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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

AN APPRAISAL OF THE
DEVELOPMENT PROGRAM
OF GUYANA
(in five volumes)

VOLUME IV
EDUCATION

April 21, 1967

Western Hemisphere Department

CURRENCY EQUIVALENTS

G\$1	=	US \$0.58
G\$1 million	=	US \$583,330
US \$1	=	G\$1.71
US \$1 million	=	G\$1,714,290

VOLUME IV. - EDUCATION

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BASIC DATA

Education and Manpower

Literacy Rate	83% (1960)
Rate of School Enrollment (ages 6-14)	89.5% (1963/64)

<u>Student-Teacher Ratios</u>	<u>All Teachers</u>	<u>Qualified Teachers</u>
Primary Education	34:1	158:1
Secondary Education	23:1	90:1

	1963/64	1964	1965 Current
	Student	Total	Cost per
	<u>Enrollment %</u>	<u>Expenditure %</u>	<u>Student (\$)</u>
Primary Education	91.4	68.6	31.2
General Secondary Education	7.3	9.8	85-220
Technical Secondary Education	0.7	2.7	150
Teacher Training	0.5	2.0	368
Higher Education	0.1	7.3	1,880
Administration, etc.	-	9.6	
	<u>100.0</u>	<u>100.0</u>	

Percentage of GDP spent on Education	5.5 (1965)
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Education Expenditure per Capita	\$16.8 (1965)
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Annual Rate of Population Growth (1946-1960)	2.9%
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Annual Rate of Labor Force Growth (1946-1960)	1.2%
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Labor Force Participation Rates: males	81.8% (1965)
females	29.3%

Estimated Unemployment Rate	20.9% (1965)
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Distribution of the Labor Force

a) by sector (1960):	agriculture, forestry, fishing	37.2%
	manufacturing and building	24.2%
	commerce, transportation	16.2%
	government and other services	18.2%
	others	4.2%

b) by occupation (1965):	professionals	0.8%
	sub-professionals	1.6%
	administrative, executive,	
	supervisory workers	4.3%
	clerical and sales workers	17.1%
	craftsmen and technicians	21.0%
	service workers	17.2%
	manual workers	38.0%

SUMMARY AND CONCLUSIONS

1. Guyana makes considerable efforts to provide education for its population, which is growing at a rate of about 2.9 percent per year. Eighty-five percent of the children aged 6-14, a very high proportion, are enrolled at school. In 1965, 5.5 percent of the GDP was spent on education; and public recurrent expenditure on education, which was 16.8 percent of total public recurrent expenditures, represented the largest single item.

2. However, the majority of capital and recurrent funds is spent on primary and all-age schools which are overcrowded, ill-equipped, poorly staffed, and cannot provide the general knowledge and understanding needed for training and adaptation to employment. In secondary education, except for a small number of very good schools, the situation is not significantly better.

3. To improve the return on education expenditures and after discussion with the government, the mission has attempted: (a) to propose policies aimed at improving the quality of education and its efficiency; and (b) to work out a program of investments for the period 1967-1972 within the framework of priorities which have been defined in relation to the middle and high-level manpower needs of the country. As a result, most of the programs proposed in the 1966-1972 development plan have been retained although in many cases a different order of priorities, magnitude of investment, and/or time phasing has been suggested.

4. In primary education, local communities should become more involved in sharing its capital cost through a generalized system of construction by self-help on the basis of a simplified architectural design and by bearing part of the maintenance and material costs. The addition of handicrafts and home economics departments to the all-age schools (primary schools with a secondary department) should be suspended. No child should be admitted before age six but it may imply that the common entrance examination to secondary schools would be taken between ages 11-13 (against 10-12 at present).

5. In secondary education, the reform of the present academic curriculum to make it well balanced and comprehensive is of immediate need. An improved teaching of mathematics and sciences and the introduction of industrial arts for every student during the first two or three years of secondary education will generate more adaptable and better oriented students. At the same time, the curriculum committee should select a limited number of recommended textbooks to reduce their cost to the parents. The planned creation of regional secondary schools needs to be phased with the curriculum reform.

6. To improve the quality of education, the annual output of trained primary teachers should be doubled and the curriculum modified to train also teachers specialized for the secondary department of the all-age schools and the junior cycle of secondary schools. With respect to secondary school teachers, an annual output of 30 would be expected from the Faculty of Education of the University of Guyana by 1970 since diploma studies of a contemplated duration of three years from the General

Certificate of Education (GCE) "O" level (five years secondary education) or two years from the GCE "A" level (seven years secondary education) will be started by 1967.

7. The promotion of technical education and training will help to expand production and reduce unemployment through the skills resulting from the introduction of higher technical studies at the University of Guyana, the provision of craft courses in refrigeration and air conditioning at the Government Technical Institute, the creation of a Junior Technical Institute at New Amsterdam, and the setting up of a Trade Training Center in Georgetown. With respect to the latter, one should take care not to duplicate the existing facilities for technical education, while it would seem logical to involve industry more actively and at an earlier stage if ultimately it is expected to support the center financially.

8. The powers of the Board of Industrial Training might be broadened to improve its effectiveness, particularly with respect to the supervision of the training provided by the employer, who would be actively encouraged to release the apprentice for periodical courses at a trade school. The Carnegie School of Home Economics could help promote the use of local foodstuffs and organize training courses for hotel and service workers. At the School of Agriculture there is much scope for increasing the practical training of field assistants, particularly in relation to rice cultivation and livestock management. The excellent program for the retraining of established farmers should be expanded in the immediate future.

9. The need for a coordinating body in the field of technical education and training is clearly identifiable and should lead to the creation of the National Technical Education Advisory Board to work in close liaison with the Ministries of Education, Labor and Economic Development and the Manpower Unit.

10. In many cases it will be necessary to raise the government salary scales to reflect the need for scarce skills. This applies particularly to the industrial and agricultural diploma technicians but it should also be borne in mind when determining the financial status of the future diploma secondary school teachers.

11. The total investment program recommended by the mission for the period 1967-1972 amounts to some G\$13.5 million. Foreign finance is already available for the equivalent of G\$4.1 million, which forms 87 percent of the cost of construction and equipment of the University of Guyana, including the Division of Technical Studies, of the New Amsterdam Junior Technical Institute and of the Industrial Training Center. Design work on these projects is in progress.

12. Other projects, for which no foreign finance is now committed, are considered to be determinant for the development of Guyana's manpower resources and economic growth:

- a. The construction of a primary teacher training college with a capacity of 600 students after thorough revision of the costing and coordination with the plans for the University of which it would utilize some facilities. The estimated cost is G\$1,200,000.
- b. The construction for a cost of about G\$250,000 of a multi-purpose educational library-laboratory with a 100-125 student capacity at the University of Guyana for the training of secondary school teachers;
- c. The addition of laboratories, workshops, or the provision of science kits to the existing 17 "new" secondary grammar schools for some G\$750,000;
- d. The construction for an estimated G\$3,500,000 of seven comprehensive secondary schools, which could be started by 1968 and phased with the expected output of secondary teachers from the University: to avoid any delay, immediately after adoption of a new curriculum for these schools, an architect specialized in school building should be assigned to work on the design, in close collaboration with the Ministry of Works and the Ministry of Education.

Designs based on the above requirements have not been worked out yet.

13. The 1967-1972 investment program suggested by the mission is summarized below and compares with a total amount of G\$12.4 million projected in the 1966-1972 development plan. It is expected to generate an average increase of 5 percent per year in the Ministry of Education recurrent expenditures. In the course of implementation, it would appear useful to review the plan periodically so that if the availability of qualified teachers falls below or recurrent costs tend to outrun projected levels, then the necessary downward adjustments could be made to the investment plan.

