secondary and comprehensive high schools nationwide were mandated to teach the ROSE curriculum, benefiting a total of 226 schools nationwide and approximately 118,300 students in Grades 7 – 9. The remaining 356 All-Age Schools (with 24,000 students because they were small schools) were provided the curriculum and sensitization training in January, 2000, although textbooks have yet to be provided to all the schools. Curriculum and teachers' guides for six additional subjects - Physical Education, Religious Education, Music, Drama, Spanish and Visual Arts have been piloted, revised, printed and distributed.

Supporting materials, local consultants' services and positions. To facilitate the teaching of the

ROSE curriculum, teachers' guides and manuals, and handbooks for school administrators were produced. Local consultants were contracted to develop continuous daily assessment, to conduct curriculum research to support curriculum revision, and to develop remaining additional subject areas. Incremental positions for more teachers and guidance counselors were created. Technical assistance from overseas on continuous assessment was also contracted. The physical targets were met.

(b) Pre-service and in-service training of teachers and school administrators

To assure implementation of the new curriculum, in-service training of teachers, school administrators and regional education officers were undertaken. The target was to train 6,800 teachers, 60 education officers, 550 administrators, 2,200 school board members, 380 teachers trainers, and 2,500 teacher trainees. The JBTE was responsible for providing in-service training through summer workshops, school visits and development of distance education materials. The MOEC was responsible for training and orientation activities of education officers, school administrators, school board members, teacher trainers at tertiary education and students in teachers colleges. By the end of the JBTE contract, 5,014 teachers were trained in ROSE methodology and an additional 2,688 attended workshops. In addition, 60 regional education officers, 90 regional office staff, over 600 administrators, nearly 1,500 school board members, 40 teachers of independent schools, 380 teacher trainers, and 2,000 pre-service trainees were trained.

The JBTE certifies pre-service teacher education programs in Jamaica. Putting it in charge of the in-service training program ensured the linkage between in-service and pre-service training through the adoption of ROSE methodology by teachers colleges in their pre-service teacher education programs. This provided consistency in the approach to teaching and learning. The JBTE regional training teams are based in the TCs and, besides running workshops, provided assistance to teachers and principals through school visits. Their regular interaction with teaching staff and students in teachers' colleges has facilitated integration of pre-service and in-service training. ROSE in-service trainers were eventually absorbed into TCs, thereby allowing for institutionalization.

However, implementation of in-service training was not entirely smooth. First of all, the number of teachers who were willing to forego their summer vacation to attend workshops fell short of the target. The JBTE had to adjust its training program to winter, thereby cutting short the duration. Second, teachers who were trained did not always assign to teach Grades 7 to 9, therefore, their impact was not maximized. Third, training emphasized methodology without simultaneously addressing the needs for strengthening subject matter knowledge. The evaluation findings of no statistically significant positive impact of teacher training and attitude on student achievement once prior learning was controlled for also raised the questions as to whether more effective training should be school-based and what other measures needed to be implemented simultaneously in order to achieve the desired outcomes.

Finally, the development of distance learning materials was not smooth. The contract was extended twice before all the modules were delivered by 2000. Therefore, there is a gap in continuous training which the modules are designed for after the end of the workshops. Furthermore, the quality and relevance of the modules have yet to be tested through implementation.

(c) Production and distribution of instructional materials

The Foundation books that were developed under the DFID (formerly ODA) financed Secondary School Textbook Project (SSTP) are of high quality. The distribution of foundation textbooks of Mathematics, Language Arts, Science and Social Studies for Grade 7 began in 1995 (Table 4). The delivery of the foundation books for Grade 8 began in the following years, but the entire series for all 4

subjects was available only in 1998. Of all subjects, only social studies foundation books were delivered in consecutive years to enable students who went through three years of junior secondary education from 1995 to 1998 to have access to books. Although the targets have been met by 1999, the interruption in delivery made it difficult to fully evaluate the impact of ROSE on student learning at the end of the project. It should also be noted that foundation books have never been planned for Resource and Technology. This has remained a concern among teachers and students.

On the issue of textbook rental, while the scheme has been up and running, the take-up rates are only about 50 percent of the foundation books of core subjects. Parents who are not concerned with their children's study did not give them money for renting the books, nor did they apply for assistance which is available. Where books are available, teachers do not necessarily know how to make the best use of them in teaching. Given the reluctance of some parents to rent books for their children, changes must be made in the immediate future to ensure that each child has a foundation book in the core subjects. The options included reducing rental fees, giving foundation books to children for free while maintaining rental for normative and enrichment books, and asking parents for a deposit at the beginning of the school year and returning the deposit when the books are returned at the end of the year.

Table 4: Schedule of Foundation Books Delivered to Schools by Subject, 1995-1998

Delivered	<u>Mathematics</u>		<u>Language Arts (Lev. 1)</u>		<u>Science</u>		<u>Social Studies</u>	
Copies for	Teachers	Students	Teachers	Students	Teachers	Students	Teachers	Students
Grade 7	Since 9/95	Since 9/95	Since 1/95	Since 1/95	Since 9/95	Since 9/95	Since 1/95	Since 1/95
Grade 8	Since 9/96	Since 9/96	Since 2/97	Since 2/97	5/98	5/98	Since 9/96	Since 9/96
Grade 9	2/98	2/98	9/98	9/98	6/98	6/98	Since 9/97	Since 9/97

Source: MOEYC.

(d) Provision of educational support materials

Forty-eight (48) Primary and Junior High Project schools have been provided with basic educational support materials and equipment to support the core subjects. However, there are some schools that have not yet received all materials and equipment allotted to them due to a space problem which is as a result of the delays being experienced in the civil works program. Thirty-seven Comprehensive High schools were provided with J\$8.4m to assist in purchasing basic educational support materials and equipment.

(e) Infrastructure improvement for schools adopting the common curriculum

Civil works. The target was to support (i) construction of 3 new JHS; (ii) refurbishing and extension of 27 All-Age schools; (iii) refurbishing of 10 New Secondary schools and 20 rural All-Age schools.

The civil works program was changed during the life of the project. In 1997, the loan agreement was amended to construct only one new school because of a serious cost under-estimation at the time of project preparation and cost escalation due to delays. The unallocated amount of \$2.6 million was reallocated to civil works, making the total allocation for civil works to be \$14.6 million. Expenditure on

civil works funded by the Bank reached \$16.98 million by April 30, 2001. Due to cancellation of non-performing contracts and re-starting of new ones, an estimated \$2 million are needed to finish the program.

Construction of the only new school was close to 100 percent complete. Of the 27 schools targeted for refurbishment and extension, a decision was taken to reduce the number to 25 only. Six of the remaining 8 schools are at various stages of completion. Of the 30 schools for refurbished only, a decision was taken to refurbish only 27, and the works were completed.

There are a number of strengths in the Ministry's management of the civil works program, including the reporting and monitoring system which goes to PIOJ, PAMCO and the Bank; timely honoring of payment certificates to contractors; improved transparency in the contracting processes; and allocation of work amongst consultants through zoning to manageable amounts.

The slowness in implementing this sub-component is due to many reasons. First, the schedule of the civil works component was unrealistic, without giving sufficient lead time for pre-contract activities. Second, during the first three years of the life of the project, a building officer with dedicated responsibility to ROSE alone was not appointed. Third, the Bank introduced new procurement documents. Most of the procurement and construction activities were undertaken in the last four years of the project. Fourth, the financial crisis impacted many contractors adversely. Non-performance of contractors had led to the termination of 17 percent of the contracts.

Less than satisfactory quality and high cost were the other major issues of civil works. The reasons for the high costs included: (i) insufficient internal control of design at the early stage, resulting in correction of architectural design.; (ii) consulting firms contract being based on 14 percent of the contract sum of the contractor, which could provide some basis for cost escalation and lax supervision; (iii) the low provision for an advance payment of 10 percent in the contractor's contract which did not provide for sufficient capital for starting the work; and (iv) exchange rate differences.

The recommendations for the future are as follows:

- (i) Use a more stringent selection process of contractors (strengthen evaluation teams) and raising the advance payment of future contracts to 20 percent of the contract amount;
- (ii) hold pre-tender site meetings with bidders: to give more realistic time estimates for works and to require bidders to provide method statement and work plan;
- (iii) introduce additional internal control at the design stage, adjust payment schedule with a larger percentage at the post contract stage, and withhold payment to alteration of designs without prior MOEYC approval;
- (iv) set a time limit for termination of contracts if contractors become non-performing;
- (v) change the price adjustment clause in future contracts if contract sums can be agreed upon in US dollars but made payable in Jamaican dollars at the prevailing exchange rate;
- (vi) greater involvement of principals and the community from the planning stage: principals are to sign-off on plans, and reduce the time between planning and implementation to avoid demand change (i.e., increased enrollment);
- (vii) focus more on safety to children during construction; and
- (viii) enforce high standards in inspection and certification.

Furniture. Provision is made for schools benefiting from extension and refurbishment to receive furniture. By the end of the project, due to delays in civil works, 10 of the project schools did not receive

furniture.

(f) Strategies for upper secondary education

The curriculum for upper secondary education (Grades 10 and 11) is very much influenced by the regional Caribbean Examination Council (CXC) Examination which certifies the completion of upper secondary education. There are mixed views about whether the ROSE methodology is conducive to high performance on the CXC examination. MOEC has developed a two-track upper secondary program and piloted it in 1997. This entails a regular two-year track (Route I) to cover the curriculum of Grades 10 and 11, and a three-year track for slow learners (Route II). Evaluation has shown positive impact on the slow learning. However, this is a very costly approach to provide what is essentially remedial education in Grades 10 and 11. A more cost-effective approach is to have compensatory education in primary education and lower secondary education than in upper secondary education. The two-track approach is not advisable, and unlikely to be mainstreamed because of the cost implications.

Component 2: Evaluation and Management Strengthening

(a) Rationalizing the examination system

All activities under this subcomponent have been completed, with the except of the rationalization of the examination system (by eliminating 16 JSC tests, and 3 SSC tests, and transferring to HEART 13 JSC and 16 SSC tests). 10 JSC score subjects remained, as there is still no alternative for replacing them. Only 2 SSC tests have been eliminated, but 24 remain. The reason for not-transferring the tests to HEART/NTA is because secondary schools are still not equipped to access their examination.

One of the most successful component is the introduction and improvement of the Junior High School Certificate Examination (JHSC) which replaced the Grade Nine Achievement Test. The JHSC Examination is based on the ROSE curriculum and serves placement, certification and monitoring purposes. It was piloted in 1996, with growing number of candidates (12,565 in 1997, 18,663 in 1998, 20,901 in 1999, and 21,081 in 2000). About 50 percent of P&JH students were placed in upper secondary classes. Teachers were trained to set questions. Items banks were developed.

(b) Establishing a Secondary Reform Management Team

See the section (b) under 4.1.

(c) Public awareness campaign

The public awareness campaign has been successfully completed. Through a variety of media (radio, video, expositions, newsletters, news sheets, news release and features, internet access, and stakeholder workshops), the public had been made fully aware of the intent and scope of the reform. As community embraces the reform, it is likely to be sustained.

