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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

APPRAISAL
OF AN
EDUCATION PROJECT
IN
GUYANA

January 13, 1969

Education Projects Department

CURRENCY EQUIVALENTS

US\$1 = G\$2
US\$1 million = G\$2 million
~~US\$1 = G\$0.5~~ ~~G\$1 = US\$0.5~~
G\$1 million = US\$ 0.5 million

GLOSSARY

GCE = General Certificate of Education
GCE "O" level = GCE Ordinary level
(after grade 11)
GCE "A" level = GCE Advanced level
(after grade 13)

Multilateral Secondary School = School which, after a common base of general studies, has a diversified upper cycle in which students are screened according to aptitude, ability and interest, into a number of distinct program channels, e.g., humanities, science, technology, agriculture, commerce.

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This report is based on the findings of a mission to Guyana in July-August, 1968 composed of Messrs. F. Lethem (economist), W. Adamson (general educator), S. Kadleigh (architect) and J. C. Jones (consultant, technical education).

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GUYANA
BASIC DATA -1967

A. General

Area: a. total	83,000 sq. miles
b. cultivated (est.)	1,800 " "
Population: a. total	693,000 (est.)
b. growth rate (net)	2.7% p.a.
Density: a. per square mile	8
b. per square mile cultivated	about 385
Labor Force (est.)	185,000
Unemployment rate (est.)	20 %
Gross Domestic Product ^{1/}	G\$377.5 million
GDP 1960-67 current growth rate (annual average)	6.25%
Distribution of GDP and employment, by branch:	

	<u>GDP</u>	<u>Employment</u>
Agriculture	23%	32%
Mining	17%	3%
Manufacturing	13%	17%
Government	13%	18%
Other	34%	30%

Income per capita	US\$240
Government current receipts as % of GDP ^{1/}	24.6%

B. Education

Population aged 6-11 (est.)	131,000
Population aged 12-16 (est.)	91,000
Primary school enrollment (ages 6-11) as a proportion of 6-11 age group	90%
School enrollment among the 12-16 age group	
a. Quality secondary schools (Government and Aided)	4%(est.)
b. All secondary level schools (idem)	18%
c. All schools (incl. primary)	69%
Literacy rate (1960)	83%
Percentage of GDP spent on education (total expenditure)	5%
Education expenditure per capita	US\$15
Percentage of Govt. current revenues spent on education	16%

^{1/} At current factor cost

GUYANA

APPRAISAL OF AN EDUCATION PROJECT

SUMMARY

i. The Government of Guyana has applied to the International Development Association/International Bank for Reconstruction and Development for financial assistance for a project which consists of:

- (a) construction and equipment of
 - (i) one new and expanded primary teacher training college, and
 - (ii) seven multilateral secondary schools (glossary) and
- (b) related technical assistance

ii. The proposal, as originally submitted, contained one teacher training college, and ten multilateral and three vocational secondary schools. Following discussions with the appraisal mission, and to achieve consistency in educational policy, the proposal was revised to one teacher training college and 12 multilateral secondary schools. However, because of the country's limited financial and managerial resources, it was decided to concentrate on the limited project outlined in para. (i) above, leaving the remainder of the revised proposal as a later project for interested assistance agencies.

iii. Guyana has a very high literacy rate (estimated at 83% in 1960). But education is deficient in terms of quality of staff, relevance of programs and facilities, and offers restricted access to secondary level. Therefore, the government has integrated into its overall development plans for 1969-73 provision for well balanced improvements in the education sector - of which the project constitutes two-thirds of the total investment.

iv. The primary schools accommodate 90% of the age group, but quality of output is poor. The quality of secondary education which enrolls about 16% of the age group is also poor, except for a few schools. As the lack of qualified teachers is the major cause, the first priority of the government's effort is teacher training.

v. The output from the proposed primary teacher training college with a capacity of 660 students would raise the proportion of trained teachers in primary education from less than 40% to 55% and together with in-service training, to more than 60% of the teaching force by 1975.

vi. Secondary education expansion is dependent on (a) the organization by January 1969 of a two-year post-secondary teacher training program to provide essential secondary teacher resources and (b) the training abroad of key personnel. For the latter, fellowships are expected to be obtained from multilateral or bilateral agencies in addition to those included in the project.

vii. The need to prepare secondary school leavers more broadly for further study and training, and to provide facilities for the part-time training of school leavers and adults calls for a replacement of the present narrowly academic programs of the secondary school. The proposed multilateral schools

would meet both of these needs and would serve as a guide for further reform of secondary education in Guyana.

viii. The educational plans now being implemented should also result in: (a) improved organization of the Ministry of Education, including establishment of an inspectorate for secondary education; (b) better utilization of all available facilities; (c) a wider entry and increased opportunities for choice in secondary education; (d) improved teaching conditions in secondary departments of primary schools; and (e) a higher proportion of qualified teachers throughout the service.

ix. The schools in the proposed project are appropriately located, with the intake into the schools assured. Accommodations are economical. Minimum hostel accommodation and staff housing are included where indispensable for proper operation of the schools. All eight sites are satisfactory and six are already acquired.

x. A Project Implementation Unit, responsible for the coordination of design, construction, and equipment procurement, would be set up in the Ministry of Education by the government with IDA/Bank financial assistance. It would supervise and coordinate preliminary studies, investigations, and designs submitted by a firm of architects to be appointed as consultants. Contract awards and procurement would conform to international bidding procedures.

xi. Estimated costs are acceptable, considering the relatively high cost of non-traditional building materials in Guyana, and site development works associated with land subject to flooding. The total estimated project costs are US\$10 million; the proposed credit/loan totalling US\$5.8 million equivalent would cover the direct and indirect foreign exchange component, including consulting services, training and interest and other charges during construction. Remaining local currency costs of the project would be financed by the Government.

xii. Construction contracts and procurement of furniture and instructional equipment would be under international competitive bidding. Local firms would be eligible to compete for furniture procurement totalling US\$340,000 under a preferential margin of 15%. In case local suppliers win all orders, then about 50% (\$170,000) of the furniture component would represent local currency financing. With design and construction extending over five years, the disbursement period would be about six years.

xiii. The projected increase in recurrent costs for education, over the period 1969-1975, will be moderate.

xiv. The project provides a suitable basis for blend financing consisting of an IDA credit of US\$2.9 million equivalent and a Bank loan of US\$2.9 million equivalent for a period of 30 years including a ten-year grace period.

APPRAISAL OF AN EDUCATION PROJECT IN GUYANA

1. INTRODUCTION

The Request

1.01 In late 1966, a Bank economic mission reviewed Guyana's 1966/1972 Development Program. It recommended not only an increase in investment expenditure on education to about G\$14 million, but also a new strategy for developing Guyana's human resources, whereby public investment would be substantially reduced in primary education and would instead be concentrated on training of teachers, higher and technical education, and on establishing a multilateral pattern of education to provide manpower more compatible with the country's development needs. In response to a government request, a joint UNESCO/Bank reconnaissance mission visited Guyana in June, 1967 and outlined the scope of a possible education project to meet the above mentioned objective. A follow-up UNESCO mission in March-April, 1968, helped to prepare an education proposal which was submitted by the government for the Bank Group's consideration in May, 1968. A mission composed of Messrs. F. Lethem (economist), W. Adamson (general educator), S. Kadleigh (architect), and J. C. Jones (consultant, technical education), visited Guyana in July-August, 1968 to appraise this proposal.

1.02 The project, as originally presented, consisted of one primary teacher training college, ten multilateral secondary schools (four new and six conversions) and three vocational schools.

1.03 Following discussions during appraisal (paras. 319, 320) and thereafter, the Guyanese authorities proposed the division of the project into two phases and requested the Bank Group's financing for Phase I, consisting of:

- a Government Training College to prepare teachers for primary schools;
- five new multilateral secondary schools and conversion of two existing secondary schools to the multilateral type;
- some essential technical assistance and fellowships; and
- the establishment of a unit to supervise the execution of the project.

The total estimated project cost is US\$10 million equivalent.

Socio-Economic Background

1.04 Guyana's population, economic activities, and social services are principally concentrated in a 10-20 mile wide coastal strip. The only other major population center is at Wismar, across the Demerara river from the bauxite extraction plants in Mackenzie (Map).

1.05 The population of Guyana is about 693,000 inhabitants and is a composite of many races: East Indian, African, Amerindian and European. Traditionally, the population of Indian origin is engaged in agriculture and the population of African origin in administration and urban employment,

but improving educational opportunities have caused both groups to compete for urban skilled employment. As in other Caribbean countries, subsistence agriculture is minimal and the economy is marked by high unemployment (about 20% in 1967).

1.06 Within a political and social context which does not encourage the promotion of family planning, the school-age population has been growing at an estimated 3.2 - 3.6% p.a. and primary school leavers, for whom too few jobs are available, create considerable demand for additional schooling.

1.07 There is an acute shortage of professional, technical and skilled workers, resulting from the past inadequate structure of the education and training system, which was of the traditional grammar-school type, and from emigration, which reaches up to 20% per year for certain of these categories (para. 2.18). High emigration rates are related to socio-historical conditions in Guyana itself, including poor educational opportunities, and to better economic prospects in several other English speaking countries, where the selectivity of immigration laws encourages the trend.

1.08 It is not anticipated that improvement in Guyana's education system in itself could reverse emigration trends. But this, combined with a better investment climate resulting in the creation of more jobs and broader promotion opportunities could help slow down emigration. Full-time employment is projected to reach 190,000 by 1975 with GDP growing at an average annual rate of 5.2% per annum from 1965 to 1975 (Chart 1).

1.09 Educational developments in Guyana are thus expected to contribute to, and take place within, a more dynamic development perspective than experienced in the recent past.

2. PRESENT SYSTEM OF EDUCATION AND TRAINING

Structure and Administration

2.01 The structure of education in Guyana (Chart 2) follows roughly the tradition and pattern of the British system. At the national level, education authority is vested in the Ministry of Education; the Permanent Secretary is responsible for policy matters and administration and the Chief Education officer oversees the professional aspects of school organization and operation. The Ministry directly supports government schools, provides subsidies to aided schools operated by voluntary agencies, and is the major source of finance for the University of Guyana. The Ministry exercises little authority over aided schools and has no jurisdiction over private schools even on matters of teaching standards or reporting of enrollment; but the Ministry intends to improve the situation gradually.

2.02 To implement its rapidly expanding role and responsibilities, the Ministry structure is undergoing changes (Chart 3), and staffing will need to be strengthened, especially in professional education specializations. Reorganization is expected to be completed by 1972.

2.03 A primary school inspectorate, staffed by District Education Officers, is responsible for supervision and program review. These officers are unduly burdened with administrative duties and their number and professional preparation are inadequate. No secondary school inspectorate exists. The Ministry recognizes these weaknesses and is planning to reorganize and strengthen its supervisory services by establishing a secondary school inspectorate and by appointing trained additional staff, especially in the subjects of science, English, social science, and technology (Annex 1A). A planning division, established in the Ministry in 1962, has inadequate numbers and insufficiently trained personnel. To strengthen the unit, the Ministry has requested the services of an educational planner from UNDP (Annex 1A) and fellowships to train local counterparts. Assurances have been obtained from the government that it will take the above measures.

Growth of the System

2.04 The education pyramid (Chart 4) portrays the enrollment distribution in 1966-67, following the recent and rapid expansion of the education system in response to demand at all levels. The pattern of enrollment growth in public supported institutions from 1959 through 1967 (Chart 5) is summarized below:

<u>Level</u>	<u>Enrollment Pattern, 1959-67</u> (in thousands)			<u>Average Annual Increase</u>	
	<u>1959</u>	<u>1967</u>	<u>Increase</u>	<u>Amount</u>	<u>Percent</u>
Primary	105.5	138.8	33.3	4.1	3.5
Secondary ^{1/}	26.7	50.9	24.2	3.0	8.5
Higher Education	.1 ^{2/}	.5	.4	.1	27.0

^{1/} Government and Aided secondary schools and secondary departments of primary schools.

^{2/} University began operation in 1963.

Estimates of future enrollment are given in Annexes 2 A and B.

Primary Education

2.05 Primary education consists of six years of schooling, free and compulsory. About half of the 400 primary schools are church owned and controlled.

2.06 The quality of primary education is impaired by over-crowded hall-type facilities, inadequate distribution of buildings in relation to density of population, rigid and out-moded curricula, inadequate instructional materials, and a teaching staff of whom about 63% are untrained (Annex 3).

2.07 Government action now being initiated to remedy these conditions includes: location of new schools with emphasis on equalization of opportunity in general, but with due regard for urban areas with high population growth; revision of syllabi to provide greater correlation of studies with local environment; and up-grading of teaching through in-service education. Of imperative importance is an extensive effort to expand the numbers entering and improving the quality of teacher training at pre-service level.

2.08 Most primary schools include a secondary education department of three years for those under 15 years of age who do not qualify under the common entrance examination for a free place at a government-sponsored secondary school and who do not have the resources to attend private secondary schools. The common entrance examination constitutes a most severe screening (one admission for every eight candidates) and leads to the heavy proportion of enrollment in these secondary departments (Chart 4). These students may then take examinations after further education (Chart 2) so as to qualify for secondary schools or certain vocational or craft training programs.