Summary Table: INVESTMENT PROGRAM AND ITS FINANCING 1967-1972
(in thousand G\$)

	1966-72 Plan Estimates	Total Cost	Alternative Mission Suggested Plan			
			External Source	Financing Amount	Internal Financing	External Financing as % of Total Cost
Primary Teacher Training College	900	1,200	-			
Training of Secondary Teachers at the University of Guyana	-	250	-			
Laboratory, Workshops, Science Kits 17 Secondary Schools	-	750	-			
Secondary Comprehensive Schools - 7	<u>2,520</u>	<u>3,500</u>				
Sub-Total: Projects potentially suitable for international finance		5,700				
Technical Institute (Junior)						
New Amsterdam	250	650	Canada	425	225	65
Industrial Training Center	-	310	U.S.	310		100
University of Guyana (of which Div. of Tech. Studies 1,600)	2,950	3,800	(Canada (U.K.	1,700 1,700	400	90
Primary Education	3,334	875		-	875	-
Amerindian Education	642	540	Canada ?	?	?	?
Others	<u>1,848</u>	<u>1,678</u>	-	-	<u>1,678</u>	-
Grend Total	12,444	13,553		4,135	3,718	31

I. THE DEMAND FOR EDUCATION

1. Guyana is a country with a very high literacy rate, estimated at over 83 percent. A rapidly expanding population with a rate of school enrollment of more than 85 percent among the children aged 6-14 (for whom school is compulsory) and the possibility of admitting children aged 5 and of allowing those aged 14 to continue for one or more years according to scholastic attainment have in the last few years generated an increasing demand for education and its satisfaction represents a considerable burden for both the financial and the manpower resources of the country. The following table summarizes the enrollments by age for the years 1962/63 - 1963/64 in the primary and all-age schools:

Age	Enrollments by Age Group			
	Numbers		Percentage of Total Estimated Population of the Corresponding Age Group	
	1962/63	1963/64	1962/63	1963/64
5	3,694	6,234	18.5	30.4
6-11	95,738	102,014	87.0	91.1
12-14	<u>26,904</u>	<u>28,518</u>	<u>82.8</u>	<u>85.1</u>
<u>Total:</u>	126,336	136,766	77.4	82.4
Total Primary and All-age Schools	135,784	147,839		

2. A projection of the population and of the past tendencies in the growth of enrollments made in 1964 showed an expected enrollment of 169,000 pupils in the primary and all-age schools by 1970/71. However, for the school year 1965/66 the enrollment was already about 166,000, showing the accelerated desire for more and longer schooling. This desire is easily understandable in view of the scarcity of employment for the primary and all-age school leavers (Table 20), which is also reflected in the relatively high number of years of schooling of the inexperienced unemployed - in Georgetown in March, 1965, the median was 8 years of schooling for boys and 8.5 for girls; in the rest of the country it was respectively 7.4 and 7.7 years.

II. STRUCTURE AND ORGANIZATION OF EDUCATION

3. Guyana's educational system follows the British pattern in a way similar to the other British-influenced countries in the Caribbean area (See Chart 1). The very selective entrance to secondary education has represented such a traditional bottleneck that in 1962 the former primary schools were reorganized into all-age schools, i.e. primary schools with a secondary department. To avoid the other bottleneck represented by the sixth-form level, the recently established University of Guyana recruits from the General Certificate of Education (GCE) "O" level (5 years of secondary education) and provides degree courses of 4 years' duration as against the usual pattern of 3 years after the GCE "A" level, obtained after 7 years of secondary education. Although the Government Technical Institute attains a very good standard, technical studies or simply practical work have been, in general, relatively neglected in the past. Formal education, both public and private, has often a narrow academic content.

4. The Permanent Secretary of the Ministry of Education deals with the administration of education while the Chief Education Officer is responsible for all the pedagogical matters. The teachers in primary and secondary education, except those in 3 of the secondary schools, are not civil servants; and their conditions of work and remuneration scales follow a pattern resulting from agreements concluded through collective bargaining (Whitley Council). The Ministry of Works is responsible for school construction and maintenance, but it has no specialist in school design.

5. Although the school system is centrally controlled, there exists an administrative arrangement known as the "Dual Control" system; i.e., some of the school buildings are owned by established church bodies which employ teachers (subject to government approval) and manage the schools generally while the government provides grants to cover all or part of the teachers' salaries and part of the expenses for maintenance, furniture, and other equipment.

6. Planning within the Ministry of Education has been mainly a statistical and budgetary function. Because of lack of personnel, statistics are relatively weak while the information on private schools is very inadequate. The planning of education has been little related to forward estimates of the availability of teachers and recurrent funds. The qualitative and quantitative priorities within the framework of the 1966-1972 development plan need a better identification to avoid concentration of capital expenditure on the primary and all-age schools as in 1966.

7. For the coordination and planning of the development of the country's human resources, the responsibilities have not been clearly defined although it would seem logical to expect it to be part of the functions of the Ministry of Economic Development, acting in close collaboration with the Manpower Unit of the Ministry of Labor which

produced in 1965 with the help of an outside consultant a well-documented survey of the country's labor force and manpower requirements. An improved coordination - even on an informal basis - appears necessary between the Ministries or entities in charge of assessing the manpower requirements, providing the training facilities both within and outside the formal educational system, selecting the fields for scholarships and training abroad, and selecting and later employing the beneficiaries of such programs.

III. GENERAL EDUCATION

Primary Education

8. The enrollment increase in the primary and all-age schools has reached an average of 10,000 per year between 1962/63 and 1965/66 (Table 1). This has meant that overcrowding in the existing schools - most of them of the hall type without wall separation between classrooms and provided with insufficient furniture - was hardly relieved despite considerable capital expenditure which reached some G\$2.68 million during the last 5 years (Table 15B) or 70 percent of all the Ministry of Education capital expenditure. Traditionally, the local communities have not been actively involved with education which was provided either by government or by the churches (Table 2). However, in 1965, twenty-three schools were built by self-help at an estimated cost to the government of G\$30 per pupil place, or less than half the usual price quoted by contractors. Consideration should be given to the further involvement of the local communities to help cover part of the recurrent costs of primary and all-age education, such as maintenance, supplies, etc.

9. The quality of education, if merely assessed from the student:trained-teacher ratio, should have slightly improved between 1961/62 and 1964/54 when 28 percent of the primary teachers were trained against 25 percent in 1961/62 (Table 3). This improvement mainly results from the start of an in-service teacher-training program in 1963 and from increased enrollments at the pre-service teacher-training college. During the same period, the average pupil:teacher ratio improved from 40.7:1 to 32.2:1.

10. Much, however, remains to be done as revealed by the fact that, although promotion is automatic, the available statistics seem to indicate a relatively important number of repeaters in the first year of primary education. The introduction of a secondary department to the primary school, in addition to increasing classroom overcrowding, tended to remove the best qualified teachers from the primary to the secondary forms. Many of the new teachers are untrained pupil-teachers, but their number is expected to decrease in the future as a result of in-service training on the one hand and of recent Ministerial decisions to promote pre-service teacher training on the other. In effect, many of these pupil-teachers have a very poor knowledge of what they are supposed to teach: in 1966 the results of the annual pupil-teacher examinations taken after two years of teaching showed that only 33 percent of them scored more than 45 percent in elementary arithmetic. The resulting need for constant supervision is evident; but, at present, each district education officer is responsible for too large a number of schools. In this respect, the decision to create a tenth district in the vast but sparsely populated areas inhabited by the Amerindians is certainly welcome.

11. As in other countries in the Caribbean area, the knowledge of written and spoken English among primary and secondary school pupils has declined during the last 10 years; and it appears justified to adopt teaching techniques of English as a second language for the teaching of English as a mother language. In general, primary and all-age schools provide an education based on memory learning with little reference to the local environment while the teaching of mathematics and sciences is inadequate. During the last few years many schools have been equipped for the teaching of handicrafts (33 departments within schools and 4 centers) and home economics (54 departments and 2 centers) (Table 15B); and it may help eradicate some existing prejudices against certain types of manual work. However, as a matter of priority, the program of construction and equipment of handicraft and home-economics departments at all-age schools should be suspended pending planning of secondary school development; specialized facilities in the all-age schools may become superfluous in some areas as the all-age school converts into a primary school proper. This does not imply the suppression of handicrafts and home-economics from the curriculum; these activities must be continued but by a less expensive approach. Alternatively the special accommodation should be so designed as to be suitable for primary school work when no longer required for specialized purposes.

12. As a means of reducing classroom overcrowding and the growth of public capital and recurrent expenditure and of giving every child an equal opportunity, it is strongly recommended that for the time being entrance into primary education should not be before the age of 6 as of October of the relevant school year. At the same time, it will be necessary to extend between ages 11-13 the period during which the common entrance examination to secondary education is taken and to modify correspondingly any other examination age limit.