(d) ROSE Evaluation

Over the life of the project, formative and summative evaluations were carried out. These were mainly quantitative in design. Evaluation includes the following: classroom observations; surveys of principals view of ROSE; surveys of teachers' view of ROSE, Grade 7-8 Pre-test and Post-test measuring achievement; Grade 7-8 Post-test measuring achievements; tracer studies of ROSE graduates from P&HJ

schools, schools' profiles and monitoring of ROSE schools. An impact evaluation, funded by GOJ, and carried out by the Program Evaluation Unit was completed in December 2000.

The Impact Evaluation consist of the following components: (i) analysis of performance data in the Junior High Schools Certificate Examination (JHSC), in primary & junior high, comprehensive high and traditional high schools from 1995-2000; (ii) interviews of 28 principals/vice-principals and 84 teachers (a total of 112 persons) in 28 ROSE schools - primary & junior high, comprehensive and traditional high on various aspects of the program; (iii) classroom observation and analysis by subject specialists, of 300 lessons in the five core subjects in ROSE schools and non-ROSE schools; (iv) tracing of graduates of the ROSE program including an analysis of their perceptions of school under the ROSE program; and (v) analysis of CXC results since ROSE, 1998-2000 in 68 comprehensive and traditional high schools.

The Evaluation Unit's findings are as follows: (i) The performance data for primary & junior high, comprehensive high and traditional high schools, in the JHSCE from 1995-2000, revealed a rising trend in performance from year to year. (ii) The interviews revealed enthusiasm and positive attitudes towards the program, on the part of principals and teachers. (iii) The classroom observation revealed widespread use of the curriculum. The implementation of the methodology was greater in some subject areas than in others. (iv) The tracer study of graduates of the program showed that a higher percentage of ROSE students were continuing their education than non-ROSE students.

While many studies have been carried out, some aspects of evaluation design, instrument and data analysis remained technically weak.

(e) Support of preparation of Phase II of ROSE

The profile of ROSE II was submitted to the Cabinet, resulting in the GOJ's request for Bank assistance in 2000. The Bank was pleased to continue the partnership to bring the reform to fruition. An end-of-the project workshop was organized to obtain feedback on ROSE and recommendations for ROSE II with stakeholders. Sentiments from the workshop attested that ROSE has widespread support within the education system and is providing the right direction for teaching and learning in Jamaica. However, in preparation for the next phase a number of recommendations born out of the implementation process of phase one were brought in focus: (i) other levels of the education system need to be aligned to ROSE philosophy and methodology; (ii) ROSE practices need to be fully embraced and tailored to meet school-identified needs; (iii) continuation, expansion and strengthening of the Ministry's role in providing technical support in response to school-based demands; and (iv) the need for greater accountability at all levels of the education system. These issues, it was felt, are key to any success of ROSE II

Summary of ROSE achievements and issues. On the whole, implementation was satisfactory. The ROSE components that have met international standards (based on assessment by Bank staff and consultants) included the following:

- progressive curriculum for Grades 7 to 9 which is relevant to the nation and culture;
- foundation textbooks in core subjects for students who read below their grade level; and
- quality of Junior High School Certificate Examination (JHSC) at Grade 9.

However, implementation has not been smooth. Delivery of complementary inputs was not synchronized. In-service training proceeded first together with delivery of curriculum guides, but delivery of textbooks was a few years later and civil works came even later and were not completed by project completion. So trained teachers did not have textbooks and laboratories to try out their activities approach

in the first few years. The project also has not implemented reading improvement, which has been deemed to be critical in raising achievement at all levels.

Seven areas of improvement have been identified for ROSE II: (i) high standards for all students to ensure that students from all backgrounds and learning styles have the opportunity to acquire the basic skills, knowledge, and attitudes to become productive citizens; (ii) continued improvement of reading and promotion of student self-learning; (iii) improving system accountability; (iv) emphasis on school-based development; (v) connecting schools to the support they need; (vi) empowering schools with the capacity and resources to become attractive to students at-risk; (vii) making schools into a quality learning environment.

To fully and deeply integrate ROSE into school practice and to meet needs identified by the schools themselves will mean that the Ministry will need to take on a significantly different role—one of technical advisor and service provider. This shift in Ministry responsibility from an institution that focuses on the development, acquisition, and provision of inputs to schools to one that responds to school-based demands for technical assistance and continuous support is fully consistent with the ROSE philosophy and has clearly already begun. The strengthening of this new role will be key to the successful implementation of ROSE II.

Component 3: Social Policy Analysis Component

SPA: Implementation was satisfactory overall. About 4 percent of the grant of NLG 4,923,199 was not disbursed mainly due to return of some ineligible expenditures.

(a) Establishment of a Social Policy Analysis Unit.

A policy analysis unit, the Policy Development Unit (PDU), was established and remains operational for the whole life of the project. It carried out all of its mandates. The in-house analysis done was a significant improvement in quantity, quality and timeliness over what had been done previously in PIOJ. The abstracts for the Jamaica Survey of Living Conditions (JSLC) began to include time series, graphs, standard errors, and tests for significant differences for the most important variables, as well as documentation of the survey method adequate to guide users of the unit record data; the unit was substantially involved in the creation of a poverty map which is used to target the activities of the Poverty Eradication Program and the Social Investment Fund and has developed a methodology to consistently track poverty over time. The in-house analysis, however, has usually stopped at the competent use of descriptive statistics. Little causal analysis or simulation of alternative policies was conducted and even the descriptive analyses often did not include statistical tests of significance for differences or trends portrayed. Forays in this direction were being taken by the end of the project, but such tests were not yet fully routine. Similarly, the unit was meant to sit at the heart of a network of social policy analysis. It gained recognition as an actor in analysis, particularly of the Survey of Living Conditions (JSLC) and poverty analysis and was often approached by other government agencies, international development agencies and occasionally non-governmental agencies and commerce for analysis or information from the JSLC. The PDU has also been approached by line Ministries for assistance in the design of studies, including a request for assistance in the design of study to profile Food Stamp recipients (Ministry of Labor, Welfare and Sports) and a study of extra-lessons (Ministry of Education and Culture). The PDU did not, however, actively pursue its role of clearing house and repository for policy analyses across the social sectors (irrespective of source of data, sector, or source of funds) as originally envisioned. A SPA steering committee comprised of representatives from the PDU and the line ministries was constituted at the time of project effectiveness and met monthly during the life of the project. The project was to establish a

Technical Advisory Committee to assess the reliability and validity of JSLC indicators on an ongoing basis. This did not happen.

(b) Linkages with Line Ministries.

The line ministries of Health, of Education, and of Labor and Social Security were to participate in the definition of a program of social policy research, benefit from policy maker and staff seminars to upgrade their respective policy analysis skills and the Ministry of Labor and Social Security was also to benefit from a small amount of computer equipment and technical assistance. All activities except the policymakers' seminars were carried out. One round of four courses of staff upgrading workshops was offered. Seventy-three (73) public sector employees participated in the staff upgrading workshops (1 person completed all four courses, 10 completed 2 courses and 54 completed 1 course). The Ministry of Education was particularly pleased with the results of both the higher and lower level training courses. Several staff completed courses in each program, and these staff have by in large remained in jobs that require the skills taught in the courses. The Ministry of Health got the most from the project in terms of research outputs, though at least two studies important to each of the other ministries were conducted. The Ministry of Labor and Social Security most appreciated the small amount of computer equipment it received. Few staff from the Ministry of Labor, Social Security and Sport attended the courses, the technical assistance received was not catalytic and few studies on topics of interest to the ministry were financed under the pipeline of research.

(c) University of the West Indies (UWI).

At the UWI, all activities were carried out largely as planned. Thirteen faculty-upgrading courses (also open to senior staff from the line ministries) were offered in review of mathematics, review of mathematical statistics, multivariate analysis I and II, techniques of policy analysis methods and research methods. At project completion, multivariate analysis I and II and research methods had been delivered twice and techniques of policy analysis methods had been delivered three times.

The courses sponsored under the project were well attended and rated, though they catered more to the current cadre of graduate students and less to the established professionals in academia and government than intended. UWI, PIOJ and the contractor were very proactive in fine-tuning a second offering of the courses and in offering the courses at different levels to meet the needs of participants with differing mathematical and statistical backgrounds. The majority of public sector participants in these programs were still in their jobs at project completion.

Curriculum was upgraded in similar graduate courses. The course descriptions have all been approved as part of UWI's ongoing offerings. UWI had sought to maintain sustainability by ensuring that posting in the Economics Department included multivariate analysis. The same attempt was made in the Sociology Department through hiring for the 2- year Population and Development Training Program. The Economics Department currently has on staff a lecturer who teaches a regularly offered multivariate course. In the case of Sociology, the 2-year project has come to an end but multivariate analysis is now included as one part of a graduate level course in Advanced Social Research Methods. The need, therefore, still exists for the Sociology Department to create and staff a post that will carry forward the SPA curriculum at a less technical level so that a wider audience -- including students from other faculties and public sector employees -- can access them.

Fifteen fellowships were granted (Sociology, 1; Economics, 7; Education, 4; Consortium Graduate School, 3). There is no detailed follow-up of what has happened to all of the students and whether they are

using the skills acquired in their graduate programs, however, an informal assessment indicates that most are either continuing their training abroad (at least three economics students are in Ph.D. programs in the United States, one staff member from the Ministry of Education won a Woodrow Wilson fellowship for six months non-degree program at Michigan State based on a research proposal prepared using skills acquired in the courses), teaching in Jamaican universities or working in public sector jobs in Jamaica.

Eleven studies were funded during the life of the project. Almost all of the studies were carried out by individuals or groups at the University. Five of the studies will have been published by PIOJ (2 have already been released and 3 are at the printers as of this writing). In all, about half of the contracted research is at international academic standards. About half of the papers have direct policy implications and the authors are well placed to see that the implications are acted on. The other studies are more likely to inform policy indirectly through better understanding the phenomenon that policy might wish to affect, rather than by, for example, evaluating the impact of a specific policy. The goal of the research agenda was not only to provide policy impact through the studies, but also to help develop skills. However, there has been relatively little synergy between the skills-building parts of the project and the research agenda. Generally, the high quality research was delivered by those who had the skills to begin with. It still seems worthwhile to have funded this work, both for its immediate policy impact and because it sets a standard for applied policy research.

The Derek Gordon Data Bank at the Sir Arthur Lewis Institute of Social and Economic Studies (SALISES) Formerly called the Institute of Social and Economic Research (ISER), it was operational for most of the project. Data sets from Jamaica and other Caribbean countries have been acquired. It has served participants in the courses sponsored under the project, graduate classes and individual students, however, has not been utilized by sector ministries as was originally envisioned.

(d) Support for Survey of Living Conditions.

The JSLC was conducted annually, various features of its quality were reviewed and improved, and the capability of the Statistical Institute of Jamaica to carry out the work without foreign technical assistance greatly enhanced. The Government is committed to providing funding to ensure that the JSLC is continued.

Summary of SPA achievements. The overall outcome of the SPA Component is satisfactory. Almost all components were implemented. Most resulted in moderate improvements from the situation that existed before the project and, in some cases, the improvement was substantial. Subcomponents that have met international standards are (i) the annual SLC and the report; (ii) about half of the research sponsored by SPA; and (iii) teaching of policy analysis (including quantitative methods) at the University of West Indies.