2.09 The secondary departments, housed in the same hall-type facility as the primary schools are over-crowded, inadequately equipped, with more than 60% of the teaching staff unqualified and untrained. This situation is in critical need of remedial action (paras. 3.12 and 3.18).

Secondary Education

2.10 Public secondary education which until 1962 accommodated the selected few is now the fastest growing (Chart 5) segment of the education system. In 1968, 10,000 students were enrolled in 26 government secondary schools compared with 1,300 students in 3 government secondary schools in 1962. This quantitative expansion (34% per year as an average) has been achieved at a sacrifice of quality.

2.11 The secondary schools established since 1962 are inferior, academically and physically. Housed in former primary school buildings, they have limited or no laboratories or workshops. Thus, the curriculum lacks balance, comprehensiveness and does not provide the students the opportunity to fully develop their abilities, and does not train them for occupations related to economic development. The concentration of effort is on narrowly academic studies leading to the G.C.E. (General Certificate of Education), but with unsatisfactory results, due in large measure to the above conditions

and to the fact that less than 30% of the teachers are trained. In 1967, of 3,550 students taking the examination at "O" (Ordinary) level, only 25% passed in four or more subjects, the minimum requirement for promotion.

2.12 Despite demand for admission (para. 2.08) and the need to augment flow through the system to respond to manpower development requirements, government secondary schools are not utilized to capacity. In 1967, the utilization factor was 60% (Chart 6), largely attributable to the too severe restrictions imposed by the common entrance examination system (paras. 2.08 and 3.10).

2.13 Despite failure in the common entrance examination, pupils can enter private secondary schools. Consequently, private secondary school enrollment and numbers are growing. Ministry of Education officials contend that the typical private secondary school is even more poorly housed, equipped and staffed than the government institutions. It is unlikely, however, that the growth of these schools will be restricted until additional places and diversified programs are made available within the public secondary school system.

Technical Education and Training

2.14 Education and training for technical employment is available at two levels only. At the craft level the Government Technical Institute offers pre-apprentice (full-time) and apprentice (block, day-release and evening) courses leading to the examinations of the City and Guilds of London Institute. Similar courses have been established by certain industrial firms. The total annual intake at the craft level is estimated at approximately 130 full-time students, 30 block-release students, and 300 part-time day and evening students. The total enrollment is of the order of 1,000 students.

2.15 Technician training is largely confined to the Government Technical Institute in courses up to an intermediate level, principally in engineering and building. Some 50 full-time and 175 part-time day and evening students are enrolled. For higher technician training and university-level engineering, students must attend courses in Trinidad or elsewhere but higher technician courses are expected soon in the University of Guyana.

2.16 Commercial training at the lower levels is largely left to private institutions although certain government departments are operating their own programs. The Carnegie School of Home Economics, located in Georgetown, offers two-year full-time courses in Home Management (Chart 2), with an average annual intake of 72, together with a number of part-time courses in a wide variety of domestic subjects (1,350 annual enrollment in Georgetown and rural centers).

2.17 Agricultural training is provided at the Guyana School of Agriculture (Mon Repos) in the form of two-year full-time courses leading to certificate and diploma awards (Chart 2). The school assists in a special

training program for primary teachers by offering one-year and summer courses; 16 teachers are enrolled at present.

2.18 The Ministry of Health is responsible for a wide range of training including nursing, public health, and medical laboratory technicians' work. Nursing students are recruited at the G.C.E. "O" level and undertake a three-year course at the Georgetown Hospital. The output of 50 per year is insufficient to replace the annual loss due largely to emigration (para. 1.07). A supplementary course of one year's duration leads to qualification in mid-wifery.

Teacher Supply and Training

2.19 The quality of education at all levels is limited by inadequate supply of trained teachers (paras. 2.06, 2.09, 2.11).

2.20 The Government Training College offers a pre-service primary teacher training course of two years' duration to selected students upon completion of G. C. E. "O" level. It has a relatively well trained and dedicated faculty. But with antiquated facilities utilized to the maximum, it can admit only about 100 students each year resulting in an output of 85 per year, compared with an annual demand estimated at 270 (para. 3.09).

2.21 In-service teacher training classes are held in two special regional centers with an annual output of about 100. Specialist teachers for home economics and handicrafts are given practical training at the Carnegie School of Home Economics and the Government Technical Institute.

2.22 Secondary teacher training was non-existent in Guyana until a year ago. For such staff, Guyana was dependent upon overseas training, the employment of foreign teachers or using primary teachers, graduates of the Government Training College. The University of Guyana Faculty of Education has now opened a post-graduate course of two years' duration in which 60 degree holders employed as teachers or headmasters are enrolled for up-grading.

Higher Education

2.23 The University of Guyana was established in 1962. Previously, Guyana was included within the regional framework of the University of the West Indies. Working in temporary facilities, operating evening classes and having a limited number of faculties, the university has grown from an enrollment of 165 students in 1963 to 572 in 1967 and, after completion of the ongoing construction program, is projected to reach 1,750 in 1975. Entrance is after G.C.E. at "O" level, with G.C.E. "A" (Advanced) level recognized by exemption from one year of university (Chart 2). The majority of students are teachers pursuing programs toward a specialized degree.

Studies Abroad

2.24 Scholarships and loan for studies abroad, usually requiring service in Guyana on completion of studies, are provided by the government or external assistance programs; awards have decreased from 579 in 1963 to 289 (Annex 4) at present as Guyanese institutions are being increasingly utilized. An estimated 15% do not return to Guyana after completion of studies.

Education Finance

2.25 Total Expenditure: In 1967, public expenditure on education is estimated at G\$17 million, 96% of which was by the Ministry of Education and the remainder by the Ministries of Agriculture, Health, Public Service and Home Affairs. With private expenditure estimated at about G\$1.5 million, total education expenditure was 5% of GDP, which is high compared to many countries with a comparable GDP per capita.

2.26 Recurrent Expenditure: Between 1963 and 1967, recurrent expenditure by the Ministry of Education had an average annual growth of 12% (9.5% in real terms) (Chart 7) and increased from 15% to 16% of the government current revenues. The share of primary and post-primary education rose from 60% to 70% of the total and that of secondary education (general and technical), from 10% to 15% over the same period. The imbalance caused by the increased weight of primary education expenditures is to be gradually corrected (para. 3.16).

2.27 Expenditure on salaries increased from 68% to 83% of total recurrent expenditures from 1963 to 1967. Teacher salaries are considered satisfactory in relation to the general level of salaries in Guyana. In 23 of the government secondary schools 97% of the budget is spent on teacher salaries, leaving only G\$1 per student per year for equipment and supplies, but the situation is under review to meet the requirements of the new curricula (para. 3.12). Only six of these schools are used above the minimum economic capacity for the curriculum presently taught, but the planned increased allocations of "free" places (para. 3.10) should effect immediate improvement in utilization.

2.28 Capital Expenditure: Of the 1963-1967 total capital expenditure (G\$3.5 million), about 50% went to primary schools and 30% to other primary-school-type buildings used as secondary schools. The remaining 20% was devoted to higher education. An increasing share of funds is provided for self-help construction of schools at primary and secondary level. Capital expenditures represented only 5% of total expenditures by the Ministry of Education over the period and proved inadequate for the needs.

MINISTRY OF EDUCATION'S RECURRENT AND CAPITAL EXPENDITURES
(1963-1967)

in G\$ millions

<u>Year</u>	<u>Recurrent expenditures</u>	<u>Capital expenditures</u>	<u>Total</u>	<u>Capital expenditures as % of total</u>
1963	9.6	.4	10.0	4%
1964	11.4	.2	11.6	2%
1965	14.1	.8	14.9	5%
1966	14.3	1.0	15.3	7%
1967	15.2	1.1	16.3	7%

2.29 Foreign aid: Out of the revised 1968 budget estimate of G\$2.6 million for capital expenditure on education, over 75% is committed from aid funds. Britain and Canada are presently financing the construction and equipment of the university. Canada is also to provide financial assistance for a technical/vocational institute at New Amsterdam. The United States has granted funds for the construction and initial operation of an industrial training center (Georgetown) and for a primary school. The three countries are also the major source of fellowships and technical assistance, including the services of some 160 teachers over the last three years, while the Carnegie Foundation is financing a special curriculum development project at the university, with UNICEF providing the teachers' stipends during training. The World Food Program has given food within the framework of self-help school construction projects. Coordination and priority allocation of external assistance - both capital and technical - is the responsibility of the Ministry of Economic Development.

School Building and Construction Industry

2.30 The coastal belt where most schools are located is below sea level, subject to flooding, and requiring expensive drainage and foundation designs. Sites are difficult to acquire because of the scarcity of accessible land and are often too small to allow for buildings to be expanded economically.

2.31 Most government secondary schools visited were of timber construction, originally built as primary schools to Ministry of Works and Hydraulics' designs and sometimes erected by self-help. This type of building is inexpensive but is inflexible and inadequate for the needs of schools where practical subjects are taught. The furniture supplied by the Ministry of Education is unsuitable. In general, the standard of maintenance of buildings, furniture and equipment at the schools visited was poor, partly due to the difficulties of maintaining this type of building and partly because of the lack of an organized and properly financed maintenance program.

2.32 Indigenous building materials are mainly hardwood, clay, stone and sand. Although local timber still plays a predominant part in building, it is being replaced in some of its traditional uses by cement products because of the decline of timber production over the past decade

and the sub-standard quality of timber supplies resulting from the lack of adequate seasoning and treatment. Technical assistance specialists, notably from FAO, are currently advising the industry and substantial improvement is expected in about five years.

2.33 Construction is one of the major industries in Guyana and currently employs about 15,000 persons. But the civil works contractors, except for two U.K. firms with permanent offices, are small. No detailed studies of productivity are available, but labor disputes and strikes are a common feature of the industry. In contrast, self-help projects have had a considerable measure of success but are unpredictable as regards timing and costs.

2.34 Government has only limited professional and technical manpower resources for design and supervision of building projects and even with the support of the two private local architectural firms, probably would not be able to carry out major undertakings relating to project design and supervision, in addition to existing commitments.

3. MANPOWER PLANNING AND EDUCATIONAL DEVELOPMENT

Manpower Needs

3.01 Between 1966-75, overall employment is projected to grow from 140,000 to 190,000, an average annual rate of 3.3%. Agricultural employment is expected to increase from 32% to 35% of total employment in order to keep pace, subject to the availability of agricultural credit, with the introduction of new rice varieties, the promotion of peasant cane farming, and potential livestock developments. Construction and services are likely to expand as a proportion of total employment, while a relative decrease is likely in mining and manufacturing as a result of continued mechanization.

3.02 The growth in the demand for professional, technical and skilled workers - already in short supply - will accelerate; but for unskilled labor, net demand will be limited to annual replacement needs. This will generate a shift in the educational qualifications needed for employment, with particular emphasis on initial versatility of training for later specialization (a) as skilled workers and technicians for industry, agriculture, commerce, administration, and health services, (b) as teachers (paras. 3.09, 3.13) and (c) as professional workers. Thus basic education,

instead of leading almost exclusively to academic studies, will have to be complemented by pre-vocational or pre-technical courses located strategically to cater for both day students and, in the evenings or during the vacations, for out-of-school youth and employed workers.

3.03 Quantitatively, annual manpower needs by 1975, as projected in this report, are expected to be as follows:

ANNUAL MANPOWER NEEDS AND SUPPLY BY 1975

Occupational/ Educational level	Annual Manpower Needs	Annual Supply at 1966/67 Level	PLANNED ANNUAL SUPPLY FROM EXPANSION OF THE EDUCATION SYSTEM		PROJECTED		
			Schools in Project Request	Other Programs	Total Supply	Deficit	
A. <u>Higher Education</u>							
Primary and Junior Secondary Teacher Training	400	80	240	50	370	30	
B. <u>Full Secondary Educa- tion</u>							
1. For further studies incl. teacher training	1650	1100	750	- 200 ^{1/}	1650	-	
2. Industrial employment (craft level)	400	200	-	200	400	-	
3. Other employment	1200	750	580	- 200 ^{1/}	1130	70	

^{1/} Decrease because of transfer of students from present inadequate programs into proper secondary education.

3.04 Employment opportunities for the unskilled, after completion of 8-9 years of schooling - the median educational attainment of today's unemployed youth - should dramatically improve during the next decade, as a result of the projected expansion and changes in secondary level education (para. 3.10) and training (para. 3.14) to meet skilled manpower requirements (Annex 5).

3.05 The present lack of agricultural technicians (about 40 per year are needed for the private and public sectors against a supply of about 15 per year) is aggravated by unattractive remuneration levels for technicians in the extension services. To offset this shortage, special upgrading courses for "certificate" holders in agriculture (Chart 2) have been started by the School of Agriculture. The introduction of agricultural streams in some multilateral schools should broaden the basis for recruitment to the School of Agriculture.

3.06 In the industrial field, the needs for craft level training estimated at about 400 per year by 1975 will be met by the additional capacity

now being built (para. 3.14).