Secondary Education

13. The statistics relating to secondary education refer to programs of different contents and quality and cannot be examined usefully as aggregates. In 1964/65 there were about 70 secondary schools and 18,000 students enrolled, a third of them in government schools (Table 1). Queen's College, Bishop's High School, and, to a lesser extent, Anna Regina, are recognized as among the outstanding secondary grammar schools in the Caribbean area. Most of their teachers are graduates and many are trained. Unlike the other secondary teachers, they are civil servants. Many prominent Guyanese are alumni from these schools; and, nowadays, many other secondary schools try to recruit their graduates with the GCE "O" or "A" level as secondary school teachers. It is worth mentioning that Queen's College provides a compulsory course in social sciences and a course in comparative religion and created a "Fifth Remove" form to improve the science background of otherwise outstanding students with the GCE "O" level.

14. The importance of the secondary school entrance examination is considerable to the children's future since their admission to free secondary education and to these 3 government schools depends on the marks obtained. In 1965, out of 8,693 candidates, 272 or 3.1 percent with marks ranging between 403 and 325 were admitted. Another 708 or 8 percent obtained marks between 325 and 280 which allowed them free education in the new government secondary schools; those who can afford to pay tuition fees go to government-aided or to private schools; the others, including those too old to be admitted into secondary education,

usually remain in the all-age schools unless they obtain outstanding results from the "Preliminary Certificate" 2 years later or from the "College of Preceptors" examination 3 years later (See Charts 1 and 2).

15. Until 1962/63, government only provided secondary education in the 3 above-mentioned schools (Table 1). By 1963/64, ten new secondary academic schools giving courses generally up to the GCE "O" level were opened; by September, 1965, there was a total of 15 new secondary schools, some of them in inappropriate buildings rarely equipped with laboratories and workshops and with relatively few qualified or trained teachers (Table 3). A survey of 12 of the government schools shows the following teacher qualifications as of October, 1966:

	<u>Graduates</u>		<u>GCE "A" Level</u>	
	<u>Trained*</u>	<u>Untrained</u>	<u>Trained*</u>	<u>Untrained</u>
Arts	3	12	6	29
Sciences	<u>1</u>	<u>9</u>	<u>2</u>	<u>10</u>
<u>Total:</u>	<u>4</u>	<u>21</u>	<u>8</u>	<u>39</u>
Percent	2.5	13.0	5.0	24.2

	<u>GCE "O" and Others</u>		<u>Total</u>
	<u>Trained*</u>	<u>Untrained</u>	
Arts	12	61	123
Sciences	-	<u>16</u>	<u>38</u>
<u>Total:</u>	<u>12</u>	<u>77</u>	<u>161</u>
Percent	7.5	47.8	100

The lack of qualified trained science teachers is striking and little practical teaching can be expected.

16. In 1964/65 there were 14 private schools aided financially by the government with 6,953 students. About 18 percent of the teachers were graduates and 13 percent were trained, although, as among government schools, some were better than others. One school visited had 12 graduates among its 18 teachers and provided sixth-form work; another had 6 graduates out of a staff of 11. There is also a number of private unaided schools with a total enrollment of about 5,200 students (1964/65). Fees in the government-aided and unaided schools are

* Having completed a teacher-training course in Guyana (primary teacher training) or abroad.

relatively high and usually amount to G\$80 - 120 per year. At one time government proposed to absorb progressively the non-government schools. The present government is conscious that such a move would increase the financial burden to the state without creating additional student places. Instead, regional secondary schools are to be established to absorb the upper classes of the all-age schools and thus improve both primary and secondary education by reducing the existing overcrowding. The cost of such a scheme, however, is likely to outweigh its benefits in terms of well-trained middle-level manpower since there are no plans to improve the curricula and no coordination with the availability of secondary school teachers.

17. The present system of all-age schools is unsatisfactory. The most appropriate solution may be to replace progressively the secondary departments of primary schools by junior secondary schools giving 2 or 3 years of general secondary education. These schools would lead either to employment or to vocational training or other advanced schooling in diversified streams. This, however, is a long-term proposal which cannot be implemented immediately because of the lack of qualified teachers and financial constraints.

18. More attention should be paid, therefore, in the immediate future to the realization of comprehensive schools as intended in the 7-year development plan (Table 17); these could be integrated in the future scheme described in paragraph 17. The present curriculum, geared toward the GCE examination, does not prepare students for a broad range of activities. At the Government Technical Institute and at the School of Agriculture much time is devoted to teach basic mathematics and sciences which is the task of general education. Improved mathematics and science teaching, plus industrial arts (handicrafts) for every student during the first 2 or 3 years of secondary education, should provide a broader background after which students could be expected to choose between an academic, technical, or commercial stream. The teaching of handicrafts should also be introduced into the existing secondary schools. Two or three of the schools should have agricultural streams following, for example, the scheme applied at the Diego Martin Secondary School in Trinidad or the program followed by six secondary schools in Kenya and preparing the students for further studies at the University, at the School of Agriculture (diploma course), or for work in agriculture and related activities. Most of the additional cost could be offset by a reduction in the duration of the diploma course, which would be designed for students from the agricultural stream.

19. Such a program of comprehensive schools should not be started before the first cohort of secondary teachers graduates from the University of Guyana. Meanwhile, because of the urgent needs for people with a good scientific background, an additional science stream of 2 years after the "College of Preceptors" (CP) level could be added to a few existing better secondary schools by assigning them some of the qualified science teachers who would teach both the regular and the science streams. For the unequipped "new" secondary schools, the addition of laboratories and workshops or the provision of science kits is an immediate need. Such kits could be provided as well to the aided secondary schools whenever

20. Books are not only often inadequate, they are also too expensive. It is estimated that an average of G\$10-20 per pupil per year is spent on books and stationery in primary education. At secondary level the annual cost varied in 1962/63 between G\$22 and G\$55 with an average of G\$38. Although the country's financial resources do not allow a free allocation of books, the government could exercise a kind of quality control via its curriculum committee and ease considerably the cost to the parents by selecting a limited number of recommended books in each subject and negotiating better price conditions with the publishers.

IV. TEACHER TRAINING

Primary Teacher Training

21. The UNESCO Reports (Germanacos 1963, Larby 1964, Edualino 1965/66) have all contributed to improve the numbers of teachers being trained and the quality of the training. Projections were made regarding the numbers needed annually and the additional recurrent cost of training and of the teachers' future remunerations. The output of trained primary teachers should be at least 300 per year against about 100 at present, which - using a pupil-teacher ratio of 33:1 - would be barely enough to satisfy the demand resulting from the growth in enrollments which has occurred during the last few years. Replacement needs may be of the order of 200 to 250 teachers per year (4-5 percent of the present total) while the in-service teacher-training program may, for another few years, contribute to raise the number of trained teachers among the existing staff (Table 4).

22. Aside from the normal 2-year course given at the Government Teacher Training College (Table 4) intended for students with the GCE "O" level, there is a 3-year course recruiting from the CP level, the future specialist teachers in home economics and handicrafts. The practical part of their training is given respectively at the Carnegie School of Home Economics and at the Government Technical Institute. The enrollments are as follows (October, 1966):

<u>Year of Study</u>	<u>Normal Course</u>	<u>Home Economics</u>	<u>Handicrafts</u>
1	84	30	30
2	59	16	10
3		23	

To compensate for the potential earnings the students will have to forego during their pre-service training courses (Table 5), it has been necessary to provide loans of an amount of G\$25-35 per month; and since 1964, a scholarship of G\$50 per month is given to those who pass successfully a preliminary examination.

23. In the pre-service course, candidates with suitable qualifications and aptitudes should be specifically trained for the junior cycle of secondary schools or for the secondary department of the all-age schools with special emphasis on the subjects they will teach and particular inducements, like differential loans and scholarships, to teach mathematics and sciences. In the curriculum, instruction in the use of science kits should be included as well as training in the preparation of improvised apparatus. The course on cooperatives could be broadened to include general principles of economic development while the course in general science should include at least a term devoted to the understanding of agriculture. Such understanding might help the teacher in his assimilation of the country's economic environment and help him better prepare the pupils for an active participation in their country's development.

24. Primary teachers will continue to be trained in two years. The construction of a new training college seems advisable in view of the inadequacy of size of the presently utilized premises. However, this decision should be delayed until funds become available and until the coordination with the university, both for the use of common facilities and for the provision of common courses, is clearly defined and accepted. Meanwhile, to accommodate increasing numbers of students, it will not be possible to avoid renting an additional building.