4.3 Net Present Value/Economic rate of return:

Economic analysis was not undertaken during project preparation. Therefore, this ICR does not have any baseline to measure against and will not undertake economic analysis.

4.4 Financial rate of return:

Financial analysis was not undertaken during project preparation. Therefore, this ICR does not have any baseline to measure against and will not undertake financial analysis.

4.5 Institutional development impact:

The project has an important institutional development goal. Achievement in making an impact are the following:

Student Assessment Unit. The Junior High School Certificate Examination is one of the major successes of the ROSE project. The quality of the exam and the Student Assessment Unit's capacity have shown continuous improvement. To ensure desired development for the long-term sustainability of the examination component, more professional staff in the unit should be trained in the future in order to handle the increasing demand for assessment.

MOEC has institutionalized the training arrangements in order to avoid losing the cumulated knowledge and experience of trainers due to the end of contract. Best practices and lessons learned from the experience of principals over 4 years in managing reform need to be reviewed for use in future training programs. To ensure the sustainability, acceleration of decentralized arrangements with an increase in local capacity is recommended. The objective would integrate education service at the regional level with MOEYC macro-management leadership would sustain the project objective.

The Jamaica Survey of Living Conditions has been institutionalized as the basis of social monitoring and poverty assessment in the country and the capacity of the Statistical Institute of Jamaica and the Planning Institute of Jamaica to field and analyze the JSLC has improved. The Policy Development Unit (PDU) in the Planning Institute of Jamaica has been established and institutionalization is progressing. The Derek Gordon Data Bank at the University of the West Indies (UWI) was established and operating costs are now funded by the University of the West Indies although future funding for the Director of the Data Bank remains uncertain. Training in policy analysis and research methods has strengthened the quality of teaching in the UWI and also built the capacity of analysts in a number of line ministries.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

Macroeconomic conditions. During the life of the project, failure of some financial institutions had triggered a financial crisis. The GOJ's efforts to support the banks had deepened the fiscal deficit. Debt servicing during the life of the project has grown from some 40 percent of total government expenditure to 62 percent by May, 2001. This has led to difficulty in the provision of counterpart funding. The economic downturn has also affected the financial capability of many civil works contractors in completing the works.

Caribbean Examination Council (CXC) Examination at the end of Grade 11. The CXC is a regional body which sets examination in all subjects at the end of upper secondary education. Since passes in the CXC are used as criteria for admission to tertiary education institutions, and employment in the public and private sectors, the examination curriculum essentially drives the subject chosen, content and organization of secondary education. Therefore, there is a perception by some schools that ROSE curriculum may not be sufficient aligned with the CXC syllabus and there is a need to overcome this.

5.2 Factors generally subject to government control:

ROSE

While counterpart funds has not been an issue in causing incompleteness of the civil works program, it was a major reason for spreading out civil works in scheduling in order to ensure the availability of funds. While works were spread out over the life of the project, once there is a slip on the part of the contractors, the program could not be completed.

SPA

There has been no lack of counterpart funds, which was highly unusual in Jamaica during the project period. There were no issues of macroeconomic or sectoral policies or of administrative procedures.

5.3 Factors generally subject to implementing agency control:

ROSE

Contract writing. The terms of reference for consultants' contracts were usually written vaguely and did not spell out specific requirements for various stage of the production. A case in point is the JBTE's contract for the production of distance learning materials.

The open-ended price adjustment clause in contracts allows for cost adjustment due to fluctuations in exchange rates, labor, and materials, and which gave the Ministry little leeway to control cost. This area needs to be reviewed for improvement.

Screening of contractors. Excluding contractors which have a track record of non-performance from consideration should be factored into the equation.

Realistic costing. The initial cost of civil works was seriously under estimated. This, combined with delay in the execution of civil works during a highly inflationary period, resulted in substantial price increase. Similarly, the real cost and time of designing, writing, proving, printing, and delivering of distance learning materials have been under-estimated.

Documentation and continuous training of Secretariat staff. The project had 3 Coordinators and 2 administrators within the 7 years. During the year before projection completion, the position of Coordinator was vacant for a year. This had resulted in an interruption of institutional memory and underscored the importance of better documentation and continuous training in procurement and financial projection and management.

Use of new technology. It would vastly improve communication with the Bank if the Secretariat is equipped with a voice mail system. It would also be important to make ROSE documents and reports available to the public through the web.

Coordination of inputs. A major challenge is the coordination and synchronization of delivery of inputs. While the changes in coordinators and administrators have contributed to the lack of synchronization, with the current team in place, this problem should not arise with the next project.

SPA

The factors subject to control by the implementing agency, such as management effectiveness, staffing, cost changes, implementation delays, use of technical assistance, adequacy of monitoring and evaluation, and beneficiary participation were generally handled satisfactorily.

The only costs that deviated so substantially from those estimated at appraisal to affect project implementation were those for the expatriate technical assistance for UWI. The winning bidder (the University of Toronto) submitted a proposal that was about half the budgeted cost of the technical assistance and also approximately half the price of the bids submitted by other bidders. PIOJ and UWI decided to double the number of offerings of each course to be taught under the contract. This had a tremendous positive impact on the project and any future project like this should program for two offerings of the courses. This allowed the project to reach two cohorts of participants and also permitted substantial fine-tuning during the second offering. In addition to the cost savings which made it possible to offer courses more than once, there were other significant benefits from linking to a university as opposed to a private consulting firm. These include the opportunity to develop continuing linkages that facilitate the ongoing exchange of ideas, faculty and students.

Salary costs ran somewhat higher (even in real terms) than budgeted for at appraisal. The reallocation among activities and budget categories was within the normal range for project implementation. It should, however, be noted that since different activities served different constituencies there were some issues of political economy around the minor variations that took place.

There were noticeable implementation delays at the beginning of the project, largely occasioned by delays in project effectiveness (seven months after presentation to the Board), in the recruitment of the permanent head of PDU (6 months after effectiveness) and in the establishment of the special account (nine months after effectiveness). In spite of these delays, the project moved largely apace. The only substantial delays were with the policy maker seminars and the research agenda. The delay in the policy maker seminars is not easily justified. The delay in moving funds through the research agenda resulted from the inadequacy of the mechanism as designed at appraisal and some delay in fixing it and also from the fact that project design did not take into account the need to develop proposal writing skills prior to the call for research proposals.

The government commitment to access to the highest level of policy makers and to high quality appointments of key staff was somewhat less during the first half of implementation than during project preparation or during the second half of implementation. This had some effect on the project, especially the success of its networking with the line ministries.

5.4 Costs and financing:

ROSE

There was substantial cost changes by subcomponent. The variation between SAR estimates and actual project expenditures is presented in the first two tables in Annex 2. Most of the subcomponents did not fully utilize the amount in the original estimates, except for civil works and the examination component. Civil works expenditure was 4 percent over and above the original estimates, while examination rationalization expenditure was nearly three times as much. The latter was attributable to the rapid expansion of the JHSC examination to cover more candidates than originally intended.

SPA.

The higher salary costs are reflected in over utilizing the incremental recurrent cost in Category 3-A by 11 percent. However, the return of ineligible expenditure on consultants' services had led to an under utilization of Category 1 expenditure.

In both ROSE and SPA, financial management was handled well after the mid-term. With the exception of delays in submission of the audit report, there was no serious issue of non-compliance in financial management. The audit reports were unqualified, although they had identified that internal control could be strengthened.

6. Sustainability

6.1 Rationale for sustainability rating:

ROSE: The reform of secondary education is highly likely to be sustained for the following reasons:

Government commitment. The MOEYC has integrated its reform in its daily operation and has allocated recurrent and capital budgets to support the continuation of the reform. The GOJ also requested for Bank assistance of a follow-on project to deepen the reform.

Policy environment. The MOEYC's White Paper on Education (February, 2001) adopted policy and set targets that are not only consistent with ROSE but also push the agenda much further beyond the original conception to ensure the sustainability of reform in all levels of education in Jamaica.

Institution/management effectiveness. The ROSE Management continues to function and exercise oversight of the reform. Unit heads who have gained so much experience in ROSE will continue to implement the measures in ROSE II. Regional offices will support the decentralization drive to improve effectiveness of supervision and support. ROSE trainers have been absorbed as regular staff in Teachers' Colleges, and their experience and intimate knowledge of the teachers who went through the in-service training will not be lost.

Technical viability. The project has contributed significantly to develop technical capacity in curriculum development, textbook development, planning and student assessment.

Financial viability. The GOJ's high level of commitment to education is attested by the high levels of public expenditure on education which is over 7 percent of GDP. In spite of the difficult macroeconomic conditions, education is likely to receive priority attention in the budget process. However, it should be noted that much of the increases in recurrent expenditure have been absorbed in teachers' salaries. It is the non-salary expenditure that needs to be monitored to ensure that educationally effective inputs are protected.

Stakeholders' participation. Principals, teachers, parents, and the community are committed to working together. The whole education system is based on partnership. School-based management approach, which will be supported by ROSE II, will further enhance the participation of the stakeholders.

SPA. The JSLC has been on-going for 14 years, moving from a pilot event heavily supported by the Bank to a self-directed and self-sustaining operation. Much of GOJ's social policy was based on

analysis of data generated by the JSLC. The UWI courses are likely to be sustained, but it is uncertain about the data bank.

6.2 Transition arrangement to regular operations:

Transition already began before the end of the project as all secondary schools adopt the ROSE core curriculum. SPA has continued with conducting the JSLC.

7. Bank and Borrower Performance

Bank

7.1 Lending:

ROSE

The project built on the experience of a pilot of implementing ROSE curriculum in 11 schools in 1991, which was financed by a previous project. In this sense, the design was based on a time-tested, workable experience. The project supported a centrally directed and supply driven approach, which was quite common in projects of the early 1990s. While the project built the capacity and delivered important inputs, for the reform to take root at the school level and to change behavior of teachers and students, the follow-on project should adopt a school-based, demand driven approach. (See the Borrower's comments for the history and details of identification, preparation, and appraisal.)

Weaknesses of the design included the under-estimation of the time needed to organize the procurement of civil works, under-estimation of the cost of construction, and the lack of recognition of the need for *continuous* training in procurement.

SPA.

Identification and Preparation. Under the Social Sectors Development Project, the JSLC provided a regular flow of data and revealed the scantiness of existing analytic capacity. Following the experience of that project, the GOJ and Bank easily agreed that a project to build analytic capacity was desirable. Japanese grant funds for project preparation were used to hire a consultant identified by the PIOJ to develop alternatives and, once GOJ and the Bank had agreed on the strategy, to elaborate the project in detail. The UWI and World Bank staff were also quite actively involved in project design, in an easy collaboration with the GOJ consultant. This resulted in the preparation moving forward smoothly. This process, however, did not enhance the ownership of PIOJ's working level staff.

Appraisal. The Bank was actively involved in appraisal, with suitable expertise provided. The appraisal and project design were largely sound. There was, perhaps some element of over-optimism, but probably less than in the ordinary run of Bank projects. Project dimensions and cost estimates were largely appropriate. The implementation plan was detailed and implicitly contained substantial, suitable and concrete performance indicators. It would have been beneficial to have clearer quantitative targets for some of these and clearer indicators by which to judge the quality of analysis under the project. Some risks, especially the complexity involved in having so many institutions involved and of trying to work with line ministries that began at very disparate capacities were knowingly accepted.