Education Plans

3.07 The most recent statement of educational plans and related policies is the White Paper, published January 4, 1968, in which the government has proposed a variety of changes giving emphasis to:

- (1) equal educational opportunity for all;
- (2) practical, technical and scientific subjects without neglecting the traditional academic subjects;
- (3) early revision of the Common Entrance Examination;
- (4) cooperation with the other independent Caribbean countries in the development of examinations adapted to local conditions; and
- (5) substantially increasing the annual output of trained teachers.

3.08 Primary Education. Present government admission policy into primary education at the age of five years, nine months, has been projected through 1975 but by 1972, there should be less resistance against raising the minimum age to six years. Assuming automatic promotion, enrollments should grow by 30% between 1966/67-1974/75 (Annex 2 A).

3.09 Primary Teacher Training. The annual teacher requirements taking into consideration:

- (1) the government policy of a 1:40 teacher-pupil ratio (acceptable in view of the increased proportion of qualified teachers in the system);
- (2) the availability of students with the minimum qualifications required for entry into primary teacher training; and
- (3) the impracticality of achieving a 100% qualified teaching force by 1974/75 without dismissing large numbers of teachers and overbuilding training capacity;

will be as follows:

	<u>Growth</u>	<u>Replacement</u>	<u>Total</u>	<u>Annual Average</u>
Primary teacher needs (1968/69-1974/75 incl.)	350	1,505	1,855	270
Supply from existing training college			600	85
DEFICIT			<u>1,255</u>	<u>185</u>

As shown above, approximately 85 primary teachers are being trained in the existing inadequate Government Training College, against the projected need for 270 primary teachers a year. In addition, about 50 teachers would be annually needed for the secondary departments of primary schools (para. 3.13). In order to upgrade the quality of teacher training and produce sufficient number of teachers to meet this projected demand, the present Government Training College needs to be replaced with a modern and a larger institution having a capacity to produce at least 320 teachers a year. Combined with the proposed in-service training program (Annex 6) the proportion of trained teachers would therefore progress from 40% in 1966-67 to 61% in 1975-76.

3.10 Secondary Education. The government has given assurances that it will implement its plan to increase enrollments in government secondary schools to reach an 80% capacity utilization (optimum feasible for the curriculum taught) by 1972 (Chart 6) through a revision of the examination system which would raise intake to 3,200 in 1968 (against 70 in 1961 and 1000 in 1966/67) and keep it at a level of not less than 15% of the expected grade 6 primary education output (para. 4.08). Under this plan, 20% of grade 6 output would enter aided and private secondary schools, about 45% would enter secondary departments of primary schools, and less than 20% would enter the labor market.

3.11 Projected secondary school enrollments (Annex 2 B) are compared with the 1966 enrollments as follows (in '000):

<u>Government Schools</u>	<u>1966/67</u>	<u>1968/69</u>	<u>1975/76</u>
Intake (% of grade 6)	1.0 (5.5%)	3.2 (17%)	4.9 (21%)
Total enrollment	8.1	10.5	16.7
<u>Aided Schools (private schools excluded)</u>			
Intake (% of grade 6)	1.6 (9.0%)	1.9 (10%)	2.4 (10%)
Total enrollment	8.5	9.0	11.1
<u>Secondary Dept.</u>			
Intake (% of grade 6)	14.4 (77%)	8.6 (46%)	11.1 (47%)
Total enrollment	32.9	27.9	23.3

3.12 This plan permits the transfer of enrollment from the overcrowded and poorly staffed secondary departments of primary schools (paras. 2.09 and 3.18) to government secondary schools where staff and facilities would be used with improved efficiency (para. 2.27). Present narrow academic curricula are to be replaced by modern broadly based curricula with diversified streams at the senior level of a system of multilateral schools. The program for the construction of these schools over the period 1969-75 would cater for more than 60% of total enrollments in government secondary schools.

3.13 Secondary Teacher Needs and Supply. These needs would be as follows:

	<u>Growth</u>	<u>Replacement</u>	<u>Total</u>	<u>Annual Average</u>
<u>A. Government and aided secondary schools</u>				
Needs (1968/69-1974/75 incl.)	250	660	910	130
Supply from University of Guyana (1968/69-1974/75 incl.)			<u>375</u>	<u>54</u>
Deficit			535	76
<u>B. Secondary dept. of primary schools</u>				
Needs (1970/71 ^{1/} - 1974/75 incl.)	85	185	270	54
Supply from existing programs (GTC)			<u>270</u>	<u>54</u>
Deficit			-	-

1/ No additional teacher needs in 1968/69-1969/70 because of decrease in enrollments (Annex 2 B).

To compensate for the shortage of University of Guyana graduates for the government and aided secondary schools shown above during the period 1968 through 1974, it is essential that a special program consisting of a two year course for training 80 secondary teachers a year should commence as soon as possible. Because the government recognizes this need, such a program has been organized by the Ministry of Education on an emergency basis, and has been put into operation in early January 1969.

Such an arrangement is acceptable as a stop-gap measure but eventually the training of diploma teachers for the general secondary education system should be incorporated within an appropriate educational institution such as the University of Guyana. The government intends to evaluate, in consultation with IDA/Bank, the feasibility of such transfer by September 1972.

3.14 Technical Education. Plans for expansion include, at the craft level: (a) the construction of the Guyana Industrial Training Center in Georgetown, to open in 1968 with 125 full-time places, mainly for adult accelerated training (six to twelve month courses) in the building trades, and some 500 places for evening up-grading courses and (b) the construction in 1969 of a second technical institute to be located at New Amsterdam with an intake of 200 students per annum. Additional hostel-places will double the capacity of the School of Agriculture.

3.15 Higher Education. Development plans for the University of Guyana call for a continued growth of the existing faculties, raising the output of graduates from 40 (1968) to an estimated 220 (1975). About half of the graduates are expected to engage in teaching, at least as their first employment. The Faculty of Education is offering its post-graduate course in education in the form of in-service training, anticipates the introduc-

tion of a diploma-course in education (para. 3.13) and, with a Carnegie Foundation grant, plans studies of educational problems, including curriculum development. The faculty, now dispersed in several rented houses, hopes to attract external grant aid for the construction of facilities for its teaching and research programs as part of the University's new campus, the initial construction phase of which is to be completed at Georgetown/Turkeyen by mid-1969.

Financial projections

3.16 In primary education, additional recurrent costs will result from the employment of a higher proportion of qualified teachers rather than from the enrollment growth which will not cause any substantial increase in teacher numbers (Annex 6). In secondary education, increases in enrollments, in the number of graduate teachers and in the cost of instructional materials in the multilateral schools (not fully compensated by the improved utilization factor of existing schools) will generate an average annual growth of expenditure of 11%. By 1975, recurrent expenditures on primary education would decrease to 55%, while secondary (general and technical) would increase to 21% of the Ministry of Education total recurrent expenditures and result in a better distribution between each level of education (para. 2.26). Altogether, recurrent expenditures on education will grow between 1967 and 1975 at the annual rate of 5.3% and remain at about 16.5% of government current revenues (Table below).

GROWTH OF EXPENDITURES BY THE MINISTRY OF EDUCATION (millions of G\$)

	<u>1960</u>	<u>1967</u>	<u>1975</u>
Education Recurrent Expenditure	7.7	15.2	23.0
Education Capital Expenditure	.4	1.1	5.0
Total Education Expenditure	8.1	16.3	28.0
Total as % of GDP	3.0	4.3	5.2
Recurrent as % of Government Current Revenues	13.8	16.4	16.3

3.17 Due to increased enrollments in primary schools and higher costs of construction (para. 4.16), planned capital expenditures on education for the period 1966-72 had to be increased to G\$24.5 million, a 75% increase above the original plan allocation. During the period of construction of the proposed project (1969-73), total capital expenditure is estimated at about G\$28 million and distributed as shown in the table below. Against this total capital expenditure, so far, the only external assistance that government has obtained has been U.K. and Canadian grant assistance of about G\$3 million towards the 1969 and 1970 expenditure on higher and technical education. The projected expenditure on secondary education and teacher training relates to that on the IDA/Bank project, a significant portion of which would be covered by the financing proposed herein. The over-all capital expenditure on education between 1969 and 1973 is now estimated to be about G\$ 5.5 million a year against the annual expenditure of about G\$2.4

million originally estimated in the Bank economic report.

1969-73 PROJECTED PHASING OF PUBLIC CAPITAL EXPENDITURE FOR EDUCATION

(Million G\$)

Year	Primary	Secondary and Teacher Training	Technical	Higher	Total
1969	.4	.5	1.3	2.4	4.6
1970	.4	2.2	-	.7	3.3
1971	.4	5.7	-	-	6.1
1972	.4	6.7	-	1.0	8.1
1973	.4	4.0	-	1.6	6.0
Total	2.0	19.1	1.3	5.7	28.1

Strategy for Educational Development

3.18 In summary, to make the most efficient utilization of available resources for education, meet manpower needs and improve the employment prospects of young people, the government is assigning top priority to an expansion of primary and secondary teacher training and modernization of secondary education. The transfer of enrollments from secondary departments of primary schools into secondary schools will result in improvement of the secondary departments by relieving present over-crowding.

3.19 Definition of the Program. The government request for financial assistance was reviewed within the framework of the government's strategy for educational development and modified during appraisal to consist of the following:

- (1) one teacher training college with a total enrollment of 660 providing for an annual output of 320 (initially, 270 primary school teachers and 50 teachers for the secondary departments of primary schools - para. 3.09);
- (2) twelve multilateral secondary schools, with a total enrollment of 9,600, each offering three academic and three "practical" options in the final two years of the course. The latter options would replace three secondary vocational schools included in the original request. The decision to replace the vocational schools was prompted by (a) the increased provision for vocational training already completed or agreed upon (para.3.14), and (b) the need to provide a broad pre-vocational program (in the multilateral schools) for those who would later aspire to supervisory and higher levels of employment in industry, commerce, and agriculture. An additional consideration was the proposed use of the "practical" facilities in the 12 multilateral schools for the training of youths and adults when the schools would not otherwise be in use . To accommodate enrollment demand the new schools should be in full operation by 1975 (Chart 6).

3.20 Feasibility of the multilateral school program. The above program for establishing 12 multilateral secondary schools within the period 1969-73 cannot be realized because of (a) difficulties in meeting specialist teacher and administrator requirements; (b) the lack of adequate capacity of the building industry to handle the volume of construction involved; (c) the increase in estimated construction costs due to the nature of the proposed sites, the type of schools contemplated and the construction materials required.

3.21 The government has accordingly decided to implement the multilateral school construction program in two phases so that it would be fully operational by 1975, but to request IDA/Bank financing at this time only for Phase I consisting of 7 multilateral schools (paras. 4.01, 4.02) to be constructed between 1969-73. Phase II, consisting of 5 multilateral schools could form the basis of a possible later request to the IDA/Bank.

4. THE PROJECT

General

4.01 The proposed project consists of the following:

- (a) construction and equipment of one teacher training college and related boarding facilities, to prepare annually 270 teachers for primary schools and initially 50 teachers for the secondary departments of primary schools;
- (b) construction and equipment of five new multilateral secondary schools, conversion of two existing secondary schools to the multilateral type and related boarding and staff housing facilities. Combined enrollment would be 5,700 students;
- (c) professional services for an analysis of alternate building materials, design, and supervision of construction;
- (d) provision of 15 man-years of fellowships; and
- (e) establishment of a project implementation unit.

Completion of construction is expected by the end of 1973.

4.02 Enrollment, staffing, accommodation and cost (Annexes 7, 8) are summarized as follows:

Project Analysis	Teacher Training College	Sec. Multilateral Schools		
		Total	New Sites	Existing Sites
Number of Schools	1	7	5	2
Total Enrollment	660	5,700	4130	1570
Net Additional Enrollment	430	3,600	2710	890
Estimated Total Annual Output	320	970	720	250
Space per Student Enrolled (sq. ft.)	54	58	58	59
Estimated Cost (US\$'000 equiv.)	960	8,350	6100	2160
Estimated Cost per Place (US\$ equiv.) ^{1/}	615	770	765	790
Staff Requirements	35	240	172	68

^{1/} Adjusted to allow international comparison.

The Government Training College

4.03 A planned enrollment of 660 in the Government Training College would almost triple present capacity and would provide an annual output of 320 teachers.

4.04 The revised curriculum satisfactorily combines academic studies with practical and professional preparation. After one year of common courses, the students would specialize in courses preparing for either teaching in primary schools or secondary departments. 25% of the second year would be devoted to practice teaching - which is adequate. The Carnegie School of Home Economics and the Government Technical Institute would provide instruction in the teaching of home economics and crafts.

4.05 The new buildings would be located on a site adjacent to the University at Turkeyen so that students and teachers could collaborate with the Faculty of Education as needed. The whole of teacher education is to be coordinated at Ministerial level (Chart 3).

4.06 The construction would include 14 classrooms, 2 laboratories, 3 workshops and 5 special rooms - with an average use factor of 83%. As the only institution of its kind in the country, hostel accommodation for 280 students would be needed.