Secondary Teacher Training

25. Secondary teacher training has been neglected in the past, even in the allocation of scholarships or loans for studies abroad. It is realized now that much of the country's future depends on the availability of a well-trained middle and high-level manpower, possessing the general knowledge and understanding necessary to assimilate a further technical training and to achieve a reasonable occupational mobility.

26. Hence, in the allocation of funds within the educational sector, priority should be given to the Faculty of Education of the University of Guyana for the training of secondary teachers in arts, sciences, handicrafts, commerce, and agriculture as required for the comprehensive schools program (paragraph 18). An annual output of at least 30 diploma-level teachers could be reached during the initial years, especially if students with the GCE "A" level are allowed to complete their studies in 2 years' time against 3 for those with the GCE "O" level.^{1/} Credit towards a degree would be given for study towards the diploma qualification. Before these decisions are made, it seems indispensable that the financial status of these secondary teachers, including teachers of technical subjects, should be determined either with the Establishment Branch of the Ministry of Finance or with the Ministry of Education.

27. The teachers' present salary level and their better prospects for professional advancement in the public service (Table 5), the private sector, or abroad leads to a considerable turnover. The country's financial resources do not allow at the present time for considerable increases in the teachers' salary scales above those granted recently. To the extent that more teachers will complete pre-service and in-service training, a higher salary bill will then reflect an increase in the quality of education. Although teacher turnover may have a temporary disrupting effect and reduce the numbers of qualified teachers immediately available, it must be recognized that a relatively high mobility of labor is inevitable at Guyana's stage of development and that, eventually, it will benefit the country by increasing the numbers of trained middle- and high-level manpower, both inside and outside the educational sector. Meanwhile, this turnover has to be taken into account when estimating teachers' replacement needs.

^{1/} Subsequent to the draft report new plans now call for a four year degree course from "O" level or three from "A" level with the possibility of leaving at any stage (e.g. 3 years) and returning to complete the course either on a full-time or part-time basis.

V. TECHNICAL EDUCATION: DEMAND AND SUPPLY

28. The educational and social system placed in the past an overdue emphasis on certain professions like law or medicine, (Table 21) to the disadvantage of training in engineering and allied fields. In paragraphs 18 and 23 the introduction of handicrafts in secondary education and of agriculture courses in primary teacher training has already been discussed as a means to help children in their choice of a future career, and to help eliminate certain conventions or prejudices which may prevail among teachers, parents and social groups.

29. The educational authorities, in their dealings with technical education, have realistically assessed that for many years the major manpower needs will be found in connection with maintenance and repair, and will relate to skilled workers, supervisors, junior technicians and diploma technicians. They are also aware that there is an oversupply of unskilled workers with primary education or more (Table 23), who would have much greater opportunities for employment if they could undergo technical education, coupled with training and practice. These opinions are confirmed by the numbers of juveniles who register with the employment exchange in Georgetown for clerical jobs, or for any kind of work (general laborers) (Table 24 A & B) - showing also the need for a more effective employment counselling within the schools than the present annual visit devoted by the Juvenile Employment Officer to about 40 all-age schools in and around Georgetown. They are also confirmed by the occupational distribution of vacancies in the private sector and the numbers of workers who are considered to perform unsatisfactorily. (Table 25 A & B). A wide range of workers did not measure up to expectations among service workers (mostly in hotels and restaurants); craftsmen (welders, turners, fitters, mechanics, printing machine operators, servicemen for domestic electrical appliances, accounting machine operators, motor vehicle drivers and carpenters); clerical workers (accounts clerks, store cashiers and general clerks).

30. Current shortages in the public sector are considerable and cannot be explained only by the possibility of more favorable salary levels in the private sector. Aside from the need for teachers (largest group) and for professionals, there were at the time of the 1965 manpower survey about 650 unfilled vacancies for subprofessionals, clerks, and other workers: 24 medical technicians, 40 supervisors, 7 accounting and audit officers and 24 accounting and audit clerks (Table 26C).

31. Account also must be taken of the need to replace the skilled workers who emigrate. Although comprehensive statistics are not available, an estimate indicates that teachers and nurses are among those who most often find work abroad.

32. At present, technical education is provided at the Government Technical Institute, the Carnegie School of Home Economics, and the Guyana School of Agriculture. There are two private trade schools run by Bookers Sugar Estates at Port Mourant and the Demerara Bauxite Company at Mackenzie.

There are also many private commercial schools, most of them in Georgetown.

The Government Technical Institute

33. The Government Technical Institute in Georgetown provides training at the preliminary craft level, the skilled craftsman level and the technician level including the ordinary diploma (see Chart 1). The preliminary craft course and the diagnostic course (preliminary technician course) are intended to strengthen the basic mathematics and science background of the students (Paragraph 18). There are full-time day courses, block-release courses (3 months full-time per year), day release courses (the apprentice is allowed to follow the course one day a week) and evening courses. In addition there are commercial courses (shorthand, typing, bookkeeping), handicraft teacher training (Paragraph 22) and other special courses. No course is considered final since, in principle, promotion possibilities exist for the best students between each level of training up to the degree level of technologist. The GTI is competently run, the equipment is well-maintained and the schedules make full utilization of the available space both at day time and in the evening. There remains, however, a large unsatisfied demand; 1,200 applicants for 240 places at craft level; 300 applicants for 45 places at technician level.

34. The main courses offered during 1965/66 were as follows Tables 6 and 7 give the enrollments since 1961/62 and the details for 1965/66):

- a. Preliminary craft (total enrollment 375)
- b. Trade courses (total enrollment 536)
- c. Technician courses leading either to the Ordinary Diploma of the City and Guilds of London Institute (81 students full time) or to the City and Guild Full Technological Certificate (176 students part time)
- d. Commercial courses (total enrollment 47)
- e. Special courses including handicraft teacher training (total enrollment 96)

It is intended to add craft courses in plumbing, autobody repair, auto electricity, refrigeration and air conditioning maintenance and installation for which the demand for skilled labor is considerable. Because of lack of space, agricultural mechanics should be transferred to the School of Agriculture (Paragraph 55).

35. A feasibility study based on demographic, educational and economic factors was made in March, 1965, and led to the conclusion that a technical institute for vocational training is needed in the Berbice region, whereas no new institution is needed yet in Anna Regina, where additional practical facilities may be required to serve technical educational streams and part time vocational training activities. A suitable site was found in

New Amsterdam and the school will provide day and evening craft courses in motor vehicle trades, refrigeration and air conditioning, construction technology, electrical installation and maintenance, carpentry and joinery, secretarial practice and bookkeeping. Canadian help will be obtained for the foreign exchange component of the cost of the institute and for the training of practical teachers.

36. Aside from its role of satisfying the demand of skills for the existing industries, technical education and training may help start new activities. A recent ILO report referred to the possibilities of developing small scale and cottage industries based on the use of coconut fiber (carpets, etc.), hides (leather tanning, shoe industry), clay (bricks), balata (ornamental pieces), cassava (starch). Training will, however, need to be complemented by and coordinated with provision of credit, regular flow of adequate raw materials, advice in accounting, management, investigation and promotion of market potentials, continued follow-up. In the Mackenzie area, it is believed that some private engineering shops might be developed for sub-contracting for the Bauxite Company. The same report suggests that the technical schools could rent the equipment in their workshops to enterprising students who wish to start production on their own.

Higher Technical Education.

37. The ordinary diploma and higher diploma courses will become part of the University of Guyana. Before the University's own buildings are completed, the training will be provided in a new workshop being built on the Technical Institute's grounds by the Institute's own students. The courses offered are of particular interest to the Guyanese economy: mechanical engineering (power production, plant maintenance, refrigeration, air conditioning); electrical engineering (electrical power, radio, telecommunications, electronics); building construction and civil engineering (roads and airfields; water supply, drainage); land surveying; laboratory technician (medical, geology, physics, chemistry, etc.). A diploma course in business administration to be taught in another faculty of the University is planned.