There was little directly comparable experience among Bank projects to take into account when this project was designed -- no other Bank project had largely consisted of capacity building around a

household survey. The Social Dimensions of Adjustment projects were the most closely analogous at the time. Those efforts to build analytic capacity were relatively small and largely doomed by confining their efforts to the central statistical agency so that links to policy makers and policy impact were undeveloped, links to universities and a large pool of analysts were lost, and all efforts concentrated on a very small group of staff and thus subject to considerable loss due to staff turnover. The SPA project component explicitly sought a radically different design to overcome those problems. The project did take into account experience in Jamaica in the predecessor Social Sector Development project. Subsequent experience in building analytic capacity around household surveys in other countries shows that while the Jamaican SPA project is the largest, its challenges and successes have common elements with other projects.

The design was complex, involving many small transactions and coordination between several institutions. The risks entailed were acknowledged during the design period. Nonetheless, it was thought that such a design was justified to reach critical mass in the network as a whole and to achieve optimal linkages between researchers and policy-makers and policy-implementers. In retrospect, the managerial burden on the Director of the PDU was greater than envisioned at design.

7.2 Supervision:

Because the implementing agencies of ROSE and SPA were different government agencies and the two components were implemented in parallel, supervision was also conducted in parallel. The PIOJ, as a coordinating agency of all external assistance, has an overview of progress in ROSE and SPA as their officers attended the briefing and debriefing meetings of both components. The MOEYC had representation in SPA through the process of review of proposals and participation in the organization and review of the education component in the SLC. However, there was no integrated reporting process of ROSE and SPA, except in the financial audit report. The Bank team submitted its aide memoires and audit reports on SPA to the Dutch Embassy in Kingston after the Dutch policy of decentralizing responsibilities of supervision and reporting of its external assistance efforts from Washington to the Embassy.

ROSE

There was a succession of five Bank task team leaders, with changes not only during project preparation but also up to the time of the mid-term review. These constant changes were not helpful to build a stable partnership with the Borrower. After the mid-term review, there was no change in task team leader.

The mid-term review observed that the need for the reform to take root in the classroom, to be evident from changed behavior of teachers and students. This challenge has remained to be taken up by the follow-on project. The other more obvious issue was the slowness in the implementation of the civil works program.

After the mid-term review, the civil works program was restructured and the loan agreement was amended, by reducing the number of new schools to be built and the schools to be refurbished and extended. Even so, the civil works subcomponent could not be completed on time due to reasons explained earlier. The loan amendment also included (a) reallocating the unallocated amount to civil works; (b) raising the threshold for International Competitive Bidding from the equivalent of \$500,000 to \$1,500,000; and (d) increase the aggregate limit for Local Shopping from \$250,000 to \$750,000. These changes, made at the request of the Borrower, were designed to expedite the process of procurement in order for implementation to make up for lost time.

Afterwards, the task team integrated technical advice on specific components with policy dialogue during supervision. Supervision received a "highly satisfactory" rating from RSA1 of the Bank's Quality Assurance Group. The team used data generated from the project to develop a sector report on secondary education (which was published as a Grey Cover report in December 1999) and used the analysis from the sector study to inform the project, support the policy dialogue and guide the design of ROSE II. In January, 1999, the MOEYC and the Bank jointly organized a stakeholders' workshop to discuss the findings of the report. Representatives of principals, teachers, students, private sector, tertiary education, the media, parliamentarians (including members of the opposition), PIOJ, Ministry of Finance, MOEYC, and HEART/NTA were present. The feedback from stakeholders was very positive.

Supervision also took the opportunity offered by Human Development Week in 1999 and 2000 to combine reversed supervision missions (MOEYC officials coming to Washington instead of Bank team going to Jamaica) with professional development for 14 MOEYC officers. This experience enabled representatives of the implementing agency understand Bank operations better because of the opportunity of meeting with the Country Director, Sector Director, senior staff in HDNED, the Procurement, Disbursement and Finance Management teams, and task managers working in other projects. Special seminars were organized for the Jamaican team on secondary education in Europe and the use of technology by the Bank and in education. The Permanent Secretary of Education made a presentation on a panel on quality of implementation/supervision together with the task team leader in the HD Week in 1999.

The Bank paid special attention to financial management and provided much assistance to the Project. The Bank could have done more on providing training in procurement, given the succession of project staff. Although the Bank took measures to assist the ROSE Secretariat to strengthen its procurement capacity in 1999, the Project was approaching the end.

SPA

The Bank's supervision was adequate. Although the overall task manager for ROSE changed several times during the project's life, the substantive review and advisory role was delegated during the entire life of the project to a single staff member from the Development Research Group (previously the Policy Research Department). The advice was, therefore, consistent and institutional memory was maintained. The ROSE task managers and accountable unit handled the processes of issuing no objections, filing of supervision reports, queries about disbursements and liaison with the Netherlands Trust Fund authorities in the Embassy in Washington and with the Government of Jamaica. The processes were accomplished well and usually in a timely fashion. There were occasional delays in communications with the Netherlands authorities half way through the project, after the Netherlands decentralized its handling of grants to the field, and nearly simultaneously turn over of personnel in the embassy in Kingston, as well as a change of task manager in the Bank. The protocols the Netherlands wanted for handling exchange of information remained unclear to the Bank for some time. In 1997 and 2000, there were changes in personnel in the Dutch Embassy, which affected the institutional memory within the Embassy. Miscommunications have been corrected.

During most of the life of the project, staff from the resident mission provided a small but extremely valuable amount of time to advise the project unit on how to upgrade its financial management. During the first few years of the project, the supervision budget was sufficient to allow the substantive part of supervision to include troubleshooting, brainstorming and mentoring, a role that made good use of the Bank's nearly unique expertise in this kind of project. Some general policy dialogue on poverty issues was also conducted under this supervision. In the last two years of the project, the supervision budget was

more constrained. As a result, the Bank was unable to participate when the government was determining how to draw its poverty line, a role the Bank usually invests heavily to achieve.

There were no major deviations from Bank policies and procedures (e.g. on procurement, disbursement, financing of cost overruns, use of cost savings, etc.). However, the ineligible expenditures were used, including expenditures for which the grant funds were used to pay 100% instead of the appropriate lower percentage, expenditures to a consultant who is a government employee (which is legal under Jamaican laws but not eligible for project financing), expenditures for a laptop computer not actually purchases and expenditures for bank charges/fees. The PIOJ had reimbursed the relevant amount.

7.3 Overall Bank performance:

Overall the Banks performance in all stages of the project cycle was satisfactory.

Borrower

7.4 Preparation:

ROSE. The Bank and the Borrower worked closely together in preparing the Project. It built on the experience of a pilot of implementing ROSE curriculum in 11 schools in 1991, which was financed by a previous project. The ROSE Management Team went on a Study Tour to Europe to assess directly experience of reform in other countries. In this sense, the preparation was well-thought out and laid the ground work for committed implementation of this 15-year reform process. The current Permanent Secretary was the Bank's counterpart during preparation, and she continued to oversee the reform during implementation to ensure its success.

SPA. PIOJ delegated project preparation to a consultant. The consultant chosen had appropriate technical expertise. The use of the Japanese grant to hire a consultant to do preparation resulted in expeditious and good quality work, however, it may have reduced ownership and the depth of PIOJ commitment to the project. UWI's involvement in preparation and commitment were substantial. The involvement of Statistical Institution of Jamaica (STATIN) and the line ministries was lesser, but commensurate with their role in the project.

7.5 Government implementation performance:

Same as below.

7.6 Implementing Agency:

ROSE. Implementation was not smooth during the life of the project. Although there was a succession of coordinators and administrators during the life of the project, the structure of the Management Team has ensured continuity of leadership. Overall, the compliance with legal covenants was satisfactory. (Also see the Borrower's comments for details.)

SPA. The recipient's performance was adequate with respect to overall implementation. Although the quality of management varied somewhat over the life of the project, a complex set of activities was carried out with positive impacts, as described in detail in Part B. The commitment of UWI and STATIN were considerable over the life of the project and both agencies contributed considerable staff time to implementation and oversight of project activities.

There were very few covenants in the loan (e.g. with respect to macroeconomic or sector policies, institutional changes, financial improvements, increased efficiencies and cost saving, etc.). The standard covenants with respect to staffing, provision of counterpart funds, procurement, and reporting/accounting/auditing were all adequately met. The provision of counterpart funds was particularly good when judged by the prevalence of this problem in the rest of the Jamaican project portfolio. The only unusual element among the covenants was a review of quality of JSLC data. This was done thoroughly and those that could be achieved under project financing and without a major reorganization of STATIN were implemented.

7.7 Overall Borrower performance:

ROSE. Overall borrower performance was satisfactory.

SPA: Overall recipient performance was satisfactory.

8. Lessons Learned

ROSE

The implementation experiences of ROSE, a project made complex by the multiplicity of components and diversity of activities, has brought to the fore a number of important lessons:

- (i) Although ROSE has achieved such objectives as establishing the base for putting students at the center of the teaching learning process and provided a system for support inputs, there is need for deepening of the reform in such areas as:
 - greater emphasis on high standards for all students, especially those performing below grade level;
 - greater support to schools to address various deficiencies;
 - improvement in the implementation process with performance indicators and greater accountability
- (ii) There is need for further efforts to remove the perception that the ROSE curriculum in Grades 7 to 9 and the CXC program is not aligned.
- (iii) The capacity of the private sectors construction industry needs to be assessed and strategies introduced in the project design to improve cost effectiveness and the quality of work.
- (iv) Project design and implementation processes need to reflect the culture and capacities of the implementing agency.

In summary, when the project was designed almost a decade ago, the focus was to provide the necessary quality inputs and to strengthen the management capacity. To the extent that it lays the foundation for the reform, the project was well designed. Nonetheless, the model was a supply-driven one, and the main challenge for implementation, among other things, was for the Ministry to coordinate and synchronize delivery of all the inputs. *This model thus needs to be complemented by a demand-driven approach in order for the reform to take root at the school level.* This then lays the platform for ROSE II.

SPA

The principal lessons learned from SPA apply to future interventions of this nature in Jamaica and to projects with similar goals elsewhere.

- (i.) Building analytic capacity is a slow and incremental process. It requires careful diagnosis and planning and often two or three tries at a particular activity before that activity works as well as desired and so that activities can have the required cumulative impact.
- (ii.) The project was successful because it reached the broad network of people involved in generating data, analyzing it and developing policy.
- (iii.) The project was successful because analysts had access to data for training and research purposes. Without open data access, this approach would not have been feasible.
- (iv.) High level support from policy makers is important to getting a project to build analytic capacity set up and can aid in its implementation.
- (v.) A policy process that respects information as an input into decision making is required for policy impact.
- (vi.) Demand for data driven policy analysis is essential to the sustainability of capacity building efforts.
- (vii.) With respect to training, three lessons emerge: (1) demand is likely to be high; (2) participants should be relatively homogenous in terms of mathematical background, computer literacy and access to computer facilities; and (3) participants should be encouraged to enroll in a whole program rather than individual courses so that both the trainees and the curriculum can build one set of skills on the next.
- (viii.) It is important to fund research to provide a testing ground for the skills learned. The process of writing proposals and carrying out the research should, however, have adequate support functions built in to mentor or coach researchers so that they improve their skills as they participate.