4.07 The intake would be provided from among students with GCE "O" level passes in four subjects; as projected, their numbers will meet the needs for the several types of post-secondary training opportunities. The full-time teaching staff would number 35, about 15 more than at present. Fifteen one-year fellowships for studies at the University of Guyana or abroad are needed to train the new staff, including those responsible for student guidance and supervision of practice teacher training. In addition, the Government Training College needs a general adviser on organization and administration for about two years. The government has given assurances that it will obtain the necessary trained staff and make best efforts to obtain the requisite adviser (Annex 1 A). The government has already taken steps to obtain the required fellowships from external sources (para. 4.14, Annex 1 B).

Secondary Multilateral Schools

4.08 Location of proposed secondary schools is consistent with population distribution demands (Map). The intake for each school is assured from the primary schools in the area if the admission examinations are suitably revised, as planned, to allow an increase in the numbers admitted to government secondary schools from grade 6 (para. 3.10).

Implementation of this plan has started. Two-fifths of the intake for the pre-vocational streams (Forms IV and V) would come from secondary departments of primary schools. In Anna Regina, where population is dispersed, and the transportation network less developed than elsewhere, hostel accommodation is included for 150. Staff housing is kept to a minimum (20 units) and is provided only where essential (Annex 7).

4.09 Five of the seven school sites are available. Assurance has been obtained that the government will take prompt legal action to acquire the two remaining sites in time to meet the proposed construction schedule and that in the meantime consultants will have access to them. The site of one school, Anna Regina, is on the Essequibo coast, within the territory which is disputed by Venezuela. This dispute is being discussed by a Mixed Commission established by the Geneva Agreement in February 1966 by the Governments of U.K., Venezuela and the former British Guiana.

4.10 The project enrollment of 5,700 would constitute 38% of total enrollment in government secondary schools by 1974/75. The additional school capacity would be 30% above 1968; at the same time, unsuitable existing accommodations would be replaced. The projected maximum annual output of GCE "O" level is 970 by 1975 or 200% above the present output. The project would satisfy a critical need to improve the quality of secondary education and would be phased in such a way that its additional capacity would become available precisely when existing facilities will be utilized at their optimum capacity (Chart 6).

4.11 Curricula. At the junior level, the curriculum has been revised to include practical work, i.e., arts and crafts, wood and metalwork and home economics. At the senior level, five of the seven schools will offer a choice among three academic options (arts, sciences, and a pre-university technology) and three pre-vocational options (technology, home economics, commerce or agriculture). The other two schools, catering for a single geographical area, are complementary in their offerings. Two schools will retain for the time being their sixth-form streams. A guidance program will be provided to help the students in their choice of options in relation to aptitude, ability, and future career choice.

4.12 Accommodation. The construction would include 92 classrooms, 19 laboratories, 51 workshops and practical workrooms and 53 special subject rooms with a high average use-factor of 81%. The average total area of 58.3 sq. ft. per student is economical: 59% is net teaching area, 21% administration and communal facilities; 20% circulation.

4.13 Teacher requirements. The need for graduate teachers of general subjects (Annex 7) will be met by the University of Guyana (para. 3.13), but,

for the lower forms, the project can only be staffed by depleting other schools of their best teachers unless an immediate start is made with the proposed two-year course to train 80 diploma teachers per year and a continuing program is established as contemplated. As agreed during negotiations, this emergency program was initiated in early January, 1969.

4.14 Fellowships and Training. Except for teachers of handicrafts, home economics, and agriculture, the technical teachers required for this project would have to be trained abroad. A comprehensive description of the training requirement for the project was prepared by the government (Annex 1 B) and discussed with external aid agencies. In view of the likelihood that the desired foreign assistance will be obtained, the technical assistance provided by this project would be limited to satisfying the key needs of the Government Training College, the multilateral secondary schools, and related positions in the Ministry of Education as summarized below:

(1) 15 man-years of fellowships are needed to train:

- (a) one specialist each, in guidance, and in speech and drama, for the Government Training College (2 man-years);
- (b) one supervisor each in technology, science and English (3 man-years) for the secondary school inspectorate to be established in the Ministry of Education;
- (c) one departmental head (1 man-year), one teacher in commerce (3 man-years) and three technical teachers (6 man-years), for the multilateral schools.

Assurance have been obtained from the Government that it will obtain the special trained staff necessary, as well as make best efforts to obtain the requisite advisors from external sources, in accordance with Annex 1 A.

Cost of the Project

4.15 Cost estimates in the proposal submitted for appraisal were based on the government's experience in building traditional schools with unsuitable local timber at early 1968 prices. Because of the increasing difficulties in getting the local timber in adequate quantity and quality (para. 2.32), it is doubtful that industry could meet its regular commitments and the requirements of the project, even at much higher prices. Guyana, at present, is a net importer of timber and wood products. Moreover, the traditional type of timber design is not appropriate for the type of multilateral schools which government, after discussions with the appraisal mission, has decided to build. Revised estimates were therefore prepared by the Ministry of Works and Hydraulics for more suitable buildings constructed with less timber and more cement products. These estimates were cross-checked with cost data for similar projects recently completed, and proved to be comparable -- at about G\$22 per square foot. A considerable decrease in cost-in-use resulting from the more durable basic structure will partially counterbalance the higher capital costs. More realistic figures for site development (para. 2.30) than in the original proposal have also been taken into account.

4.16 The estimated capital costs and foreign exchange component of the various parts of the proposed project are shown below:

Categories of Expenditures	Total			Foreign Exchange		
	(G\$ million)	(US\$ million)		(G\$ million)	(US\$ million)	
Academic & Communal Facilities	8.10	4.05	(51.9%)	4.21	2.10	(52%)
Boarding Facilities	.51	.26	(3.3%)	.26	.13	(52%)
Staff Housing	.43	.21	(2.7%)	.22	.11	(52%)
Site Development	2.46	1.23	(15.8%)	.93	.47	(38%)
Professional Services	1.20	.60	(7.7%)	.84	.42	(70%)
Total Construction Cost	12.70	6.35	(81.4%)	6.46	3.23	
Furniture	.75	.38	(4.9%)	.68	.34	(90%)
Instructional Equipment & Library Books	1.49	.74	(9.5%)	1.34	.67	(90%)
Fellowships and Project Implementation Unit	.66	.33	(4.2%)	.26	.13	(40%)
	15.60	7.80	(100.0%)	8.74	4.37	
Contingencies	3.50	1.75		1.96	.98	(56%)
Interest & other charges during construction	.90	.45		.90	.45	(100%)
<u>TOTAL PROJECT COST</u>	20.00	10.00		11.60	5.80	(58%)

4.17 From an assessment of likely price trends in Guyana over the next five years, based on experience in recent years, an average of about 4% a year increase in costs is expected. For construction and fees, a further 8% has been included for unforeseen difficulties. Total contingencies represent 18% of the project costs. Foreign exchange components for building and site development include direct imports, the estimated foreign exchange of local materials, and the depreciation of the contractor's imported plant over the construction period. The direct foreign exchange component of furniture and equipment is estimated at 90%, the balance being the estimated cost of storage and internal transportation. Interest and related charges on the loan during construction (up to Sept. 30, 1974) have been included.

4.18 Equipment and furniture lists, together with their estimated costs, have been reviewed for all the schools and are satisfactory.

4.19 Total estimated costs per student place may seem high compared to other countries. But once site development, professional fees and contingencies are excluded to allow international comparison, the costs per place of US\$615 equivalent for the Government Training College and of US\$770 equivalent for the multilateral secondary schools are reasonable.

4.20 Annual recurrent costs of the project schools are estimated at about G\$1.7 million per year. Only G\$1.2 million per year represents additional expenditure due to the project, equivalent to 8% of the Ministry of Education total recurrent expenditures in 1967. The annual recurrent cost of the secondary school system as a whole is estimated to rise to about G\$5 million by 1975 (Chart 7).

Implementation

4.21 The need to break with the traditional forms of school construction and to establish a more economic use of available materials for the design of the project schools requires the employment of a firm of consultant architects with experience in the technical and cost studies which precede the development of new building techniques, as well as experience in school design in tropical climates. The consultants, preferably in association with one or more Guyanese architect firms, should make preliminary surveys and analytical investigations, design, and supervise construction. They should also design or select appropriate furniture for the schools. Appointment of such consultants is a condition of effectiveness of the proposed credit/loan.

4.22 About one year would be needed for the consultants to perform the preliminary surveys and investigations. Because of the scarcity of qualified labor, the limited volume which can be handled on each site by the building industry, and the need to phase teacher and administrator training, construction will not be completed before late 1973.

4.23 Throughout the period of disbursement, a Project Implementation Unit would be established to initiate, coordinate and supervise all aspects of the implementation of the project. To head this unit, a full-time Project Director acceptable to IDA/Bank has been appointed and will be entrusted with duties and responsibilities agreed to during negotiations with IDA/Bank. The unit would be located within the Ministry of Education, and the Project Director would have direct access to the Minister of Education and be directly responsible to the Permanent Secretary. Assurances have been obtained from government that the Project Director would be assisted by an architect and a specialist in the procurement of instructional equipment and furniture, both acceptable to IDA/Bank. He would also be assisted by specialists in education and accountancy, and supported by an adequate staff.

4.24 Selection of the civil works contractor and procurement of instructional equipment, books and furniture would be on the basis of international competitive bidding. Bids would be invited in packages of a size likely to encourage international competition. In evaluating bidding for the supply of furniture, Guyanese firms would be allowed a preferential margin of up to 15% of the c.i.f. landed costs, exclusive of import duties or other taxes. If all furniture contracts are awarded to local manufacturers, 50% of the furniture component (i.e. \$170,000 or less than 3% of the proposed loan and credit) would represent local currency financing. The current import duty on furniture varies between 50% and 70%, depending on the source of supply. The type and design of furniture to be procured would be co-ordinated by the Project Implementation Unit in cooperation with the consultants during the design stage of the project. Detailed lists and specifications for instructional equipment would be prepared by the Project Implementation Unit, with the assistance of subject specialists as needed. The lists would be developed with the consultants during the design stage of implementation and submitted to IDA/Bank for approval.

4.25 Disbursements. The IDA/Bank credit/loan of US\$5.8 million would

represent about 58% of the total estimated project cost and would cover the estimated direct and indirect foreign exchange component of the project, and interest and other charges on the loan during construction (up to Sept. 30, 1974). IDA/Bank would disburse or reimburse:

- the foreign exchange costs of instructional equipment and books as well as the consultants' fees;
- agreed percentages representing the foreign exchange component of civil works contracts, fellowships, and the project implementation unit;
- interest and related charges on the Bank loan; and
- the actual foreign exchange cost of imported furniture and/or the ex-works costs of locally manufactured furniture.

Since completion of the project would require five years (para. 4.22) funds would be disbursed over a six-year period (Annex 9) to include the construction liability period. Undisbursed funds would be available for cancellation. Any excess over the estimated cost of the project would be met by the government.

5. CONCLUSIONS AND RECOMMENDATIONS

5.01 The proposed project would be the first step in a national program to improve the quality, efficiency and pattern of the public secondary education system to meet Guyana's economic and social needs (Chapter 3).

5.02 The Government Teacher Training College would modernize its curriculum and increase its output to meet the annual needs for primary school teachers. This would contribute to an improvement in the instructional program and the quality of the output from primary schools (paras. 3.09 and 3.19). The multilateral schools would help to alleviate post-primary unemployment and would provide both academic and pre-vocational education to produce the more versatile school leavers needed in a developing economy. Trained guidance counsellors would assist the students in selecting their study programs from the broader choice available to them (paras. 3.02, 3.04, 3.19).

5.03 The proposed project is economically conceived, soundly located, and well-programed. Estimated costs per place are reasonable. The government would be able to meet the recurrent costs and 42% of the capital cost of the project (paras. 3.17, 4.20, 4.25).

5.04 The establishment of a Project Implementation Unit and the proposed program of training to meet staffing needs would ensure an effective implementation of the project. (paras. 4.14, 4.23). Procurement would be on an international competitive basis, in accordance with IDA/Bank guidelines (para. 4.24).

5.05 Assurances have been obtained from the government that:

- (i) The resources and services of the Ministry of Education will be strengthened, particularly in the field of secondary education, including the establishment of a satisfactory secondary school inspectorate and guidance services, and the appointment of a competent educational planner in the Planning Division (para. 2.03);
- (ii) Optimum utilization of public secondary school capacity will be achieved by September 1972 (paras. 3.10, 3.12, 4.08) by improving the flow to and through secondary schools (paras. 2.12, 4.08). This will require a revision of examination and admission procedures and an adaptation of examinations to meet Guyanese conditions. (paras. 2.08, 2.11, 3.07);
- (iii) The two-year secondary teacher training course with an annual output of 80 teachers, has been put into operation in early January 1969; government will consult with IDA/Bank regarding the feasibility of transferring the responsibility for the course to an appropriate educational institution by September 1972 (paras. 3.13, 4.13);
- (iv) The project schools will be used part-time, for adult vocational training (para. 3.19);
- (v) The special staff needed for the Government Training College, the Ministry of Education and the project schools will be obtained in accordance with the schedule in Annex 1 A. Government will also make best efforts to obtain the required advisers from external sources according to the same schedule (para. 4.07, 4.14);
- (vi) The legal action required to ensure access by the consultants to the unacquired sites will be taken promptly, and all sites will be acquired in time to meet the agreed construction schedule (para. 4.09);
- (vii) An experienced architectural firm, acceptable to and on terms and conditions approved by IDA/Bank, will be appointed to carry out the preliminary site surveys, the analytical investigations, prepare the designs of the teacher training college and the multilateral schools and to supervise construction (paras. 4.21, 4.22);
- (viii) Government will establish a Project Implementation Unit within the Ministry of Education, with necessary facilities and full-time professional personnel, including the project architect and the procurement officer to be acceptable to IDA/Bank; the Director of the Project Implementation Unit, already appointed, with IDA/Bank approval, will be entrusted with duties and responsibilities agreed to with IDA/Bank (para. 4.23).