Home Economics

38. The Carnegie School of Home Economics has presently 69 students following the practical courses linked with their three-year teacher-training course, in addition to 120 students who hope to reach the CP level in two years and generally study further for nursing or work as domestics. There is also a day course of six months' duration in catering (16 students) and about 12 evening classes in dressmaking, home management, upholstery, etc., for which the demand is higher than the available places. There are five rural centers where cooking, preserve making and home improvement are the most popular subjects. The school is aware of the very important role it may play:

- a. It provides the opportunity to promote the use of traditional and new locally grown foodstuffs, the cultivation of which should be encouraged as a substitute to imports by the Ministry of Agriculture extension services and by the School of Agriculture. Conversely, it should abandon lessons using too expensive imported products;
- b. The urgent need for better trained hotel and service workers - whose productivity is very low at present (see paragraph 29) - designates the School of Home Economics as the logical center to organize such courses, in addition to catering courses. The present system, whereby certain firms send apprentices for training by day release and evening classes at the Technical Institute, could usefully be employed in home economics as well and be encouraged by the Board of Industrial Training (paragraph 43). Recently steps have been taken to implement some of these proposals.

Commercial Education

39. Most commercial schools limit their activities to the training of shorthand-typists and bookkeepers. The schools are private and often expensive although many students are ready to borrow amounts which, once employed, they could repay within four to five months. However, employment openings are no longer as plentiful as formerly since many enterprises and the government itself require experienced secretaries - as opposed to merely trained ones. One or two private schools still train a very small number of accountants up to the Higher Certificate of the London Chamber of Commerce, but the tendency is to concentrate on lower levels and simple bookkeeping where the numbers of students are larger and the profits higher. No training is provided at middle management level. The proposed diploma courses in business administration at the University of Guyana are therefore fully justified, as well as the introduction of commercial streams as part of the comprehensive schools scheme.

Training within Industry

40. The purpose of general and technical education is to produce trainable young men and women, capable of specialization and adaptation. Industry is expected to provide on the job training, although, in developing countries, the cost of such training is relatively higher than in developed countries, and tends to become an investment outlay.^{1/} Hence, the fear of

^{1/} In Guyana in one of the private trade schools, each apprentice spends his first two years outside production, at an estimated annual cost of G\$2,500.

losing their trained workers to other employers may induce many enterprises to refrain from organizing on-the-job training. However, for the economy as a whole, there is a greater return in using the employer's facilities to train for specialized skills that can be learned quickly but also may soon become obsolete than in providing expensive equipment and teachers to simulate work conditions within schools. Therefore private firms with adequate training facilities should be encouraged with such government support as is necessary to train over and beyond their own needs.

41. At least three large firms maintain well equipped apprentice workshops and retain staff to teach the theoretical aspects of the subjects taught. At the Demba Trade School run by the Demerara Bauxite Company in Mackenzie, the capacity is 24 apprentices carefully selected to become electricians, fitters and turners, millwrights (boiler makers), draftsmen, motor mechanics and diesel mechanics. There are also day and evening upgrading courses such as the supervisor course, which appears to be very competently run. The Port Mourant Training Center of Bookers Estates provides a basic course in bench work for all apprentices and specialized training for agricultural mechanics and mechanical fitters. The annual intake is between 40 and 50 apprentices, corresponding to a total enrollment of 80. Much time has to be devoted to the improvement of the knowledge in subjects which belong to general education; teaching follows modern pedagogical methods. It is estimated that the company lost over 100 former apprentices, during the last five years, to other enterprises in Guyana or abroad.

42. The Manpower Survey recorded in 1965 a total of 579 boys and 63 girls receiving training (Table 9) among whom registered apprentices account for 291. Very few, apart from the registered apprentices, received any formal instruction, and only 98 were having the benefit of courses in addition to practical work - which implies that few of these trainees can rise professionally because of their inadequate theoretical preparation. Most of the registered apprentices in the Georgetown area were working in the manufacture and repair of transport equipment, those in Mackenzie in bauxite mining, and for the other areas, in sugar estates, factories and refineries.

43. The Board of Industrial Training is a supervisory body of ten members, which sets the rules for the training of apprentices among twenty-eight companies relating to the engineering, building and printing trades. The employment obligation is five years^{1/} during which the apprentice is encouraged to attend technical courses and is paid a reasonable wage. The numbers for 1966 show little change from 1965 (Table 10). It is felt that the Board's effectiveness is limited by lack of funds and a shortage of staff which does not allow enough control over the training provided, by the lack of an adequate testing of the competence of the tradesman after completion of the apprenticeship and possibly by some weaknesses in the provision of the Industrial Training Ordinance. Therefore, many of the suggestions in the Partin Report (May 1965) regarding the registration of enterprises and examination of the master's competence, as part of a new Industrial Training Ordinance are worth serious consideration (see Annex B); appropriately other suggestions have been implemented. Of particular interest is the provision

^{1/} Urgent consideration should be given to reorganizing the apprentice system in particular the period of apprenticeship, in the light of present knowledge and practices of vocational training techniques.

that part of apprentice training be spent in an organized school situation, since employers often need to be made fully aware of the benefits to be derived from workers being allowed to undergo instruction while becoming skilled tradesmen. In Guyana's case some of the facilities at the Government Technical Institute in Georgetown where day-release and evening courses are run, are indeed under utilized (Table 8).

44. The need to upgrade certain skills and the numbers of unemployed, untrained school leavers has generated the idea that an Industrial Training Center might solve some of the problems by providing crash programs. Similar programs are being carried out in many of neighboring Latin American countries. Initially, the center would provide courses in plumbing, electricity, masonry, welding, carpentry, heavy equipment operation and maintenance and reach an annual output of 500 building trades craftsmen. The training in building trades (housing, road construction) appears justified by the lack of skills in the industry, although the more important need for supervisors may not be covered by the project. The estimated recurrent cost of G\$380 per student trained (training programs will usually take less than one year) may be high compared to the annual cost per student at the Government Technical Institute, and requires further investigation.

45. Slow progress on this project has been beneficial since it has helped underline some of the problems involved in manpower training and planning. Its capital and initial recurrent costs will be borne by AID - AIFLD^{1/}. Although the project is mainly sponsored by trade unions, it has been suggested that its further financing might be carried out by a special levy on industrial enterprises according to the pattern set by SENAI^{2/} in Brazil. The Association of Industries (CAGI) should be involved at an earlier stage not only to determine in what fields training is required but also to ensure the close cooperation essential to supply the on-the-job training which will convert the semi-skilled worker from the center into a skilled craftsman. The project has helped the Ministry of Education and the Ministry of Labor to clarify their respective responsibilities in the field of manpower training: it seems a reasonable proposal that the Ministry of Education deal with formal education and the Ministry of Labor with all matters relating to industrial training. In view of the high recurrent cost, however, there is need to ascertain that (a) the Industrial Training Center under the Ministry of Labor will not overlap with the existing facilities available at the Government Technical Institute where day-release and evening classes are offered; and (b) there is no oversupply in any of the skills.

46. All of this points to the immediate need to organize, as recommended in the 1966-72 development plan, the National Technical Education Advisory Board, comprising representatives of industry, labor, professional groups and appropriate ministries. The function of the Board should not be limited to

^{1/} American Institute for Free Labor Development

^{2/} National Service of Industrial Apprenticeship

advice on "curriculum and course content, the function of the apprenticeship system, the skills which are in short supply, and other matters pertaining to the formation of policy concerning vocational, technical and commercial education", but also should include an active coordination of the efforts by both the Ministry of Education and the Ministry of Labor with regard to technical education and training respectively. The Manpower Unit of the Ministry of Labor appears well equipped although understaffed for the further gathering and interpretation of manpower information to be communicated to the National Technical Education Advisory Board and to the Ministry of Economic Development where the evaluation of the economic and financial constraints involved with any new investment takes place.

47. Private enterprises or their professional associations within the relevant economic sector should become more actively involved with education and training in the shaping of curricula, provision of practical training opportunities (both for students and masters) and not merely considered by the educational authorities as purveyors of funds or sponsors of scholarships to compensate the scarcity of public funds. Such considerations apply to the Government Technical Institute (whose Board had been very active until it was dissolved), as well as to the Carnegie School of Home Economics, the School of Agriculture, and the future institutes to be created.

The Public Service Training Center

48. This Center is attached to the Training Division of the Ministry of Education and has concentrated its activities on providing a "grass roots" induction course to about 400 entrants in the civil service; in earlier years the Center had given emphasis to the upgrading of civil servants through training abroad. Some improved coordination seems necessary between the evaluation of the training needs by each ministry, the approval of such needs by the Establishment of the Ministry of Finance,^{1/} the approval of the choice of the trainees by the Public Service Commission who, once the training is completed, will have to appoint those selected earlier.