It can be difficult to staff a project designed to build analytic capacity, since by definition, there is a shortage of persons with the skills required to staff the project. Thus, some capacity building may be required among those staff as well. The pacing and ordering of activities should allow for this. Moreover, leadership of a project like SPA requires a rare mix of administrative and research skills. It might be worthwhile to separate the functions into two posts, especially if the administrative burden will be high.

9. Partner Comments

(a) Borrower/implementing agency:

ROSE

The Project, overall, was satisfactorily administered and successfully implemented. The objectives of improving the quality and equity of junior secondary education and strengthening the capacity of the Ministry of Education, Youth and Culture to plan and monitor the impact of the ROSE Program have been met. The following paragraphs are comments on the partnership with the Bank.

Identification. GOJ's priorities for education, identified in the Five Year Plan 1990-1995 and the Medium Term Economic Framework, received support from the Bank with the signing of the loan agreement for the ROSE project on May 7, 1993. Viewed within the context of its support, ongoing since 1966, the Bank made important contribution to the education sector. When the agreement for ROSE was signed the Bank was then providing funding to its fourth project in the sector - the Education Programme Preparation (EPP) and Student Loan Project (World Bank IV). The project had been specifically designed to assist the MOEC in building the conceptual and analytical framework for the reform of lower secondary education and to pilot the introduction of a common curriculum which formed the core of the ROSE project.

Pre Appraisal. Lessons learned were incorporated into project design. There was allowance for adequate planning and advanced preparation as evidenced in Bank involvement in Education Program and Preparation (EPP) and greater attention was paid to institutional arrangements for project implementation especially where the project was broad in scope. In this regard GOJ and the Bank agreed that instead of a traditional Project Implementation Unit, a Reform Management Team would be established to oversee and coordinate the ROSE project. This team would also coordinate the interventions of all projects at the secondary level in support of the policy of a common curriculum thus eliminating problems of duplication.

Appraisal. The Bank provided relevant expertise/consultants for all proposed components. In addition a copy of a financial manual that had been developed with assistance from the Bank under the Administrative Reform Programme was presented to the appraisal mission. The manual established procedures intended to facilitate the flow of funds to projects and sought to address Bank concerns about the risk of timely budget support. The Bank, however, did not identify regular training of relevant staff in its new procurement/accounting procedures as a critical element given the possibility of staff turnover. Such training would have offset concerns later about failure to follow procedures. The Bank should therefore consider training in these areas for ROSE II and other new projects.

An appropriate financing package in keeping with its policy of supporting 80 percent of total project cost was provided by the Bank. In recognition of project risk the Bank discussed with the MOEC, inter alia, the recurrent cost implications of the reform. The final number of schools receiving civil works was also reduced in order to bring the cost of the civil works to 50 percent of the reform support component. The Bank had no objection to co-financing arrangements with the Netherlands Government whose involvement helped to reduce the share of local contribution to the project to approximately 10 percent.

Supervision. There had been several changes of Bank task managers during the first three years of the project. It was only after September 1996 that the same task manager remained with the project. Most of the comments below were directed to Bank supervision efforts from late 1996 to date. The Bank and, in particular, the current task manager, displayed a high level of attention and commitment to the Project. The supervision missions, which often included experts in the various components, proved to be very useful in dealing with implementation issues. During supervision, the teams not only identified obstacles to implementation but also helped to diagnose the underlying constraints. Specially of note are the following

areas:

Civil works: The Bank addressed the delays in civil works in the first three years by appointing a dedicated officer, who is a trained officer, in the then Resident Mission to work with the dedicated building officer of MOEYC. He was available to answer questions and attend meetings with the civil works team, architectural consultants and contractors whenever the needs arose. In this way, a lot of the procedural bottlenecks were revolved, enabling the civil works component to make up for some lost time. After the departure of this officer, the Bank's procurement specialist, assistant, and consultant continued to help address questions.

Financial Management: The Project enjoyed a positive relationship with the Bank on matters pertaining to financial management. In most instances, funds were disbursed within a reasonable time frame. On rare occasions, funds were withheld but with subsequent clarification with the Bank's Disbursement Unit, the problems were speedily resolved. The Financial Management Specialist was especially helpful.

Examination: The Bank's performance in the supervision of the Examination component of the Project was laudable. The close supervision of this component allowed for tremendous professional growth of individuals and, by extension, the system at large. The availability of consultants in Assessment allowed for immediate analysis, interpretation and solution of problems.

Evaluation: In the initial stages of the Project, the consultant from the World Bank developed the evaluation design in conjunction with the Ministry. After the first year of the Project, an evaluation consultant visited the Project once in 1997 but not afterwards due to the Bank's constraints on supervision budget, although this consultant continued to comment on subsequent evaluation designs and reports and the task manager followed up afterwards. The evaluation was carried out by the Evaluation Unit of the Ministry (at times utilizing inputs from the Student Assessment Unit) and reports and presentations made to stakeholders including visiting World Bank teams. The monitoring by the World Bank was rigorous and demanding. A comprehensive picture of the accomplishments of ROSE was drawn not only from the Evaluation Unit reports but also from the SLC, GSAT and JHSC examination data. The Unit welcomed the process since it demonstrated interest in evaluation in general and the ROSE Project in particular. However, it is recommended that, in future, more attention should be given to qualitative methods to complement the heavily quantitative approach.

Two Reverse Supervision Missions was carried out in 1999 and 2000, with the ROSE Management Team visiting the Bank to discuss the status of the project, to get familiarized with Bank Country Director, Sector Director, and officers and procedures in procurement, disbursement, and financial management. Combine with attendance at Human Development Week at the Bank, these missions contributed to in no small way to the professional advancement of 14 MOE&C staff. Such transfer of knowledge by the Bank's staff has redounded to the benefit of the entire education system. Strong recommendation is being forwarded for administrative staff to benefit from any similar activity.

Policy Advice: The analysis and recommendations by the "Study of Secondary Education in Jamaica: Improving Quality and Expanding Access" have proven useful and was well received in a conference jointly held by the Ministry and the Bank with stakeholders in January 1999. The Ministry's staff who worked with the Bank on the collation of the data, gained useful experience in data analysis and collection.

SPA

The Project, overall, was satisfactorily administered and successfully implemented. SPA met its principal objective of enhancing national capability for the conduct of sophisticated data research and analysis. In essence, this was achieved not only by improving technical skills, but by promoting greater orientation towards and interest in such analysis. In order to maintain and build on the momentum achieved, it is necessary to continue to facilitate the utilization of the skills developed. In addition, it is of the utmost importance to take the process further along the way to impacting on policy development. An error in the Project design was the attempt to involve the policy directorate before the technical capabilities and research output had reached a stage that could make such involvement meaningful. It should not be surprising, therefore, that this aspect of the Project failed to materialize. Anticipation of the University's preparedness to institutionalize the Project courses was similarly based on premature expectations. In order to reap full benefits from the Project, it should be followed up by initiatives to consolidate the advances made, assist in institutionalizing local training provisions, thereby ensuring continuity, and promote incorporation of research output into the policy-making process.

(b) Cofinanciers:

Continuous discussions had been held with officials in the Dutch Embassy. Since the implementation of most of the subcomponents of SPA was completed by 1999, an ICR on SPA specifically was prepared at that time and the draft was presented to and discussed with officials in the Dutch Embassy. The SPA ICR had since been updated and the content incorporated into this ICR. Officials who had followed the project expressed satisfaction with the achievements of the project. Although some concerns were raised regarding the original design of linking SPA with ROSE, it was felt that both projects benefited from the association. It was also felt that the strong ownership of SPA by the GOJ would contribute to sustainability.

(c) Other partners (NGOs/private sector):

The MOEYC organized an end-of-the-project workshop to hear the views of stakeholders on the achievement, shortfalls, and recommendations for the next project in February, 2001. Over 150 stakeholders and the Bank team participated. These stakeholders included principals, teachers, students, private sector representatives, construction contractors, architectural firms, representative of the media, parliamentarians, PIOJ, Ministry of Finance and MOEYC. The stakeholders were divided into 11 groups and their feedback are presented in Annex 9.

10. Additional Information

N/A

Annex 1. Key Performance Indicators/Log Frame Matrix

ROSE Performance Indicators

Development Objectives	Indicators	Original Target	Target to Date
Improve quality, efficiency and equity of lower secondary education, focussing on serving the poorest students	Introduction of a common curriculum in Grades 7 to 9	72 project schools and 28,000 students over 5 years (1997/98); Accept voluntary schools into programme	By 1997/98, over 120 schools and 89,029 students. By Sept. 1999 all secondary schools nationwide (over 500).
	Teachers guides and manuals.	10,500	Over 10,500
	Overseas training in assessment	2-man months	12-man months
	Local consultants in Continuous Assessment	52-man months	Contract completed. Final report submitted.
	Curriculum research	3-man months	Done and produced 3 curriculum development studies
	Curriculum development	62-man months	Done. Curriculum development and revision in 5 core subjects, plus 6 other subjects.
	In-service teacher training by JBTE	6,800 teachers trained	5,014 trained in ROSE methodology; additional 2,688 attended workshops.
	Training of education officers, school board members, teacher trainers, pre-service trainees.	60 education officers, 550 administrators, 2,200 school board members, 380 teacher trainers, 2,500 teacher trainees	>600 administrators, 60 Regional Education Officers, 90 Regional Office staff, 40 teachers of Independent schools, 1,464 school board members, 2000 pre service trainees
	Pilot programs to improve Upper Secondary Education	Pilot Programme	Piloted and evaluated new Upper Secondary Curriculum
	Provision of textbooks	160,000 books for all reading levels; 71,000 foundation books; 40,000 HIRLAP books	Target met
	Education materials	72 project schools	72 project schools
	Furniture	50 project schools	All but 10 project schools received furniture.
	Construction of new schools	3	Loan amendment reduced construction to only 1 school. 100% completed by June, 2001.
	Extension/Refurbishing	27 All-Age schools	18 completed; 7 at advanced stages of completion
	Refurbishing only	21 All-age; 10 New Secondary upgraded to Comprehensive	All 28 schools completed
Evaluation and Management Strengthening	Introduction of a new examination	Junior High School Certificate Examination, and using it for placement of students, certification, and monitoring	Piloted in 1996, Growing # of candidates: 12,565 in 1997; 18,663 in 1998; 20,901 in 1999. Approx. 22,000 students in 2000. Used results for placement, certification, monitoring.
	Rationalization of old exam system	Eliminate 16 JSC tests, 3 SSC tests, and transferring 13 JSC and 16 SSC to HEART	Eliminated 20 JSC subjects and 2 SSC subjects

SPA Performance Indicators

Output indicators set in the ROSE SAR and the ROSE Loan Agreement are as follows:

- (a) Offer at UWI at least 3 quantitative methods courses to be developed under the project.
- (b) Prepare 6 working papers with policy relevance for the social sectors of quality commensurate with

international academic standards.