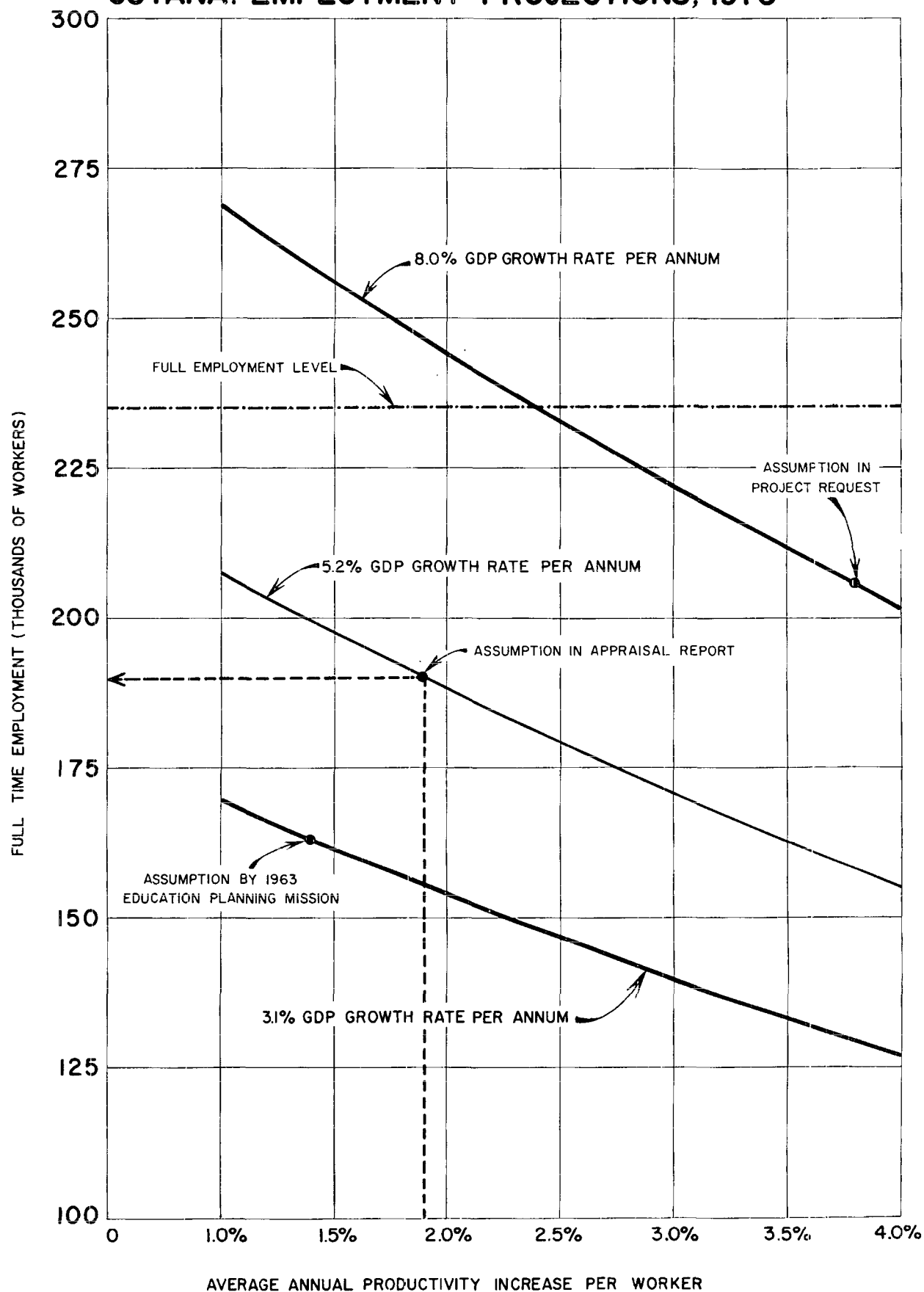
5.06 Appointment of the consultant architect would be a condition of effectiveness of the proposed credit/loan (para. 4.21).

5.07 The proposed project is suitable for a blend financing consisting of an IDA credit of US\$2.9 million equivalent and a Bank loan of US\$2.9 million equivalent for a period of 30 years, including a 10 year grace period. It is proposed that disbursements should first be made from the IDA credit and after its exhaustion, from the loan funds. The Borrower would be the Government of Guyana.

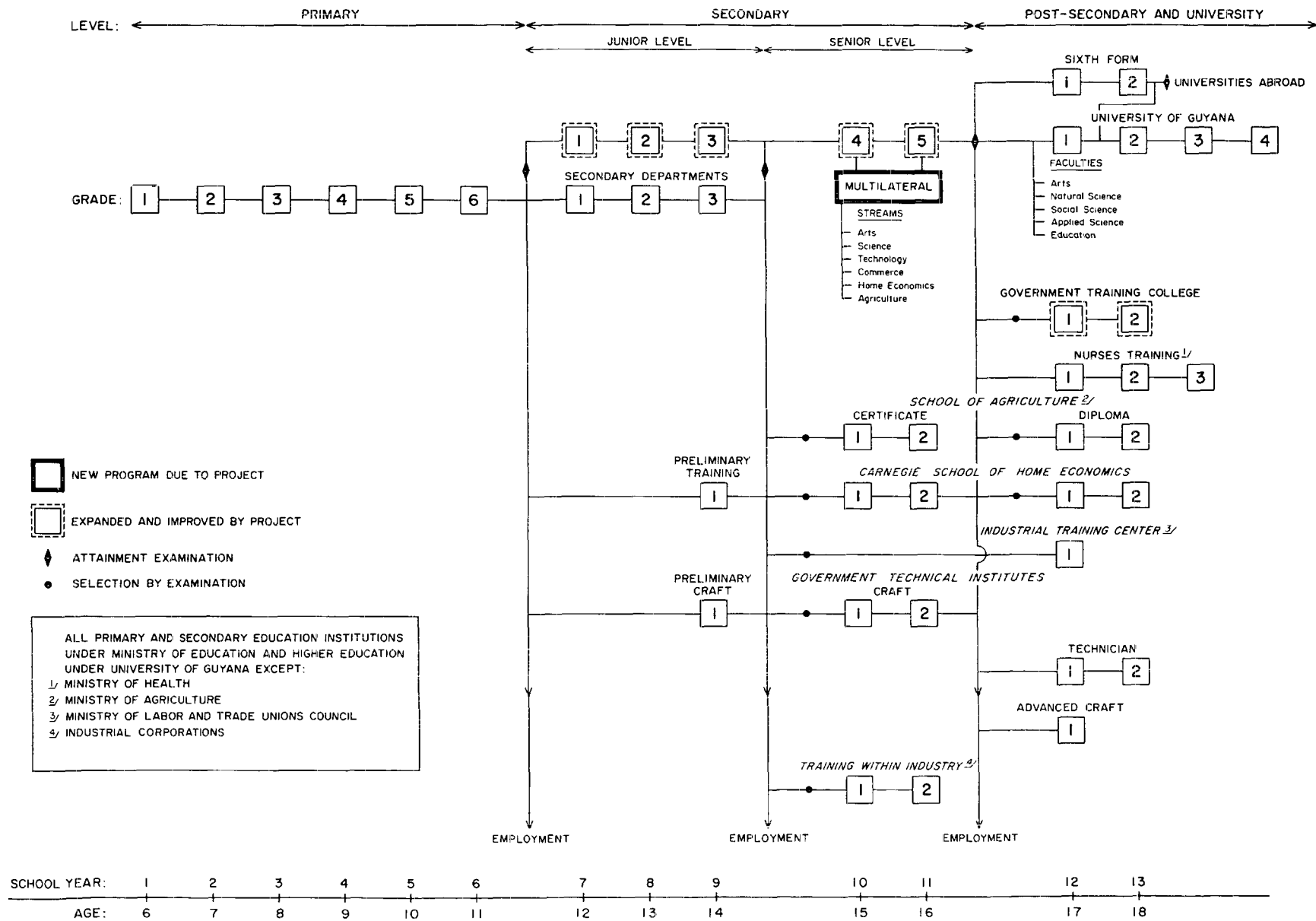
January 13, 1969.

IDA/IBRD

GUYANA: EMPLOYMENT PROJECTIONS, 1975

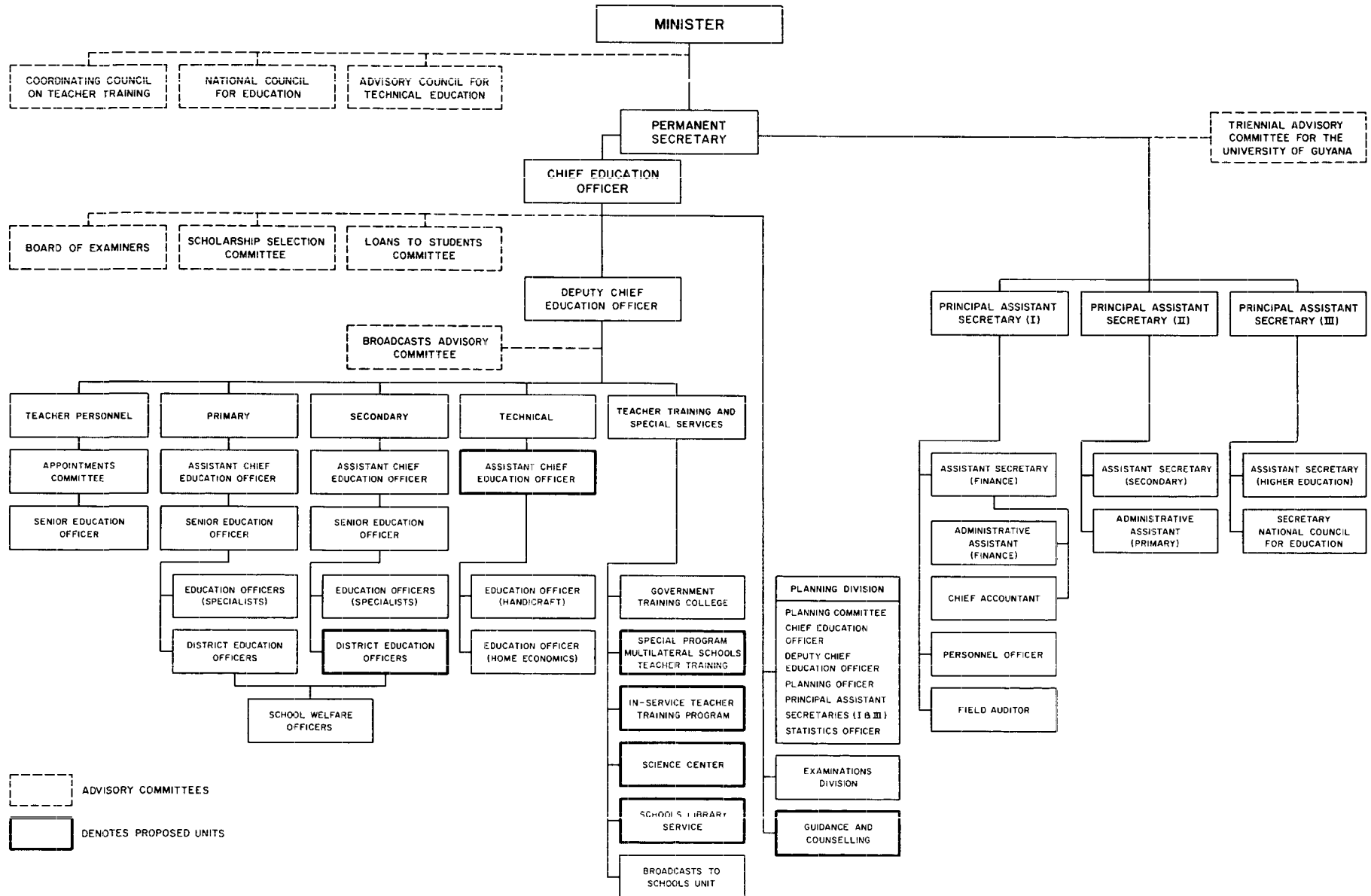


GUYANA: THE EVOLVING STRUCTURE OF THE EDUCATION SYSTEM, 1968



GUYANA: ORGANIZATION PLAN FOR THE MINISTRY OF EDUCATION

AUGUST 6, 1968



GUYANA: PYRAMID OF ENROLLMENT, 1966-67

(GOVERNMENT AND GOVERNMENT-AIDED SCHOOLS)