Health Education

49. In the health sector the 1965 manpower survey estimated the total number of doctors in the country to be about 160, 65 of whom were in the public service and 23 were in large private establishments. There were 17 dentists. Many medical officers are needed in the public sector, as well as public health inspectors, technicians, physiotherapists, nurses. Recruitment difficulties are resulting from the needs in the private sector, and from differential levels of remuneration; as a consequence many of the specialists are expatriates under contract. A high turnover of trained nurses leaving for

^{1/} The Establishment of the Ministry of Finance authorizes the creation of new positions for the whole public service.

employment abroad has to be reckoned with and determines the level of intake of the nurses training school.

50. The Georgetown hospital provides for the training of nurses, laboratory technicians, dispensers, radiographers, physiotherapists; except for the training of nurses, the other programs are coordinated with theoretical courses given at the University of Guyana. The hospital also trains medical interns and doctors in residence. There are at present 210 nurses undergoing a three years' training with an annual intake of 90 - the establishment for the country's twelve hospitals being 286 trained nurses. The admission level is in principle the GCE "O" in four subjects including English and mathematics, but often candidates with less general background have to be admitted. Thirty-six graduate nurses are following a one-year midwifery training program, while 44 students without prior nursing qualifications are attending an 18-month course to become rural nurses/midwives.

Agricultural Education

51. In the field of agriculture the country is divided into six agricultural districts where the extension work is the responsibility of one agricultural officer (degree level) and several field assistants (diploma level) (Table 27). Since for every 1,500 farmers there is at present only one field assistant whose task, already made difficult by the lack of connecting roadways between the different fields, is complicated by an overload of administrative and other duties, there is little opportunity to provide the farmers with additional technical knowledge. As of October 1966, vacancies existed in the Ministry of Agriculture for five agricultural officers (three assistants were acting) and seven field assistants. In the research and laboratory division positions for eleven field assistants were vacant. It is hardly surprising: if, instead of studying for two years after the GCE "O" level to obtain the diploma in agriculture - and thus having had to forego two years' earnings - the field assistant had entered the public service straight as a clerk, he would have started with the same salary of G\$117 per month. Or if he had studied two years to become a primary teacher, he would have started with G\$156.50 per month.

52. Another consequence follows: the intake of full-time students has dropped at the School of Agriculture. In 1964/62 12 students graduated at the certificate level (two years' study after the CP level); in 1965/66 there were only 7. Their employment opportunities are not clear and none of them has been employed yet by the Ministry of Agriculture. For the diploma students, the numbers graduating dropped from 12 to 9. The adjustment of the field assistants' remuneration at least to the level of the sub-professional's scale (A 10: G\$3,336 - 5,616 per year) deserves immediate implementation.

53. The School of Agriculture started in 1963 at Mon Repos, next to the Central Agricultural Station, seems to have suffered from improvisation. The courses leading to the certificate level do not give the student access to further study up to the diploma level, a situation which should be reviewed. The relations with the enterprises engaged in agriculture could be strengthened

beyond the limited field of mere provision of scholarships - as suggested in paragraph 47. Little in the curriculum is devoted to the special study of rice promotion to which the highest economic priority is attached, and where extension work will be decisive if productivity is to increase and production prices are to become internationally competitive. There are courses to train teachers of vocational agriculture; however the employment possibilities in primary education, all-age and secondary schools appear to be limited but they might improve when curricula are drawn for the comprehensive schools. As mentioned in paragraph 23, the recommended teaching of agricultural principles as part of the teacher-training curriculum serves another purpose: to broaden the teachers' understanding of the economic and social environment.

54. The special summer courses for established farmers - unlike the formal courses for student - should have a very high priority, since they would yield immediate return in terms of improving farmers' theoretical and practical knowledge while wastage will be minimal. Eighty farmers recommended by the extension officers were given a one-week course at the School of Agriculture in 1964/65 and 75 in 1965/66. Their numbers should be rapidly increased in future. Special efforts could be set up to promote among the participants a more scientific cultivation of rice and efficient use of fertilizer. A few of them could be initiated into the growing of those limited and presently imported foodstuffs that appear to be economically viable. On their side they could discuss their professional problems with the extension and research officers, and thus help a two-way communication between research, extension and practice.

55. The school intends to expand into commercial farming both for the benefit of its students and as demonstration of its profitability to the farmers. The scheme would include the growing of citrus, field and sweet corn, fruit and cash crops and be combined with beef cattle and dairy farming and pig raising. It appears (Volume II, Agriculture, paragraphs 80 - 81) that the proposal cannot be fully endorsed either in terms of location or the proposed program. On the contrary, the long delayed transfer of agricultural mechanics courses from the too crowded Government Technical Institute deserves rapid implementation (Paragraph 34).

VI. HIGHER EDUCATION

56. The need for highly qualified professionals and subprofessionals has already been stressed throughout this report. In the public sector, it is revealing that, by mid-1965, the largest needs were for teachers (Table 26B: 63 professionals; 966 service workers) although in most cases unqualified teachers were now filling the vacancies. More critical were the 754 unfilled vacancies where no officer was acting or performing the duties (Table 26A). Among the 100 professionals needed, 4 were architects, 13 civil engineers, 9 land surveyors, 9 geologists, 6 agricultural officers or assistants, 18 physicians and surgeons and 16 graduate teachers; a survey of the positions filled by expatriates shows that their numbers are particularly important at professional and managerial level (Table 22). The following summary indicates the percentage of posts filled by expatriates:

<u>Area</u>	<u>Occupation Groups</u>		
	<u>Professionals</u>	<u>Administrator (Managing Dir.)</u>	<u>Manager and Senior Executive</u>
Greater Georgetown	27%	18%	18%
Other Areas	68%	11%	21%

The University of Guyana

57. Accordingly, the University of Guyana (U.G.), established in 1963, with its balanced approach to diploma and degree studies is expected to contribute considerably to satisfy the country's high-level manpower needs - and in a very efficient way. The University expects to produce teachers for secondary schools, (paragraph 26), graduates in public administration, geology, sociology, biology, etc. A total of 13 subjects will be taught in arts, sciences and social sciences. At the diploma level the University offers advanced technician training, (paragraph 37), public administration, radiography and other courses for medical technicians (paragraph 50). A course for physiotherapists is planned. The University does not seek to duplicate the expensive professional faculties of the University of the West Indies in such fields as medicine and engineering, but hopes to assist in feeding students to them.

58. The entrance level is the GCE "O" level with five subjects and the courses at UG last four years (five years in evening classes) - a departure from the present British pattern which has been introduced by many countries to avoid the 6th form bottleneck. Students with the GCE "A" level are given one year credit towards a degree. Reciprocally, it is hoped that students with one year at UG will be considered by other universities as having the "A" level.

This admission policy should of course be reflected on the pattern of studies in secondary education where the expensive courses at "A" level will probably not be introduced in any new secondary schools.

59. There are at present 490 students; the intake in October 1966 was 70 in social sciences, 70 in arts and 53 in science (Table 11). Classes are held during the evenings on the premises of Queen's College. Most of the students are employed during the day time, a majority as teachers, although one cannot expect that many will desire to continue to work as teachers after completion of their studies. In 1964/65 the occupations of the students were as follows:

Teachers	147
Civil servants	77
Students in other institutions	12
Other occupations	<u>32</u>
	268

Many of those giving their main activity as students attend day classes at the Government Teacher Training College. When the University switches to day classes, after completion of its own campus at Turkeyen, the problem of financing the students' studies will be acute, and a loan scheme should be preferred to a scholarship scheme - while the present fee of G\$100 per year, or a higher fee, will still have to be charged. If the numbers of students justify it, evening studies should not be phased out since the cost of studies, and particularly the weight of the earnings foregone may be too high for those who have family charges. Government assistance should be more closely related to support of students undertaking courses of direct significance to implementation of development goals.