Activities required by the Netherlands Grant Agreement are as follows:

- (a) Carry out a study of the SLC data quality;
- (b) Presents to the Bank the results of the study and its recommendations;
- (c) Based on the results and recommendations of such study, and taking into account the Bank's comments, presents to the Bank a plan of action in respect of such study; and
- (d) Implement such plan of action in a timely manner satisfactory to the Bank.

Accomplishments:

Faculty Seminars

Number Given 13

	Students attending	Receiving Credit	Professionals attending	Public Receiving Certificate	Other
Techniques of Policy Analysis	29	29	35	4	5
Multivariate Analysis I	20	17	22	2	1
Multivariate Analysis II	12	6	3	2	1
Multivariate Analysis I	25	25	21	7	3
Techniques of Policy Analysis	23	22	11	7	0
Multivariate Analysis I	0	0	15	4	3
Multivariate Analysis II	N/A	5	N/A	3	3
Seminar in Policy Analysis	3	21	21	10	1

Graduate Fellowships

Number Given 15
 Recipient Gender 10 female, 5 male
 Program of study 1 Sociology, 4 Education, 7 Economics, 4 others
 Number Completed 15

Policy Makers Seminars

Number Given: 0
 Number of Attendees 0

Staff Upgrading Workshops

Number Given One round of four courses
 Number of Attendees: 73 enrolled (1 completed all four courses, 10 completed 2, and 54 completed 1)

Data Activities

Number of JSLS Surveys: 8
 Months Between Survey and Report: 7 months
 Number of Data Bases Acquired by SALISES Data Bank: 12 (many for multiple years and 5 for other countries in region)

Number of Individual Users of SALISES Data Bank:	data not collected
Number of Courses using SALISES Data Bank:	data not collected

Research Activities

A study of the SLC data quality	1
Production of JSLC/IBMS Reports:	8 JSLC; 1 IBMS
Annual Dissemination Conference:	5
Number of Executive Briefing Notes	4
Number of Other Reports	3 Poverty Studies, 1 methodology study, 2 parish reports, 1 gender study and others
Number by Sector:	1 Welfare, 2 Labor, 2 Education, 3 Health, 3 Health/Education, 2 Non-Research

Curriculum Upgrading Activities

Number of Curriculum Upgraded	4
Number of Students Participating in Upgraded Courses:	n/a

Linkages Activities

Number of Technical Advisory Committee Meetings:	0
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Datasets acquired by the Derek Gordon Data Bank, Sir Arthur Lewis Institute of Social and Economic Studies, University of the West Indies

The following list represents datasets available in the data bank as of March 2001.

A. Jamaica Census - 1991

B. Jamaica Survey of Living Conditions - 1988 - 1999 (approximately 2000 households with 7500 individuals per annum)

- 1989 - Expanded health module; fertility last pregnancy.
- 1990 - Expanded education.
- 1991 - Expanded housing.
- 1992 - Poverty (parish data — larger sample size).
- 1993- Employment & time use social mobility.
- 1994 - Experimental consumption modules.
- 1995 - Persons aged 60+ years.
- 1996 - Consumer satisfaction with health services; child fostering.
- 1997 - Employment and earnings, adequacy of income, savings, money borrowed and money lent.
- 1998 - No special focus but larger sample size to provide parish data.
- 1999 – Coping strategies

C. Health - Jamaica

1. Vital registration of births and deaths data, 1974-90
2. In-patient utilisation by diagnosis - 1993, 1994, 1996
3. Perinatal Morbidity and mortality Study
4. Contraceptive prevalence surveys – 1989, 1993 and 1997

D. Education - Jamaica

1. Data on enrolment and attendance at primary and all-age schools
2. Literacy surveys 1994, 1999

E. Jamaica - Labour force survey 1974- 1996

F. Guyana Survey of Living Conditions - 1994

G. Caribbean Development Bank Poverty Assessment Studies for:

1. St. Lucia -1994
2. Belize - 1995
3. St. Vincent & the Grenadines - 1994
4. Grenada - 1998

H. Barbados Labour Force Survey with Poverty & Living Conditions Module - 1996

I. Belize Census – 1991

J. External Trade Data 1990 – 1999 - Jamaica and Trinidad

K. Political Attitudes and Party Choices in Contemporary Trinidad (Prof. Ryan SURVEY 25/03/2000)

All datasets are available in SAS, ASCII, or SPSS but can be converted to the software format of choice.

Annex 2. Project Costs and Financing

MINISTRY OF EDUCATION YOUTH & CULTURE
REFORM OF SECONDARY EDUCATION (ROSE)
STATUS REPORT on FINANCIAL EXPENDITURE
INCEPTION to APRIL 30, 2001

COMPONENT	ORIGINAL (APPRAISAL) PROJECT COSTS			EXPENDITURE INCEPTION - APRIL 30, 2001			VARIANCE ON PROJECT COSTS AS AT 2001			PERCENTAGE OF APPRAISAL		
	TOTAL US\$	IBRD US\$	GOJ US\$	TOTAL US\$	IBRD US\$	GOJ US\$	TOTAL US\$	IBRD US\$	GOJ US\$	TOTAL	IBRD	GOJ
SECONDARY REFORM SUPPORT												
1. Curriculum Development	2,300,000	1,400,000	900,000	1,130,859	888,846	242,013	1,169,341	511,354	657,987	49	63	26.89
2. Training	6,400,000	6,300,000	100,000	6,427,982	6,284,807	163,175	-27,982	35,193	-63,175	100	99	163.17
3. Educational Support Materials	2,400,000	2,400,000	0	1,405,907	1,283,488	122,419	994,094	1,116,512	-122,419	59	53	
4. Textbooks	1,300,000	1,200,000	100,000	544,138	521,048	23,090	755,862	678,952	76,910	42	43	23.09
5. Infrastructure	19,800,000	16,400,000	3,400,000	21,084,030	16,977,891	4,106,138	-1,284,030	-577,891	-706,138	106	104	120.77
6. Upper Secondary Support	1,400,000	1,400,000	0	267,261	115,565	151,696	1,132,739	1,284,435	-151,696	19	8	
SUB-TOTAL	33,600,000	29,100,000	4,500,000	30,859,976	26,051,446	4,808,530	2,740,024	3,048,554	-308,530			
EVALUATION & MANAGEMENT STRENGTHENING												
1. Exams Rationalization	900,000	600,000	300,000	1,962,890	1,773,200	189,690	-1,062,890	-1,173,200	110,310	218	296	63.23
2. Management & MIS	1,300,000	1,200,000	100,000	1,883,210	742,413	1,140,797	-583,210	457,587	-1,040,797	145	62	1140.80
3. Public Awareness Campaign	300,000	200,000	100,000	121,899	119,395	2,504	178,101	80,605	97,496	41	60	2.50
4. Programme Evaluation	600,000	500,000	100,000	439,032	308,126	130,906	160,968	191,874	-30,906	73	62	130.91
5. Phase II Preparation	400,000	400,000	0	8,949	8,949	0	391,051	391,051	0	2	2	
SUB-TOTAL	3,500,000	2,900,000	600,000	4,415,981	2,952,083	1,463,897	-915,981	-52,083	-863,897			
TOTAL PROJECT COSTS	37,100,000	32,000,000	5,100,000	35,275,957	29,003,529	6,272,428	1,824,043	2,996,471	-1,172,428			

Notes

- The above figures includes amount paid to suppliers from the Special account and not yet brought to Expenditure as follows:-
Curriculum Development ==> US\$161,437.85
Educational Support ==> US\$ 25,024.76
Infrastructure ==> US\$ 30,484.48
Exam Rationalisation ==> US\$ 16,150.40

- Original Project Costs taken from page 26 Staff Appraisal Document.

STATUS REPORT on FINANCIAL EXPENDITURE
INCEPTION to APRIL 30, 2001

COMPONENT	ORIGINAL (APPRAISAL)	EXPENDITURE INCEPTION (BALANCE ON PROJECT COSTS)		
	PROJECT COSTS	TO APRIL 30, 2001	AS AT APRIL 30, 2001	PERCENTAGE OF APPRAISAL
	TOTAL US\$	TOTAL US\$	TOTAL US\$	
<u>SECONDARY REFORM SUPPORT</u>				
1. Curriculum Development	2,300,000	1,130,659	1,169,341	49
2. Training	6,400,000	6,427,982	(27,982)	100
3. Educational Support Materials	2,400,000	1,405,907	994,094	59
4. Textbooks	1,300,000	544,138	755,862	42
5. Infrastructure	19,800,000	21,084,030	(1,284,030)	106
6. Upper Secondary Support	1,400,000	267,261	1,132,739	19
SUB-TOTAL	33,600,000	30,859,976	2,740,024	
<u>EVALUATION & MANAGEMENT STRENGTHENING</u>				
1. Exams Rationalization	900,000	1,962,890	(1,062,890)	218
2. Management & M&S	1,300,000	1,883,210	(583,210)	145
3. Public Awareness Campaign	300,000	121,899	178,101	41
4. Programme Evaluation	600,000	439,032	160,968	73
5. Phase II Preparation	400,000	8,949	391,051	2
SUB-TOTAL	3,500,000	4,415,981	(915,981)	
TOTAL PROJECT COSTS	37,100,000	35,275,957	1,824,043	

Notes

- 1) The above figures includes amount paid to suppliers from the Special account and not yet brought to Expenditure as follows:-
 - Curriculum Development ==> US\$161,437.85
 - Educational Support ==> US\$ 25,024.76
 - Infrastructure ==> US\$ 30,484.48
 - Exam Rationalisation ==> US\$ 16,150.40
- 2) Original Project Costs taken from page 26 Staff Appraisal Document.

ROSE AND SPA PROJECT COSTS BY PROCUREMENT ARRANGEMENTS
APPRAISAL ESTIMATE

CATEGORY	ICB	NCB/LCB	OTHER	SPA ***	TOTAL COST
Consultancy Services & Training (Technical Assistance, Training, Fellowships, Studies, Workshops, Pilot Programms)	- -	- -	12,900,000 (12,900,000)	1,700,000 -	14,600,000 (12,900,000)
Goods (Equipment, Furniture, Vehicles, Educational Materials, Textbooks)	3,700,000 (3,700,000)	600,000 (600,000)	1,400,000 (1,400,000)	200,000 -	5,900,000 (5,700,000)
Civil Works	3,900,000 (3,400,000)	11,000,000 (9,500,000)	- -	-	14,900,000 (12,900,000)
Incremental Recurrent Costs (Operation & Maintenance, Miscellaneous Supplies & Field Costs, Incremental Staff Costs)		-	4,500,000 (500,000)	800,000	5,300,000 (500,000)
GRAND TOTALS	7,600,000 (7,100,000)	11,600,000 (10,100,000)	18,800,000 (14,800,000)	2,700,000 -	40,700,000 (32,000,000)

ROSE AND SPA PROJECT COSTS BY PROCUREMENT ARRANGEMENTS

LATEST ESTIMATE

INCEPTION to APRIL 30, 2001

CATEGORY	ICB	NCB/LCB	OTHER	SPA ***	TOTAL COST
Consultancy Services & Training (Technical Assistance, Training, Fellowships, Studies, Workshops, Pilot Programms)	480,052 (480,052)	9,823,600 (8,555,642)	3,623,258 (3,478,328)	1,566,311 (1,443,136)	15,493,221 (13,957,157)
Goods (Equipment, Furniture, Vehicles, Educational Materials, Textbooks)	826,583 (826,583)	2,731,280 (2,281,280)		354,280 (347,626)	3,912,143 (3,455,489)
Civil Works	- -	17,520,397 (12,704,094)			17,520,397 (12,704,094)
Incremental Recurrent Costs (Operation & Maintenance, Miscellaneous Supplies & Field Costs, Incremental Staff Costs)	- -		1,363,355 (499,942)	618,947 (634,413)	1,982,302 (1,134,356)
Special Account (to be reconciled)				95,460 (133,203)	
GRAND TOTALS	1,306,635 (1,306,635)	30,075,277 (23,541,016)	4,986,613 (3,978,270)	2,634,998 (2,558,378)	38,908,063 (31,251,097)

Note: SPA financial data were not broken down by procurement method. Dutch Guilders were converted to US\$.