GRADE
SECONDARY

13

12

11

10

9

8

7

BOYS

GIRLS

PRIMARY

6

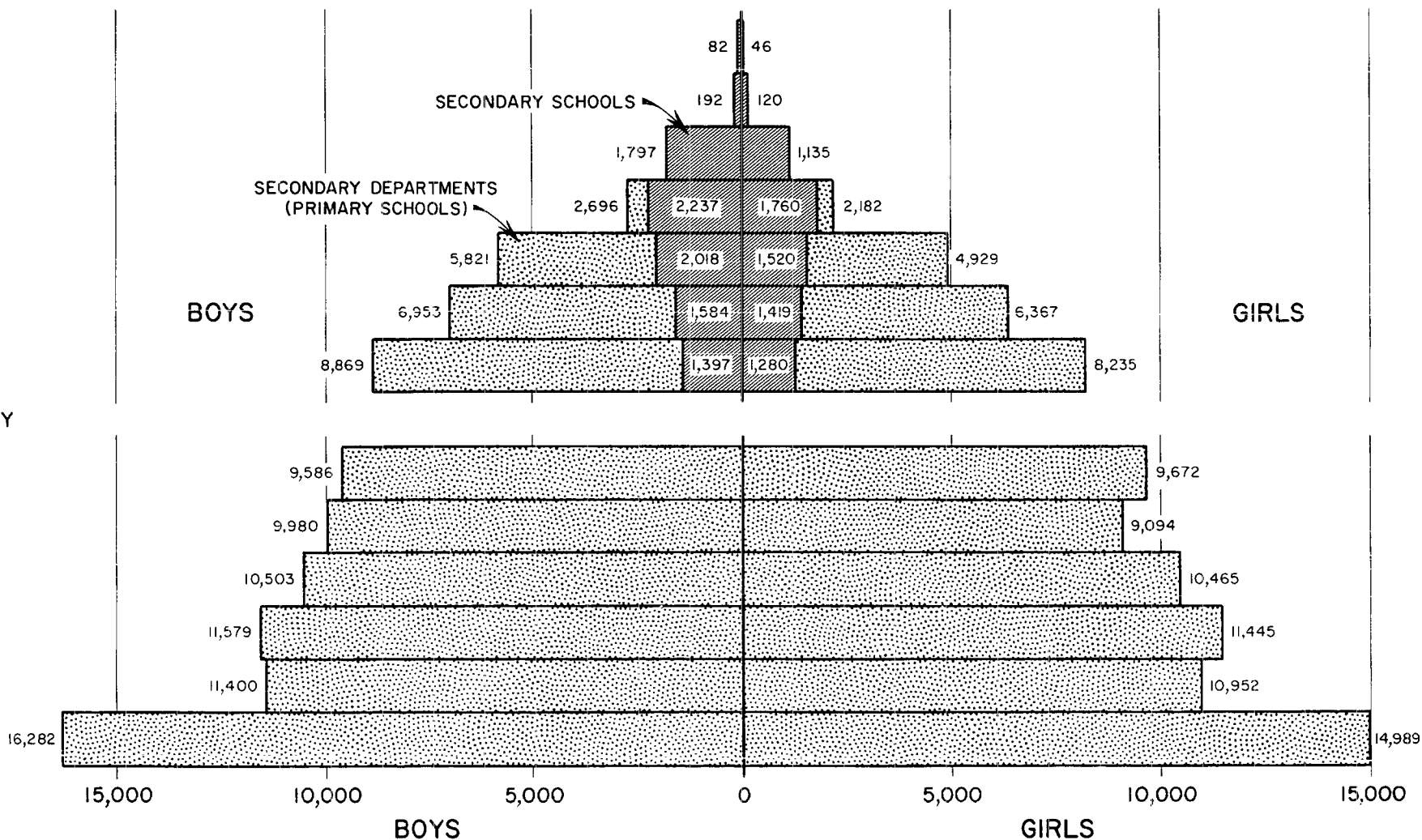
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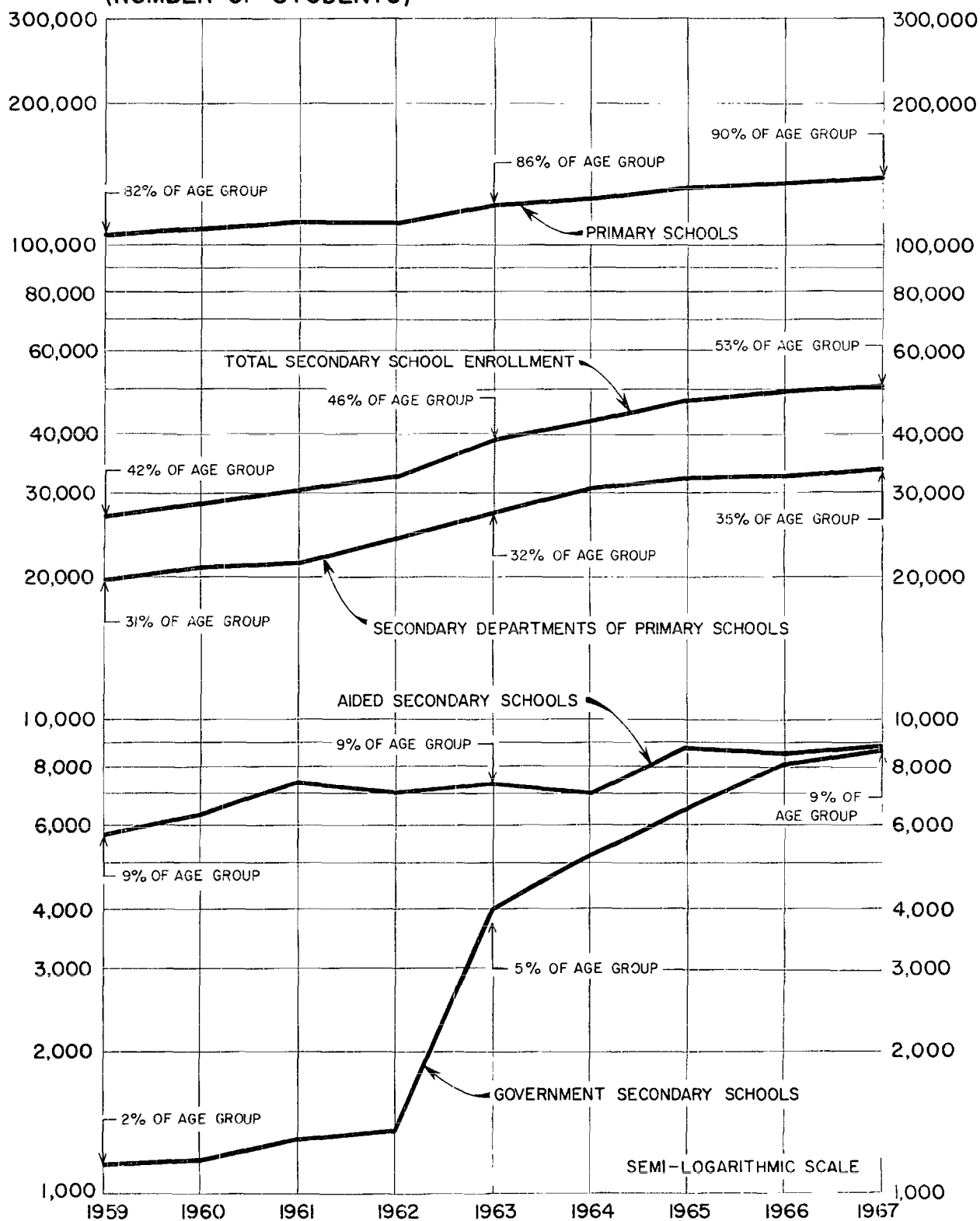
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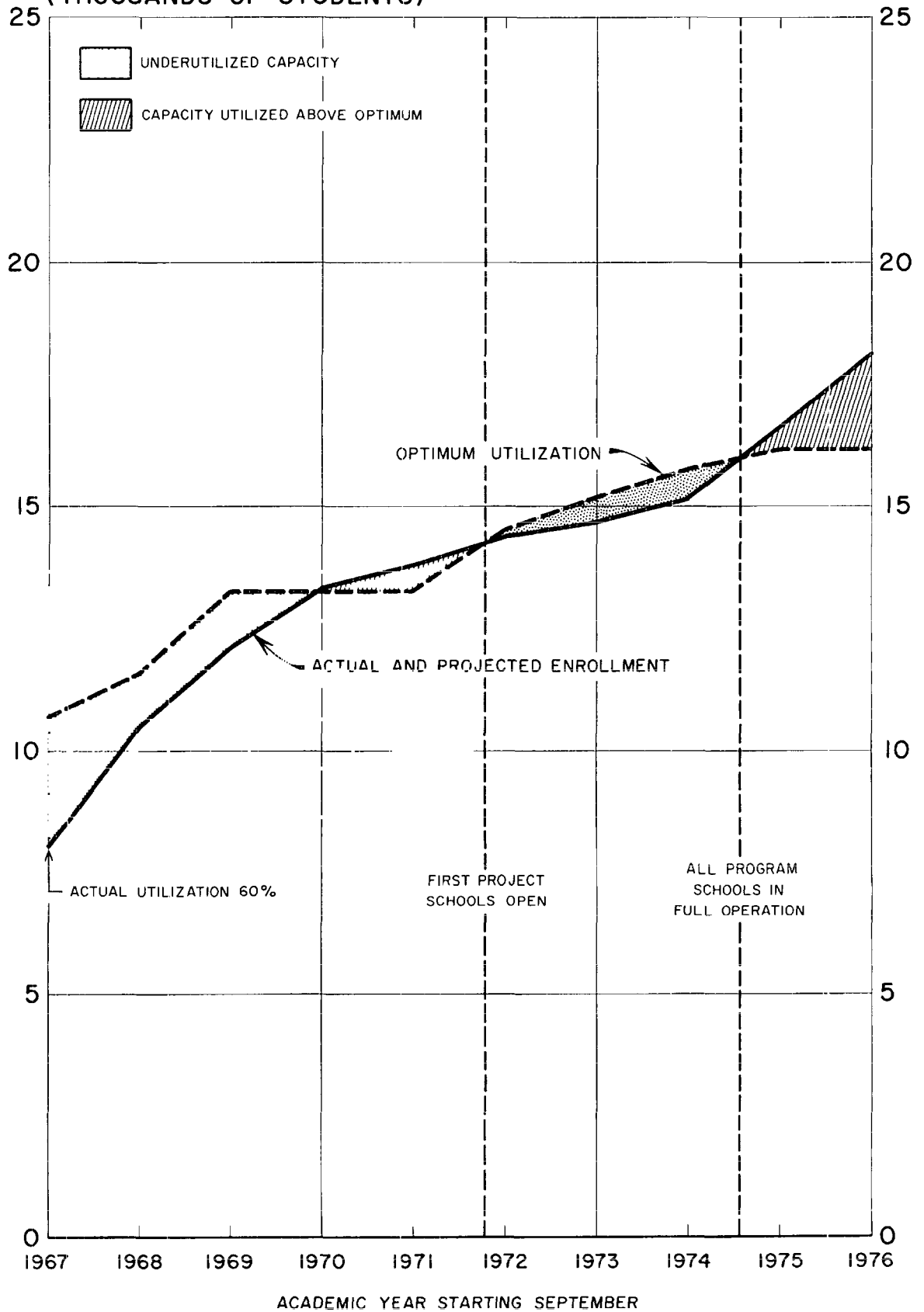
GUYANA: PRIMARY AND SECONDARY SCHOOL ENROLLMENT GROWTH, 1959-1967

GOVERNMENT AND GOVERNMENT-AIDED SCHOOLS

(NUMBER OF STUDENTS)