Studies Abroad

60. To be complete, it is necessary to mention that there are many Guyanese students abroad on loans or scholarships administered by the Training Division of the Ministry of Education. Among the students, the 1963 statistics of students abroad (Table 12) reveal an almost complete absence of persons in fields such as public administration, sociology, statistics, mining engineering - which proves how justified UG was to start some of them. Of the 260 awards of loans (implying 3 to 5 years' service in Guyana after termination of the studies) during the years 1954-65, 68 were in medicine, 29 in economics, 22 in various branches of engineering, 22 for the B. A. General, 8 in History, 6 in English, 13 in Modern Languages, 12 for the B.Sc. General, 7 in Dentistry, 11 in Education and 6 in other fields. Since 50 of the awards in medicine were made after 1959, many of the doctors will only graduate between 1966 and 1970, and it is to be hoped that the Public Service will be able to attract them. But more striking is the almost complete absence of beneficiaries of the loan scheme in the field of agriculture, although six scholarships had been attributed by 1966 (Table 13) implying that the latter have contracted an obligation to serve the Government for five years after graduation.

61. The scholarships and loan scheme for studies abroad should become a major tool of an active manpower policy geared at solving some of the main needs at professional and subprofessional level; scholarships abroad should be reserved for such studies as are not offered in Guyana but are considered essential for its economic and social development. To satisfy the needs of the Public Service alone, the 1965 Manpower Survey recommended a number of fields as of priority for the training abroad of administrative and professional personnel, and of certain "engineering technicians".

62. There exist also several awards through external aid programs or bilateral agreements, often for fields in which the Government's scholarships and loans program had laid too little emphasis (Table 14).

VII. EDUCATION FINANCE AND INVESTMENT PLANNING

63. In 1965 Guyana spent on education an estimated G\$18.5 million or 5.5 percent of the GDP. Government expenditure accounts for G\$15.1 million or 81 percent of the total. Most of the funds were allocated to primary and all-age schools: about 73 percent of the recurrent and 85 percent of the capital public expenditure on education (Table 15 A and B). The share of salaries has increased steadily during the last years and moved from 68 percent of the Ministry of Education recurrent expenditures in 1963 to 81 percent in 1966.

64. During the period 1963-1966, the Ministry of Education recurrent expenditures increased by about 45 percent or 13 percent a year, while total public recurrent expenditure increased by some 37 percent or 11 percent a year. In 1966, 17 percent of the total public recurrent budget was devoted to education, against 16 percent in 1963 (Table 16). With the implementation of the Government's policy to provide free education in its own secondary schools, public revenues from education fees declined from G\$126,400 in 1963 to G\$26,000 in 1966.

65. The cost of construction is estimated at about G\$8.5 per square foot for the relatively simple structure of a primary school, with labor representing 40-45 percent, and foreign exchange 25-30 percent. The traditional use of greenheart wood, the need of protection against vandalism, and the proportion devoted to the non-teaching area result in relatively higher costs than could be achieved otherwise.

66. Many of the projects suggested in the 1966-1972 development plan (Table 17) are of great value. However, in view of the budgetary constraints which are facing the country and of the relatively high increase in the recurrent costs generated the priority of each project needs a careful review.

67. In this respect, the preceding analysis of the needs in each education sector (paragraphs 8-62) and the availability of more recent cost estimates delineate a new strategy for the development of Guyana's human resources. It is aimed at reducing the share of public resources devoted to primary education while phasing the investments in accordance with their suggested priorities, although it should be understood that all projects form part of an inter-linked program. Paragraphs 68 to 75 examine the resulting projects in a similar order.

Secondary Teacher Training

68. The training of secondary school teachers is an integrated program with the arts and sciences faculties of the University of Guyana. Since for most courses, it will use either the general purpose classrooms or the other faculties specialized laboratories, it only requires the addition of a multi-purpose educational library - laboratory for 100-125 students estimated to

cost about G\$250,000. As stated in paragraphs 24-25 the annual teacher output should be initially around 30 and the increases would be phased according to the forecast expansion of secondary education.

Comprehensive Secondary Schools

69. A program for the construction of seven comprehensive schools of five streams each (paragraph 18) could be spread over the years 1968 - 1972 and allow for a total intake of 750 students by 1971/72 and 1,050 students by 1973/74 which will bring the total capacity to 5,250 when the schools are in full operation. The capital cost for a 750 students' comprehensive school may be in the order of G\$500,000. The annual teacher requirement is expected to reach 40-45 per year by 1972/73. Since the output from secondary teacher training will be around 30 per year, the difference will be covered by junior secondary teachers to be trained at the primary teacher training college (paragraph 23). Assuming by mid-1969 an initial output of the teachers who entered university with "A" level in 1967, the construction of the first comprehensive school should begin a year before. This means that, after adoption of a new curriculum, an architect specialized in school buildings should be assigned to work in close collaboration with the Ministry of Works and the Ministry of Education on the preparation of the school design.

Science Laboratories, Workshops, Science Kits

70. The addition of science laboratories and workshops to five of the existing "new" secondary schools may cost G\$500,000 over a five-year period. For the other 12 "new" secondary schools, the provision of science kits equivalent to three laboratories (physics, chemistry, biology) at a unit cost of G\$20,000 for a 500 students secondary school would represent a total cost of about G\$250,000. As a result, an immediate increase in the output of students with an acceptable scientific and practical background can be expected (paragraph 19).

Higher Technical Education

71. The construction and equipment of the Division of Technical Studies at the University of Guyana for the ordinary and higher diploma studies will require an investment of some G\$1.6 million for a capacity of about 200 students (paragraph 37).

University of Guyana

72. The total cost of the University's first stage of construction is estimated at G\$3.8 million, 40 percent of which are already included under higher technical education (paragraph 71). The master plan provides for a large number of multi-purpose classrooms and avoids the duplication of facilities, thus allowing for an efficient utilization of premises. It seems realistic to expect construction to start in the second half of 1967 and to spread over a period of three years.

Technical Institute

73. The Junior Technical Institute to be built in New Amsterdam (paragraph 35) will serve the whole Berbice area. It will have an annual output of 225 students for a total enrollment of 400 full-time students and 400 students in evening or day-release classes. The total estimated cost of G\$650,000 does not include staff housing. The training of Guyanese practical teachers will take four to five years of studies abroad; meanwhile, technical assistance in the initial staffing of the Institute will be provided from Canada.

Primary Teacher Training College

74. The creation of a primary teacher training college with an enrollment capacity of 600 will replace the present facilities which accommodate a maximum of 250 students and bring the output of primary and junior secondary teachers to a level of 300 per year (paragraphs 21-24). However, the initial project for a new Government Teacher Training College provided for an expenditure of G\$3.8 million for a 300 student capacity, later reduced to G\$1.6 million for the first stage. Compared to the cost of the University of Guyana, it is clearly overambitious, particularly since its location adjacent to the University allows for the use of common facilities (playgrounds, cafeteria, library) and even some cooperation in the teaching of basic courses. As a result, the capital cost per student place could be lower than for the university facilities which implies a complete revision of the whole project and will delay the construction by at least one year. For planning purposes a provision of G\$1.2 million has been made for a 600 student capacity including construction of one dormitory for 150 students.

Industrial Training Center

75. The construction cost of an Industrial Training Center under the Ministry of Labor is estimated at G\$310,000, including equipment, initial supplies and technical assistance. The capacity is 520 students in day and evening classes (paragraphs 43-44), following intensive craft courses in several building trades. The project, likely to be phased over the period 1967-1970 is expected to generate an annual recurrent cost of G\$370,000 with expatriate personnel and G\$190,000 with local personnel. Technical assistance is to be provided by the United States.

76. These projects are the core of the 1966-1972 suggested investment program as appears in the summary table at the end of this chapter. However, provision has to be made as well for the expansion of the School of Agriculture practical farming efforts. The sum of G\$200,000 seems sufficient to buy and prepare land for rice cultivation, vegetable growing, to acquire and to transfer the agricultural mechanics courses from the GTI. With respect to primary education, the construction of accommodations to absorb additional enrollments and to relieve school overcrowding should be done entirely by self-help including in Georgetown - which may mean additional responsibilities for the local government authorities. It appears useful to simplify the designs and to authorize only the construction of classroom type buildings.

Under the existing arrangements there are some uncertainties as to whether funds will be allocated under the Commonwealth Development and Welfare Acts for the building of the schools by self-help as opposed to work under contract; the allocation of such funds for self-help projects is certainly advisable. The proposed allocation of funds for primary education is based on the assumption that, by limiting admission from school year 1967/68 to the six year olds, the total (1967-1972) increase in the enrollments of primary and all-age schools will be limited to 12,000.