Exchange rates fluctuation needed to be reconciled. Final audit report for 2001 will have precise figures.

Due to exchange rates fluctuations over time, there are discrepancies between the figures reported in Dutch Guilders and those in US\$. The final audit report for the year ended March 31, 2001, which is due in September 30, 2001, will have the final figures.

SPA Disbursement by Category in Dutch Guilders, June 25, 2001

	Category	Undisbursed	Disbursed	Total	Disbursed as % of total
1	Consultants' Services	318,427.72	2,829,771.3	3,148,199.00	89.9%
2	Goods	17,200.30	632,799.7	650,000.00	97.4%
3	Incremental Costs	-	521,600.0	521,600.00	100.0%
3-A	Incremental Costs	(41,118.92)	423,358.9	382,240.00	110.8%
3-B	Incremental Costs	-	162,900.0	162,900.00	100.0%
3-C	Incremental Costs	1,135.32	57,124.7	58,260.00	98.1%
Special Acct.		(97,099.29)	97,099.3	-	
Total		198,545.13	4,724,653.9	4,923,199.00	96.0%

Source: World Bank's Integrated Controller's System

Annex 3. Economic Costs and Benefits

At the preparation stage, there was no economic cost-benefit analysis. In the absence of a bench mark, the ICR did not conduct one.

(a) Missions:

- 44 -

04/04/1996	1 Task Team Leader 1 Economist 1 Sr. Education Adviser 1 Architect 1 Procurement/Audit	U	S
10/05/1996	1 Task Team Leader 1 Civil Engineer	U	S
05/09/1997	Task Team Leader 1 Examinations Specialist 1 Task Assistant 1 School-Based Management 1 Accountant 1 Civil Engineer 1 Evaluation Specialist 1	S	S
09/26/1997	Task Team Leader Education Specialist Accountant Engineer	S	S
03/30/1998	1 Task Team Leader 1 Financial Analyst 1 Sr. Economist 1 Social Protection Specialist	S	S
10/02/1998	1 Task Team Leader 1 Procurement Specialist 1 Sr. Economist 1 Consultant 1 Consultant 1 Consultant	S	S
03/05/1999	1 Task Team Leader 1 Science and Sec. Educ. 1 Training of Teachers 1 Accounting & Auditing 1 Civil works 1 Procurement Procedures 1 Education Statistics 1 Knowledge Management 1 Examination Specialist 1 Permanent Secretary 1 Director, Planning & Dev.	S	S

ICR	10/28/2000	1	Task Team Leader	S	S
		1	Procurement Specialist		
		1	Consultant		
		1	Financial Management		
	1/29/2001		Task Team Leader		
			Sector Leader		
			Senior Education Specialist		
			Senior Education Specialist		

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ ('000)
Identification/Preparation	74.0	193.0
Appraisal/Negotiation	20.0	49.1
Supervision	208.6	648.0
ICR	30	50
Total	332.6	940.1

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	Rating				
☐ Macro policies	☐ H	☐ SU	☐ M	☐ N	☒ NA
☐ Sector Policies	☒ H	☐ SU	☐ M	☐ N	☐ NA
☐ Physical	☐ H	☒ SU	☐ M	☐ N	☐ NA
☐ Financial	☐ H	☒ SU	☐ M	☐ N	☐ NA
☐ Institutional Development	☐ H	☒ SU	☐ M	☐ N	☐ NA
☐ Environmental	☐ H	☐ SU	☐ M	☐ N	☒ NA
Social					
☐ Poverty Reduction	☐ H	☐ SU	☐ M	☐ N	☒ NA
☐ Gender	☐ H	☐ SU	☐ M	☐ N	☒ NA
☐ Other (Please specify)	☐ H	☐ SU	☐ M	☐ N	☒ NA
☐ Private sector development	☐ H	☐ SU	☐ M	☐ N	☒ NA
☐ Public sector management	☐ H	☐ SU	☐ M	☐ N	☒ NA
☐ Other (Please specify)	☐ H	☐ SU	☐ M	☐ N	☒ NA

The above ratings pertain to ROSE. Below is relevant to SPA.

SPA

Macro policies	NA
Sector policies	NA
Physical	SU
Financial objectives	NA
Institutional development	SU
Environment	NA
Social	
Poverty reduction	SU
Gender	SU
Other	M
Public sector management	NA
Private sector development	NA
Other	NA

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

6.1 Bank performance

Rating

☐ Lending	☐ HS	☒ S	☐ U	☐ HU
☐ Supervision	☐ HS	☒ S	☐ U	☐ HU
☐ Overall	☐ HS	☒ S	☐ U	☐ HU

6.2 Borrower performance

Rating

☐ Preparation	☐ HS	☒ S	☐ U	☐ HU
☐ Government implementation performance	☐ HS	☒ S	☐ U	☐ HU
☐ Implementation agency performance	☐ HS	☒ S	☐ U	☐ HU
☐ Overall	☐ HS	☒ S	☐ U	☐ HU

The above pertains to the ratings of ROSE. Below are the ratings of SPA.

SPA

Bank performance

Grant application & project design	S
Supervision	S
Overall	S

Borrower performance

Preparation	HS
Government implementation performance	S
Implementation agency performance	S
Overall	S

Annex 7. List of Supporting Documents

Staff Appraisal Report Jamaica Reform of Secondary Education March 4, 1993

Loan Agreement (Reform of Secondary Education Project) between Jamaica and International Bank for Reconstruction and Development. May 7, 1993

Netherlands Grant Agreement (Reform of Secondary Education) between Jamaica and International Bank for REconstruction and Development as Administrator on behalf of the Minister for Development Cooperation of the Netherlands, September 1, 1993.

Reform of Seconarcy Education Amendament to Loan Agreement, July 9, 1997

Aid-Memoires of World Bank Supervision Missions, 1993 to 2000

Jamaica Secondary Education: Improving Quality and Extending Access (Two Volumes), December 17, 1999. World Bank Report No. 19069-JM, Washington, DC.

Bramley, Tom. Jamacia ROSE Project: A multi-level analysis of 1999 JHSC scores matched with 1996 GSAT scores, University of Cambridge Local Examinations Syndicate, March 2000. Mimeo.

Planning Institute of Jamaica. Jamaica Survey of Living Conditions. Kingston, Jamaica. Various Years.

University of Cambridge Local Examinations Synidcate. The Ministry of Education, Youth and Culture Junior High School Examination Statistics Reports. Various Years. Mimeo

Evaluation Reports from the MOEYC Evaluation Units, various years.

Research Reports (funded under Research Agenda). various years.

Blank, Lorraine, Margaret Grosh and Pauline Knight "Building Analytic Capacity in Conjunction with LSMS Surveys: The Jamaica Story" Research Project 679-61 Improving the Policy Relevance of Living Standards Measurement Study Surveys Research Report Series, No. 1, Development Research Group, World Bank, Washington, D.C.

Blank, Lorraine and Margaret Grosh "Using Household Surveys to Build Analytic Capacity" (August 1999) *World Bank Research Observer*, Washington, D.C.

Annex 8. Beneficiary Survey Results

Beneficiary surveys of principals and teachers, and tracer studies of students who went through the ROSE Program were undertaken by the Evaluation Unit. These studies found discernible differences the project has made in terms of improving student self-image, better test scores, better opportunity for placement, and higher success rates in the next level of education.

Annex 9. Stakeholder Workshop Results

Feedback from the Eleven Working Groups at the Stakeholders' Workshop, February 7, 2001

1. The Curriculum Groups

Strengths:

- Process for the provision of textbooks put in place
- Common programme and assessment enabled smooth transfer of students
- Strong public relations through community meetings, PTA and media
- Objectives are clear, precise, and achievable (especially for math)
- Objectives (especially for Math) provide a good base for CXC – articulation with primary education and CXC
- Group work helps slow learners to develop a sense of achievement
- Curriculum forces the teachers to work together – Fosters common planning time
- Integration and infusion across the different subject areas
- Students are exposed to courses that can help them make better choices at grade 10
- Students involved in sharing, cooperative learning, respecting others, responsibility
- Curriculum enables students to use projects for developing research skills
- Use of indigenous materials, process skills and multilevel teaching, fostered
- Training of administrators (HODs), supervisory officers, teachers, trainers
- Monitoring and supervision of implementation schedule
- Adequate provision of guides and support materials that were available in the schools and their use monitored
- Development broad-based, allowed for community initiative
- Integration/infusion of career education in each subject area
- Curriculum forces the teacher to prepare
- Curriculum lends itself to activities
- Curriculum focuses on skills
- Students more involved with their environment
- Alternative forms of assessment promoted

Weaknesses:

- Should not have concentrated on sore areas only in the initial stages
- Insufficient involvement of teachers' colleges in the initial stages
- Specialist teachers by facilities absent in most All-Age schools militates against access and equity in the development of quality education
- Management of multi-level teaching needed greater attention
- Regarded by some schools as just another project and was not embraced fully
- All-Age Schools not equipped to manage curriculum
- Junior High assessment way above the level of content in curriculum
- Continuous assessment component not brought fully on stream
- Curriculum need special reading component aimed at addressing reading problem

Recommendations:

- Additional teachers to deal with some subject areas (e.g. R&T)
- Continuous training/upgrading of teachers
- More coordination and integration among the various players e.g. MOEC, schools, teachers' colleges, for effective implementation
- Implement a reading program
- Equip schools for science and R&T
- Expand JHSC so that students do more than multiple choice exams
- Continuous in-service training in-house. Curriculum implementation committees should be set up in schools
- Make curriculum guides available to any stakeholders at a cost
- Greater attention to be paid to primary-trained teachers who are expected to operate at Grades 7 to 9 as subject specialists

2. Pre- and In-service Training Group**Strengths:**

- Established teams of trainers
- Centralised management of training teams (JBTE)
- Autonomy and flexibility of training teams
- Allowed for the growth and development of the trainers
- Involvement of all the stakeholders
- SMART targets were set and constantly reviewed
- Students actively involved in their own learning
- Allowed for the identification and sharing of best practice

Weaknesses:

- Limited number of trainers to cover field
- Insufficient training for teachers
- Absence of policy to make training mandatory
- Absence of parallel in-service and pre-service training
- No provision for involvement of independent schools in training
- Insufficient institutional materials and facilities to support implementation of training
- Competence of some teachers to apply skills etc