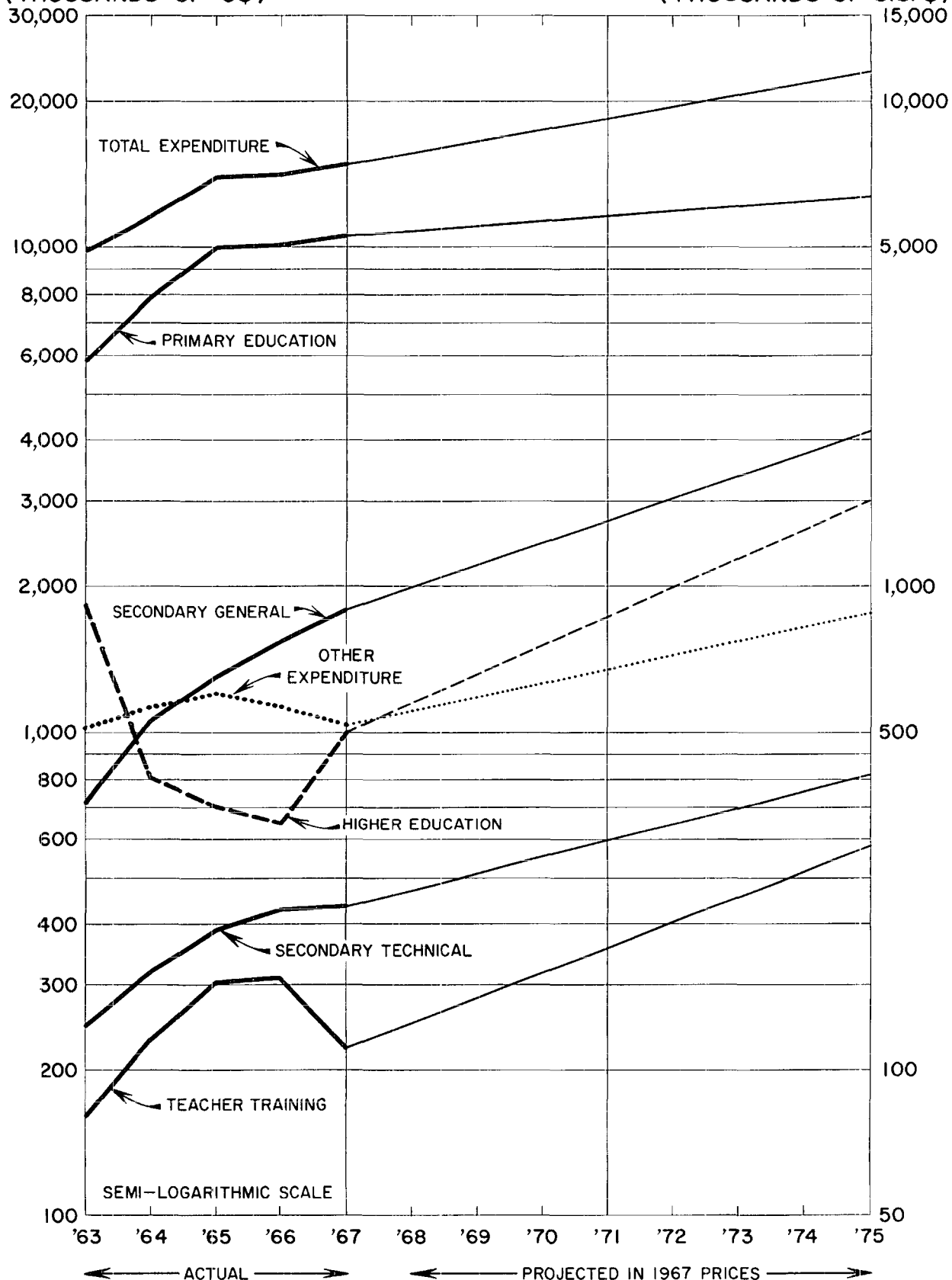
GUYANA: UTILIZATION OF GOVERNMENT SECONDARY SCHOOLS, 1967/68-1976/77 (THOUSANDS OF STUDENTS)



GUYANA: MINISTRY OF EDUCATION RECURRENT EXPENDITURES BY MAIN SECTOR

(THOUSANDS OF G\$)

(THOUSANDS OF U.S. \$)



STAFFING SCHEDULE

<u>Institution</u>	<u>Numbers required by:</u>				
	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
<u>A. Special Staff</u>					
1. <u>Government Training College</u>					
General Science and Biology	1				
Physics & Chemistry		1			
Social Sciences	1	1			
Health and Physical Education	2				
Speech and Drama	1			1	
Guidance	1			1	
Supervisors of Practice, Teacher Training	1	1		2	2
2. <u>Ministry of Education</u>					
Supervisor, secondary education					
a) general	2	1		1	1
b) science	1				
c) English		1			
d) Social science		1			
e) Technology		1			
3. <u>Multilateral Schools</u>					
Technical teachers				13	11
Commercial teachers				1	5
Agriculture teachers				4	
Guidance specialists				6	8
Trained headmasters		3		4	
Department head		1			
<u>B. Advisers</u>					
	<u>Duration</u>				
	<u>(man-years)</u>				
1. <u>Government Training College</u>					
General Adviser (org. & administration)	2	1			
2. <u>Ministry of Education</u>					
Adviser on examination development	2	1			
Adviser on curriculum & textbook development	2	1			
Adviser on Ministry organization with emphasis on secondary education	1½	1			
Adviser-Planner on org. for teacher training	1	1			
Adviser on planning & statistics	1½	1			

ANNEX 1 B

GUYANA - EDUCATION SECTOR

FELLOWSHIP REQUIREMENTS

Institution	Duration (years)	Training locally or abroad	Numbers required by:						Basic requirement for training
			1969	1970	1971	1972	1973	1974	
1. <u>Government Training College</u>									
* <u>Fellowships</u> ^{1/}									
General Science and Biology	1	L or A	1						Degree or equiv. and minimum of five years teaching experience
Physics & Chemistry	1	L or A		1					
Social Sciences	1	L or A	1	1					
Health and Physical Education	1	A	2						
Speech and Drama	1	A	1		1				
Guidance	1	A	1		1				
Supervisors of Practice, Teacher Training	1	A	1	1	2	2			
2. <u>Ministry of Education</u>									
* <u>Fellowships</u> ^{1/}									
Supervisor, secondary education									Degree or equiv. and minimum of five years teaching experience
a) general	1	A	2	1	1	1			
b) science	1	A	1						
c) English	1	A		1					
d) Social science	1	A		1					
e) <u>Technology</u>	1			1					
3. <u>Multilateral Schools</u> ^{2/}									
<u>Fellowships</u>									
Technical Teachers	1	L or (A)			10*	8*	6	4	CGLI (MTC) ^{4/} or Handicraft teacher diploma Ordinary diploma GCE "O"
	2	A							
Commercial Teachers	3	A	1*	3*	3	2			
Agriculture teachers	1	L or (A)			4*				Diploma Degree and Teaching experience Qualified headmaster Degree and Teaching experience
Guidance specialists	1	A			6*	8*	6	4	
Training of Headmasters ^{3/}	1	(L) or A		3*	4*	3	2		
Training of Departmental Heads	1	A	1*						

* Required for Project

□ Provision in project estimated cost

^{1/} In case of delay in award, there is need for priority allocation of the V.S.O., C.U.S.O. and Peace Corps volunteers.^{2/} Assuming continuation of existing programmes with V.S.O., C.U.S.O. and Peace Corps volunteers.^{3/} or one fellowship in 1969 to train a Guyanese in the teaching of management of multilateral schools.^{4/} City & Guilds of London Institute (Full Technological Certificate)

Source: Ministry of Education and Staff estimates,

B. Note on technical teacher training requirements for the project schools

- 1) Arts and crafts: The light crafts as taught in the first and second forms of the multilateral schools will be included as optional subjects in the second year of a separate government "diploma" training program in co-operation with the Government Technical Institute.
- 2) Woodwork and metalwork: As taught in the third form these subjects can properly be regarded as educational handicrafts and the appropriate qualifications offered by the C.G.L.I. or by handicraft teacher training colleges (Loughborough and Shoreditch in the U.K. or their North American equivalents) would normally suffice. But the volume of teaching at this level in any one of the project schools is insufficient to justify the appointment of separate specialist teachers for both woodwork and metalwork. Since few teachers are adequately qualified in both subjects, the teaching at this level should be integrated with the more vocationally biased instruction given in the upper school.
- 3) Engineering and building: The upper school subjects included under this heading are "geometrical and technical drawing," "technology and trade theory," and "workshop practice". To these must be added, for reasons given above, the subjects of "woodwork" and "metalwork".

Ideally, teachers of these subjects should have had experience within the engineering or building industries and should be able to offer appropriate qualifications at technician or craft levels. In fact, persons so qualified are in considerable demand and may be unattracted by the normal teacher salary scales. Failing such source of supply, the teacher qualified in educational handicrafts (industrial arts) should be recruited following a special course of at least one year's duration with the more mature equipment, techniques, and processes available at the Government Technical Institute or similar institution abroad. Teachers so recruited and trained should be able to assume responsibility for the work of the third form and much of the Technical "B" stream in the upper school.

Where it is possible to recruit from industry generally immediately after obtaining the appropriate "career" qualifications, two levels should be contemplated corresponding to technician and craft requirements. The former having obtained an Ordinary (National) Diploma in engineering or building at the Technical Institute, should be sent abroad to complete a course at the Higher (National) Diploma level and to obtain a teaching certificate. The latter should possess a Full Technological Certificate (C.G.L.I.) in his particular craft but would need pedagogical training, either "pre-service" or "in-service" in character. The "diploma" teacher (or graduate, if available) would normally be in charge of the work of the Technical "A" stream and the "certificate" teacher, that of the "B" stream with considerable elasticity to permit of the full employment of both.

4) Commerce: The volume of commercial study is small, and it is not possible to provide more than one teacher for this subject per school. This limits the field of recruitment, but it is not unusual for students to qualify in a wide range of commercial subjects, and the major problem is likely to be that of providing the specialized pedagogical training required. In view of the small numbers involved, it would probably be more economical to arrange for this training to be given overseas (e.g., at the Bolton or Garnett Technical Teacher Training Colleges, U.K.).

5) Home Economics: The two main fields to be covered are needlework and cookery; but since two teachers are required in each of the project schools (except Buxton), it will be possible to appoint a specialist in each subject. As in the case of the light crafts, needlework and cookery will be included as optional subjects in the second year of a separate government "diploma" training program carried out in co-operation with the Carnegie School of Home Economics.

6) Agriculture: The project calls for two teachers of agriculture in each of two schools; the selection of the teachers in each school should be such that both theory and practice can be adequately covered. The most likely source of recruitment is from former diploma students of the Guyana School of Agriculture who have had some field experience and can be induced to return for a one-year ad-hoc training course arranged jointly by the School and the Government Training College.

GUYANA: ENROLLMENT PROJECTION FOR PRIMARY EDUCATION
(in 000's)

<u>YEAR</u> <u>GRADE</u>	<u>1/</u> 1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76
1	31.3 ^{2/}	32.5	33.4	35.6	37.3	39.1	39.5	40.6	41.6	42.6
2	22.3	23.5	24.4	25.1	26.7	28.0	29.3	29.6	30.5	31.2
3	23.0	21.6	22.8	23.7	24.3	25.9	27.2	28.4	28.7	29.6
4	21.0	22.3	21.0	22.1	23.0	23.6	25.1	26.3	27.5	27.8
5	19.1	20.4	21.6	20.4	21.4	22.3	22.9	24.3	25.5	26.7
6	19.3	18.5	19.8	21.0	19.8	20.8	21.6	22.2	23.6	24.7
TOTAL:	136.0	138.8	143.0	147.9	152.5	159.7	165.6	171.4	177.4	182.6

1/ Actual Enrollment

2/ Includes pupils 5 and 6 years of age. About 40% of the pupils aged 5 repeat.

Source: Ministry of Education, July 27, 1968

GUYANA: ENROLLMENT PROJECTION FOR SECONDARY EDUCATION^{1/}

1966/67^{2/} 1967/68 1968/69 1969/70 1970/71 1971/72 1972/73 1973/74 1974/75 1975/76 1976/77 1977/78 1978/79 1979/80

SECONDARY DEPARTMENTS OF PRIMARY SCHOOLS (in thousands)

Forms														
1	14.4	15.0	8.6	9.5	10.3	10.1	10.6	10.8	10.9	11.1	11.6	12.2	12.7	13.3
2	10.3	10.8	11.2	6.5	7.1	7.7	7.6	7.9	8.1	8.2	8.3	8.7	9.2	9.5
3	7.2	7.7	8.1	8.4	3.2	3.5	3.8	3.8	3.9	4.0	4.1	4.2	4.4	4.6
4	.9													
	32.8	33.5	27.9	24.4	20.6	21.3	22.0	22.5	22.9	23.3	24.0	25.1	26.3	27.4

GOVERNMENT SECONDARY SCHOOLS

Forms														
1	1,027	1,350	3,200	3,100	3,400	3,350	3,500	3,550	3,600	4,900	5,160	5,400	5,640	5,900
2	1,253	1,300	1,300	3,000	2,900	3,200	3,200	3,300	3,350	3,400	4,650	4,900	5,130	5,360
3	1,838	1,800	1,800	1,800	2,850	2,750	3,000	3,000	3,150	3,200	3,230	4,420	4,660	4,870
4	1,997	2,000	2,000	2,000	2,000	2,280	2,200	2,400	2,400	2,500	2,560	2,580	3,540	3,730
5	1,711	1,900	1,900	1,900	1,900	1,900	2,160	2,100	2,300	2,300	2,380	2,430	2,450	3,360
6	280	300	300	300	300	330	340	350	350	350	350	350	350	350
Total	8,106	8,650	10,500	12,100	13,350	13,810	14,400	14,700	15,150	16,650	18,330	20,080	21,770	23,570

GOVERNMENT-AIDED SCHOOLS

Forms														
1	1,650	1,800	1,900	2,100	2,200	2,200	2,300	2,400	2,400	2,400	2,400	2,500	2,500	2,500
2	1,750	1,850	1,900	1,900	2,100	2,200	2,200	2,300	2,400	2,400	2,400	2,400	2,500	2,500
3	1,700	1,800	1,850	1,900	1,900	2,100	2,200	2,200	2,300	2,400	2,400	2,400	2,400	2,500
4	2,000	2,000	2,000	2,000	2,000	1,900	2,100	2,200	2,200	2,300	2,400	2,400	2,400	2,400
5	1,200	1,200	1,200	1,200	1,250	1,250	1,250	1,350	1,450	1,450	1,550	1,650	1,650	1,650
6	160	150	150	150	150	150	150	150	150	150	150	150	150	150
	8,460	8,800	9,000	9,250	9,600	9,800	10,200	10,600	10,900	11,100	11,300	11,500	11,600	11,700

1/ Does not include private schools independent of government support.