Recommendations:

- Realistic workload to allow effective training/monitoring
- Adequate notice for training workshops
- Training must be mandated by policy
- Pre-service and in-service training must be run in parallel
- Allow scope for innovations for supplement/provide resources
- Make provision for more extensive training
- Need for standardization
- Supervision must be tri-partite and formative
- Independent schools must be included
- Tertiary training must receive adequate resources

- Use recommendations to inform further implementation
- Re-visit training model to ensure sustainability

3. The Textbooks Group

Strengths:

- Textbooks developed in core subject areas, except R&T (i.e, science, maths, social studies, and language arts)
- Textbooks cater to all levels (especially in language arts)
- Officers are deployed in different areas (regions)
- Textbooks support the new curriculum
- Content is more relevant
- High take-up at the secondary level (in High School)
- Provision to schools is at 100%, although there is need to promote access
- Implementation shift focuses to students
- Ongoing training at the in-service level

Weaknesses:

- Low take-up of textbooks at all-age schools and primary/junior highs
- Foundation 1 (0-3) not accomplished
- Inadequate training at the training institutions (with TBS)
- For R&T—unable to comply with one textbook
- Textbooks not developed for entire core subjects

Recommendations:

- More attractive libraries to promote reading
- Relevant textbooks for R&T
- Include training at training institutions (with TBS)
- Set fees based on SES of schools/families
- Revise Foundation 1 (0-3) to meet non-readers
- Revisit utilization of substitutes at all-age schools and primary/junior highs

4. The Civil Works Group

Strengths:

- Reporting and Monitoring System
- Management of the project by the Ministry
- Timely honouring of payment certificates to contractors
- The implementation process enhanced the accountability aspects of the project—greater transparency in contracting processes
- Allocation of work amongst consultants—zoning, into manageable amounts

Weaknesses:

- Criteria for selection of schools need to be reviewed, data to be current (i.e., refurbish only, 1-stream, etc.)
- Weaknesses in consultants' contracts with MOEC – results, accountability, performance, penalties

- Facilities provided did not always meet the schools' needs
- Many contracts terminated or non-performing
- Contractors have experienced cash-flow problems
- Poor performance of the clerk of works: absenteeism, lack of experience

Recommendations:

- Bidders to have pre-tender site meeting: time for work to be more realistic, bidders to provide method statement and work plan
- Ministry's direct involvement in purchasing materials, reduce costs, assists in contractors' cash flow
- More stringent selection process of contractors (strengthen evaluation teams)
- Adjust payment schedule of consultants, larger percentage for post-contract administration
- Revise and redraft contract
- Time between planning and implementation to be reduced to avoid demand change (i.e., increased enrollment)
- Greater involvement of principals and the community from the planning stage, principals sign-off on plans
- Engage higher level personnel directly by the MOEC (i.e., junior local engineer, closer supervision)
- Focus more on safety to children during construction and of finished product

5. The Resources and Technology Group

Strengths:

- The thematic approach provides greater integration of contents areas
- Curriculum/teacher's guide. The second draft is well structured and provides useful information
- Training accessible to teachers and administration
- Training has increased awareness to different approaches
- Has increased collaborative planning skills
- Examination format correlated with instructional methodology
- Supervision provided on a departmental basis proved to be more beneficial
- Teachers are being more innovative in their methods of delivery presentation
- Students are highly motivated and able to work more independently and cooperatively

Weaknesses:

- Inability to provide adequate training for all teachers at any given time
- Not enough follow up due to financial constraints and lack of personnel
- Each module section is not easily identified
- Many students are not able to perform satisfactorily due to low levels of literacy
- Absence of a school based assessment programme
- Inadequate internal monitoring by R&T co-ordinators
- Not enough officers to supervise the programme in the schools
- Student teacher ratio too high to enable effective delivery of the practical aspects of the subject
- Many teachers are still using traditional method of instruction
- Insufficient resources and space to facilitate the delivery process
- Large class size and lack of resources impact negatively on student performance
- R&T should be more performance based

Recommendations:

- More needs to be done in guiding teachers in applying R& T concepts to individual modules
- All teachers participating in the programme must have access to both guides and be encouraged to use them more in planning
- Furnish trainers with adequate supplies of resources for training
- Training should be on-going and frequent
- Supervision : Principals should be proactive as instructional managers
- Presentation : Greater articulation must be established between teachers of grade 7-9 and those of grades 10-11
- Follow up study should be established in order to assess impact
- Issues of class size and resources need to be addressed

6. The Examination Group

Strengths:

- Test accessible by all school types
- Tables of specification effectively used
- Performance certificate provided for all participants
- Noted improvement of mean scores
- Training of 600 teachers to set and mark exams (ie 350 /250 respectively)
- Sensitization for all schools sitting the examination
- All test are equated
- Feed back mechanism developed and implemented
- Proper test development procedure were followed

Weaknesses:

- J.S.C not phased out and SSC not scaled down
- Currency of certification not as strong in secondary schools
- Assessment students are restricted in their choice of questions from the modules in the JHS examination

Recommendations:

- Feedback workshops to be held regularly for all participating schools
- Certificate should identify R&T modules done by students
- All subjects should be compulsory for all schools
- Schools should be given access to individual student's profile
- Ensure availability of adequate spaces at grade ten
- Students should have at least two questions from which to choose within each module in the Junior High School certificate examination

7. The Evaluation Group

Strengths:

- Training of evaluation unit staff.
- International exposure of the unit at evaluation conferences.
- Training of education officers in evaluation skills and information

- Impact on other components through use of findings.
- Ability to assist student researchers in tertiary institutions
- Evaluation data has been used by schools to improve practices
- Recognition of the importance of evaluation by MOEC.
- Ability to inform policy through evaluation findings
- Ability to inform other areas of the MOEC.
- The existence of the evaluation unit which did not exist before.

Weaknesses:

- Staff complement of 4 officers is small.
- Insufficient information to the public.
- Insufficient analysis of causes of success in school performance
- Quantitative design did not sufficiently explain reasons for successes and failures

Recommendations:

- The unit should find innovative ways of reporting to the public
- MOEC should increase staff complement
- MOEC should put systems in place so that records of school leavers are kept.
- The unit should place greater emphasis on qualitative research in order to explain successes and failures

8. The Continuous Assessment Group

Objectives:

- To incorporate continuous assessment in the curriculum/instruction
- To align assessment activities to the curriculum/instruction
- To improve record keeping systems
- To standardize assessment practices across all classrooms (school types)
- To give students, parents, teachers on-going information on the achievement of learning targets
- To encourage students to take responsibility for their own learning

Strengths:

- A more varied and creative approach in assessing students
- A standardized approach to assessment across school types
- Wide collaboration of classroom teachers/officials/ROSE trainers in the development of the unit.
- Enable teachers to be more focused in lesson planning methodology and content.
- Improvements in record-keeping.
- Increase the teachers' strength and ability in assessment

Weaknesses:

- Lack of resources to reproduce worksheets in quantities for whole class.
- Lack of resources for whole class activities, especially in S&T.
- Activities versus range of ability levels
- Difficulty in completing some units because of the structure of timetables in some schools.

Recommendations:

- Both the curriculum and assessment must consider availability of resources in the schools
- Further development of assessment units in order to have a bank.

- More guidance for teachers in using the assessment units.
- More differentiation in activities to suit the literacy level of some students.
- Complete pilot of units for an entire year for grades 7 – 9 accompanied by teacher training.
- Further editing and formatting of assessment units for publication.
- Help schools to adjust their time-tables in a more realistic way for some subjects.

9. The Upper Secondary Group

Strengths:

- Development of tripartite relationship: school-student-parent
- Students develop awareness of own abilities – what they could achieve academically
- Leadership skills and self-expression developed
- Professional development of teachers
- Developed self-esteem and self-confidence
- The relevance of the programme: the core plus extended school experience
- Teachers' awareness of the importance of paying special attention to students
- The importance of guidance and counselling with emphasis on career education
- Importance of parental involvement
- Teamwork – integrated approach to learning
- Importance of teaching student and not subject – rate at which students learn
- Instructions targetting different types of intelligence to facilitate learning
- Access, equity, quality and relevance – all embodied in the programme

Weaknesses:

- Physical space problem
- Administrative bungling in schools
- Teacher attrition in schools
- Lack of serious planning prior to start of pilot in some schools
- Lack of adequate staffing
- Teacher selection to match to students
- Sense of isolation of students, especially after graduation of peers
- Lack of family support for students
- Insufficient sensitization to programme

Recommendations:

- Sensitization of all stakeholders – e.g., teachers, students, parents
- Continuous training for teachers
- More building, space, equipment
- Summer remedial instructions
- Assignment of teachers with 'right' attitude and special interests in weaker/slower students to

Route II group

- Make programme universal '7-9' '10-12'
- Better home-school link
- Lower student-teacher ratio
- Guidance and counselling; career education; community service; work experience and other elements of extended school experience for all high/secondary schools

10. The Project Management Group

Strengths:

- Matrix-type management for continuity and sustainability and ownership
- Monthly meeting allowed for sharing, resolution, identification, etc.
- Informal collaboration outside of regular meeting
- Government funded reform benefited from the Project
- High classroom-teacher involvement in curriculum development
- Bank's inclusion of experts on supervision missions

Weaknesses:

- Bureaucratic delays in procurement
- Insufficient collaboration between trainers and officers
- Delay of disbursement of cheques
- Project management inversely affected by cash-flow
- Civil works lags
- Materials component (distance education) not successful, content developers had too many other responsibilities
- Inadequate communication facilities for all levels

Recommendations:

- Install email at least in the secretariat
- More intense training in procurement procedures
- Clarify roles of teacher-trainer, specialists, and education officers
- Develop manageable portfolio of projects (PSIP)
- Establish a commercial bank account
- Employ project manager and civil works personnel during project preparation
- Engage school principals in project development and implementation
- School Development Plan should be linked to ROSE project
- For distance education, have link arrangements with experts and expert institutions.
- For distance education: training and material developers for program needs to be on a full time basis

11. The Financial Management Group

Strengths:

- The accuracy and comprehensiveness of the financial reports
- Good collaboration between project unit and MOFP
- The prompt response of the project management unit to the financial need of the project
- Acceleration of implementation process, hence speedier drawing down from the World Bank
- We have moved from a manual system of accounting to a partial computerization

Weaknesses:

- GOJ has to finance 100% of all unfinished civil works contracts
- Private auditors lack full knowledge of government accounting procedures (quality needs)

improvement)

- Slow pace of disbursing cheques, Lack of control of managing payments.
- Design and implementation of the project. Skewed distribution in allocation.
- Termination of contracts due to poor performance let do negative impact on financing
- It costs the government more money to complete the civil works component of civil works
- Dynamics of the country economic situation (eg., exchange rate, inflation, et al.)

Recommendations:

- Complete computerization with establishment of a database
- More training and exposure of relevant personnel to World Bank procedures (procurement, etc.)
- Use auditor general office for auditing functions
- We should have our own local bank account
- The World Bank should consider retroactive funding for aspects of the projects, such as civil works, before
startup of the project.
- Improve contract administration and monitoring of project.

MAP SECTION