2/ Actual enrollment.

Source: Ministry of Education, August 11, 1968.

**TEACHING FORCE
AND
LEVEL OF PREPARATION**

1966/1967

<u>PRIMARY SCHOOLS</u>	<u>Number</u>	<u>%</u>
University Graduates		
Trained	1	.02
Untrained	1	.02
Trained	1,540	37.00
Qualified Untrained	290	6.97
Unqualified	2,330	55.98
Totals	4,162	100%

SECONDARY SCHOOLS

Type:	Secondary Departments		Government		Aided		Grand Total	
	No.	%	No.	%	No.	%	No.	%
University Graduates								
Trained	10	0.6	33	1.9	20	1.1	63	3.6
Untrained	3	0.2	71	4.0	53	3.0	127	7.2
Trained	396	22.4	49	2.8	8	0.5	453	25.6
Qualified Untrained	73	4.1	87	4.9	231	13.1	391	22.1
Unqualified	611	34.5	109	6.2	16	0.9	736	41.6
Totals	1,093	61.8	349	19.7	328	18.5	1,770	100%

Source: Ministry of Education
July 28, 1968.

ANNEX 4

SCHOLARSHIPS AND LOANS FOR OVERSEAS UNIVERSITY STUDIES, 1967 ^{1/}

	Agriculture	Arts	Commerce	Education	Engineering	Medicine	Natural Sciences	Social Sciences	Law	General	Total
Conditional Scholarships	12	19	-	3	22	-	11	-	-	7	74
Loan Students	5	26	12	5	10	36	7	16	1	2	120
Guyana Scholars	-	4	-	-	2	2	-	1	-	-	9
U.S.A. Govt.Univ. Scholarships	3	2	-	1	10	-	13	4	-	5	38
U.K. Scholarships	1	3	-	-	2	-	-	-	-	-	6
Canadian Scholarships	1	9	4	-	8	1	-	-	-	-	23
U.A.R.	-	-	-	-	-	1	-	-	-	-	1
India	1	-	-	-	-	6	-	-	-	-	7
Puerto Rico	-	-	-	1	-	-	-	-	-	-	1
Israel	-	-	-	-	-	4	-	-	-	-	4
Commonwealth Awards	-	-	1	-	2	1	1	-	1	-	6
Total	23	63	17	10	56	51	32	21	2	14	289

Source: Ministry of Education, IBRD Project Request,
April, 1968

^{1/} As of October, 1967.

GUYANA - MANPOWER ABSORPTION CAPACITY BY LEVEL OF EDUCATION

A. After completion of nine years of education

	<u>1967</u>	<u>1966-70</u>	<u>1975</u>	<u>1966-75</u>
<u>Output from public education system</u>	<u>10,700</u>	<u>58,000</u>	<u>10,200</u>	<u>105,700</u>
<u>Studying further:</u>				
a) academic education	4,000	20,000	4,800	42,500
b) vocational or pre-vocational education	260	1,600	1,400	6,700
<u>Entering the labor market:</u>				
a) employed	2,400	14,700	2,900 *	34,300
b) unemployed	2,240	11,500	-	6,600
<u>Not entering the labor market</u>	<u>1,800</u>	<u>10,200</u>	<u>1,100</u>	<u>15,600</u>

B. After completion of full secondary education ("O" level)

	<u>TYPES OF SECONDARY SCHOOLS (By 1975)</u>				<u>TOTAL</u> <u>1967</u>
	<u>Multi-lateral</u>	<u>Other Secondary</u>	<u>Technical Schools, etc.</u>	<u>Total</u>	
<u>Output from public education system</u>	<u>1,600</u>	<u>2,100</u>	<u>500</u>	<u>4,200</u>	<u>3,150</u>
<u>Studying further</u> (post-secondary or University)	780 ^{1/}	800	100	1,680 ^{1/}	1,100
<u>Entering the labor market</u>					
a) jobs requiring "O" level or equiv.	580	550	400	1,530	950
b) jobs requiring less than "O" level	-	350	-	350	540
<u>Not entering the labor market</u> ^{2/}	<u>240</u>	<u>400</u>	<u>-</u>	<u>640</u>	<u>560</u>

* leaving a deficit of 1,500 to meet manpower needs estimated at 4400
This deficit, added to those of the years 1971-1974 is expected to be filled by the backlog of unemployed, explaining the decrease in their numbers from 11,500 in 1966-70 to 6,600 (1966-75).

^{1/} including an estimated 30 who would, after completion of studies abroad, not return to Guyana.

^{2/} participation rate in the labor market assumed for girls who do not study further: 50%.

PROJECTED FLOW OF TRAINED TEACHERS FOR PRIMARY SCHOOLS 1967-1975

<u>Year</u>	<u>Primary School Enrollment (Grades 1 - 6)</u>	<u>Teachers Required on Post ^{1/}</u>	<u>Trained Teachers</u>	<u>Output of Trained Teachers ^{2/}</u>	<u>Wastage of Trained Teachers ^{3/}</u>	<u>Additional Trained Teachers ^{4/}</u>	<u>Trained Teacher Ratio</u>
1967/68	138,800	4,210	1,692	150 (100)	85	65	40%
1968/69	143,200	4,210	1,757	150 (100)	87	63	42%
1969/70	147,900	4,230	1,820	220 (100)	90	130	43%
1970/71	152,500	4,240	1,950	240 (100)	100	140	46%
1971/72	159,700	4,320	2,090	200 (100)	105	95	48%
1972/73	165,600	4,360	2,185	320 (50)	110	210	50%
1973/74	171,400	4,390	2,395	320 (50)	120	200	55%
1974/75	177,400	4,430	2,595	320 (50)	130	190	59%
1975/76	182,600	4,560	2,785	320 (50)	140	180	61%

^{1/} Teacher-pupil ratio increasing from 1:33 in 1967/68 to 1:40 in 1974/75.

^{2/} Output at end of session - including in brackets output from in-service training.

^{3/} Calculated at 5% of trained teachers on post in the session.

^{4/} That is, entering the teaching force at the beginning of the following session.

Source: Ministry of Education, August 4, 1968.

PROJECT SCHOOLS

Total enrollment, accommodation, and teacher requirements

	Teacher Training College	----- Multilateral Schools -----							Total
		Anna Regina	Mahaica	Wismar	Ruim- veldt	Annan- dale	Vigi- lance	New Amst.	
<u>Enrollment</u>									
Present	230	328	-	177	320	370	243	657	2095
Additional	430	592	848	671	528	286	413	263	3601
Final	660	920	848	848	848	656	656	920	5696
Boarders	280	150	-	-	-	-	-	-	150
No. of Staff housing units	-	-	8	9	1	-	-	2	20
Total gross area (sq.ft.) ^{1/}	35,868	52,375	49,000	49,750	49,750	39,500	42,625	49,250	332,250
<u>Streams offered at senior level of multilateral sch.</u>									
Arts		2	1	1	1	2	1	2	10
Sciences		2	1	2	2	2	1	3	13
Technology A		1	1	1	1	-	1	2	7
Technology B		1	2	2	2	-	2	-	9
Commerce		-	-	1	1	1	1	1	5
Home Economics		1	1	1	1	1	-	1	6
Agriculture		2	2	-	-	-	-	-	4
Total		9	8	8	8	6	6	9	54
<u>Teacher requirements</u>									
General	10	20	16	17	17	15	14	21	120
Arts/Music	3	2	2	2	2	2	2	2	14
Maths/Science	11	11	7	9	9	6	6	12	60
"Technical" Subjects	11 ^{2/}	4	5	4	4	1	4	2	24
Home economics	-	2	2	2	2	2	1	1	12
Commerce	-	-	-	1	1	1	1	2	6
Agriculture	-	2	2	-	-	-	-	-	4
Total	35	41	34	35	35	27	28	40	240
<u>Ratios</u>									
a. Gross area (sq.ft.) per student enrolled	54.3	56.9	57.8	58.7	58.7	60.2	65	53.5	58.3
b. Use factor of teaching accommodation	.83	.88	.85	.77	.77	.77	.78	.84	.81
c. Teacher-student ratio	1:19	1:22	1:25	1:24	1:24	1:24	1:23	1:23	1:24

^{1/} excluding boarding & staff housing^{2/} Professional subjects and supervision

GUYANA EDUCATION PROJECT
SUMMARY OF ESTIMATED PROJECT COSTS IN G\$ MILLION EQUIVALENT

Item	Enrollment			Academic and Communal			Boarding			Staff Housing	Professional Services	Total Buildings	Total Furniture	Total Equipment	Total Cost G\$		
	Present	New	Total	Boarding	Site Development	Buildings	Furniture	Equipment	Buildings	Furniture						Equipment	
TEACHER TRAINING																	
A101 Government Training College (new)	230	430	660	280	.301	.717	.043	.051	.285	.026	.015	-	.137	1.002	.069	.066	1.575
Sub-total	230	430	660	280	.301	.717	.043	.051	.285	.026	.015	-	.137	1.002	.069	.066	1.575
SECONDARY SCHOOLS																	
B101 Anna Regina (expansion)	328	592	920	150	.353	.952	.097	.218	.228	.019	.011	-	.161	1.180	.116	.229	2.039
B102 Mahaica (new)	-	848	848	-	.353	1.029	.094	.295	-	-	-	.116	.160	1.175	.094	.295	2.077
B103 Wismar (new)	177	671	848	-	.636	1.592	.106	.205	-	-	-	.222	.257	1.814	.106	.205	3.018
B104 Ruimsig (new)	320	528	848	-	.203	.995	.093	.178	-	-	-	.019	.128	1.014	.093	.178	1.615
B105 Annandale (expansion)	370	286	656	-	.166	.830	.085	.196	-	-	-	-	.104	.830	.085	.196	1.381
B106 Vigilance (new)	243	413	656	-	.229	.895	.080	.163	-	-	-	-	.118	.895	.080	.163	1.485
B107 New Amsterdam (new)	657	263	920	-	.225	1.084	.106	.159	-	-	-	.043	.138	1.126	.106	.159	1.754
Sub-total	2,095	3,601	5,696	150	2.165	7.377	.580	1.414	.228	.019	.011	.430	1.066	8.034	.679	1.425	13.369
Total	2,325	4,031	6,356	430	2.466	8.094	.623	1.465	.513	.045	.026	.430	1.203	9.036	.748	1.491	14.944 1/2
Contingencies:					.628								.306	2.323	.090	.149	3.496

1/ Add:
Fellowships : .160
Project Administration: .500
Interest during construction: .900

Total estimated cost of the Project: G\$ 20.000
US\$ 10.000

November 20, 1968

Legend:

... = Survey and outline Proposals
 ::: = Scheme design
 *** = Final design and contract preparation
 TTT = Tendering period
 XXX = Construction

GUYANA EDUCATION PROJECT - ESTIMATED SCHEDULE OF CONSTRUCTION AND EXPENDITURE ^{1/}

	Construction Estimated Value	1969 3 6 9 12	1970 15 18 21 24	1971 27 30 33 36	1972 39 42 45 48	1973 51 54 57 60	1974 63 66 69 72	months
TEACHER TRAINING								
A 101 Government Training College	1.303	...:::*****	TTTXXXXXXXXXXXXXXXXX					
SECONDARY SCHOOLS								
B 101 Anna Regina	1.533	:::*****	TTTXXXXXXXXXXXXXXXXX					
B 102 Mahaica	1.528	:::*****	TTTXXXXXXXXXXXXXXXXX					
B 103 Wismar	2.450	:::*****	TTTXXXXXXXXXXXXXXXXX					
B 104 Ruimveldt	1.217	:::*****	TTT XXXXXXXXXXXXXXXXX					
B 105 Annandale	.996	:::*****	TTT XXXXXXXXXXXXXXXXX					
B 106 Vigilance	1.124	:::*****	TTT XXXXXXXXXXXXXXXXX					
B 107 New Amsterdam	1.351	:::*****	TTT XXXXXXXXXXXXXXXXX					
FORECAST EXPENDITURE								
	<u>Total</u>	<u>Total</u>	<u>Total</u>	<u>Total</u>	<u>Total</u>	<u>Total</u>	<u>Total</u>	
Buildings	9.036		.279	2.509	3.925	2.207	.116	
Site Development	2.466		.072	.707	1.084	.573	.030	
Professional services	1.203	.306	.285	.204	.204	.194	.010	
Furniture	.748		.374	.374				
Equipment	1.491		.745	.746				
Fellowships and Project Administration	.660	.100	.118	.191	.129	.092		
Contingencies	3.496	.076	.284	.961	1.393	.743	.039	
Interest during construction	.900	.040	.040	.040	.152	.325	.303	
TOTAL PROJECT COMPONENT	20.000	.522	2.227	5.732	6.887	4.134	.498	
Local currency	8.400	.202	.587	2.339	3.300	1.877	.095	
Foreign Exchange	11.600	.320	1.640	3.393	3.587	2.257	.403	

^{1/} Estimated from data available on November 20, 1968 and assuming that Consultants are appointed by January, 1969.
 All expenditures are in G\$million.

GUYANA EDUCATION PROJECT LOCATION OF PROJECT SCHOOLS