Foreign Finance

77. For the construction of the University of Guyana the sum of G\$3.4 million or 90 percent of the estimated total cost has been already secured in equal amounts from the U.K. and Canada. This latter country has also committed the equivalent of G\$425,000 to cover the foreign exchange cost of the Junior Technical Institute in New Amsterdam as well as the equivalent of G\$165,000 per year during four or five years in scholarships for training abroad and as technical assistance. The possibility of further finance from Canada for other projects might be envisaged within the framework of the recently proposed Centennial International Development Program. Finally, for the proposed Trade Training Center, the U.S. has committed funds equivalent to G\$1,250,000 covering its building and equipment (G\$310,000), and the running costs over a period of three years.

78. The projects mentioned in paragraphs 68-75 are summarized in the following table in a way to show those for which foreign finance is already available and those which could attract further partial international finance.

79. It is estimated that the suggested program (Table 18) will generate by 1972 additional recurrent costs of G\$5 million for the Ministry of Education, representing an average annual increase of 5 percent per year from 1966. This increase is lower than the original forecast in the Plan essentially because of a different project content.

Summary Table: INVESTMENT PROGRAM AND ITS FINANCING 1967-1972
(in thousand G\$)

	1966-72 Plan Estimates	Total Cost	Alternative Mission Suggested Plan			
			External Source	Financing Amount	Internal Financing	External Financing as % of Total Cost
Primary Teacher Training College	900	1,200	-			
Training of Secondary Teachers at the University of Guyana	-	250	-			
Laboratory, Workshops, Science Kits	-	750	-			
17 Secondary Schools	-	750	-			
Secondary Comprehensive Schools - 7	2,520	3,500	-			
Sub-Total: Projects potentially suitable for international finance		5,700				
Technical Institute (Junior)						
New Amsterdam	250	650	Canada	425	225	35
Industrial Training Center	-	310	U.S.	310	1/	100
University of Guyana (of which			(Canada	1,700		
Div. of Tech. Studies 1,600)	2,950	3,800	(U.K.	1,700	400	90
Primary Education	3,334	875	2/	-	875	-
Amerindian Education	642	540	Canada ?	?	?	?
Others 3/	1,848	1,678	-	-	1,678	-
Grand Total	12,444	13,553 4/		4,135	3,718	31

1/ The land will be leased from the Town Council.

2/ Funds from the U.K. (CD & W grants) still uncertain.

3/ Agriculture school, furniture, sites etc. (See Tables 17 and 18).

4/ To reconstitute the total of the projects costs over the period 1966-1972, it is necessary to add G\$940,000 which were already spent in 1966 and not included in the above figure.

ANNEX A

General Information on Manpower^{1/}

1. Between 1946 and 1960 the country's total population increased from 375,701 to 560,330 or 49.1 percent, representing an average annual rate of growth of 2.9 percent. Most of the population lives along the coast, and the share of urban population increased from 27.8 percent in 1946 to 29 percent in 1960.

	<u>Total Population</u>		<u>Labor Force</u>		<u>Labor Force as a percent of Total Population</u>	
	<u>1946</u>	<u>1960</u>	<u>1946</u>	<u>1960</u>	<u>1946</u>	<u>1960</u>
Male	186,433	279,128	106,517	134,130	57.1	48.0
Female	189,268	281,202	40,964	40,867	21.6	14.5
Total	375,701	560,330	147,481	174,997	39.2	31.2
Urban	103,602	162,444	42,825	56,595	41.3	34.8
Rural	272,099	397,886	104,656	118,402	38.4	29.7

2. The labor force increased by 18.7 percent at a much slower rate than the population as a whole. But the growth of employment was only 10 percent between 1946 and 1960, generating a rise in unemployment from an estimated 3,700 to 18,770, of whom the "inexperienced unemployed" were respectively 1,300 and 11,800.

3. In 1960 37.2 percent of those employed worked in agriculture, forestry and fishing; 3.7 percent in mining and quarrying; 16.3 percent in manufacturing; 7.9 percent in building and construction; 0.5 percent in electricity; 11.4 percent in commerce; 4.8 percent in transport and communication; 18.2 percent in government and other services.

4. The 1965 manpower survey showed that among the 318,420 aged 14 and over, or 49 percent of the total estimated population, 174,772 were in the labor force - the participation rate for males being 81.8 percent and for females 29.3 percent. Unemployment was 18.4 percent of the males in the labor

^{1/} A detailed analysis may be found in O.J.C. Francis. Report on a Survey of Manpower Requirements and the Labor Force - British Guiana - 1965.

force and 27.7 percent of the females, with an overall figure of 20.9 percent. Of the 28,300 males 14 years of age and over who were not classified in the labor force, nearly 60 percent were attending school; for the females, 80 percent of the 115,400 not in the labor force were engaged in home duties and 11 percent were attending school.

5. Of the 138,128 employed during the 1965 manpower survey week, 0.8 percent were professional workers; 1.6 percent were non-professional workers with specialized training; 4.3 percent administrative, executive and supervisory workers; 17.1 percent clerical and sales workers; 21 percent craftsmen and technicians; 17.2 percent service workers; 38 percent manual workers. The detail of occupations among professional workers (Table 21) shows the predominance of law and medicine. A majority of the employed were wage earners (73.4 percent of the males; 67.1 percent of the females), while the employers were the smallest group (1.2 percent of the males and 0.7 percent of the females); self employed were 21.4 percent of the males and 24.5 percent of the females and unpaid family workers accounted for only 3.8 percent of the males and 7.6 percent of the females. Average incomes for wage earners of both sexes were G\$34.4 in Georgetown and G\$22.4 for the rest of the country.

6. Those aged between 14 and 21 represented 27.4 percent of the population aged 14 and over. Unemployment among males 14-21 years of age was more than double that for persons of the same sex in the population as a whole (43.7 percent against 18.4 percent) and unemployment amongst young females was double the national average for females (54.5 percent against 27.7 percent) (Tables 19 and 20). At every age the proportion of males at school was higher than in the case of females.

7. Using the participation rates of the 1965 manpower survey, the Ministry of Economic Development estimates that by 1972, out of a total population of 417,000 aged 14-64, the labor force will represent 231,600 or 170,600 males and 61,000 females.

ANNEX B

The Industrial Training Ordinance^{1/}

1. The application of this Ordinance to the country's skilled manpower needs must be drastically changed. As it is presently applied it will never provide the necessary craftsmen of adequate competency. Apprenticeship training is one of the most important in developing competent tradesmen, therefore the following is recommended as a basis for discussion between private and government employers and the trade unions to improve the apprenticeship programs:

- a. All existing contracts between apprentices and masters should be honoured to their termination unless they can be brought under the changed regulations by mutual agreement.
- b. The registration of all existing masters should be terminated when their obligation to present apprentices under contract to them are completed.
- c. The present individuals who are now registered as masters may continue to be registered as artisans and continue to work at their trade.
- d. Under the new regulations only organizations may register as Trainers of Apprentices. This will include various government workshops. The organization may also be a one man business. To be eligible for registration the following requirements should be met:
 - (i) The organization must have on its staff an artisan who has passed a theoretical and practical examination conducted by the Technical Institute. This will be the examination given to all future artisans on the completion of their apprenticeship or others wishing in the future to be licensed as artisans.

^{1/} Excerpt from "Recommendations to the Government of British Guiana Regarding Vocational Education and Training" by William Partin, May 1965.

- (ii) The organization must have on its staff examined artisans who have completed a short course in workshop supervision including material on the organization of apprentices in a workshop. These courses will have to be put on at various centers throughout the country. In future this course might be part of the training of all apprentices near the end of their program.
 - (iii) The equipment and its organization must be adequate to give the apprentice the necessary variety of experience. This should be determined by a visit to the premises.
- e. It should be a compulsory part of apprentice training that they spend about 1/5 of their time in an organized school situation. This could be one day per week, ten weeks per year or one continuous year. The organization that wishes to train apprentices must have a school facility of its own or make use of the facilities supplied by the Department of Education such as the Government Technical Institute. The school facilities must be able to provide instruction in both the theoretical and practical areas at least near the level provided by the Technical Institute. While attending school the apprentice should receive half his usual wages and be responsible for his own transportation if he lives within day-to-day commuting distance from the school. The Government should not charge apprentices tuition fees at its schools. If the school is too far for day-to-day commuting, then the apprentice should be transported at the equal expense of the Government and the organization to which he is apprenticed. The apprentice will be responsible for maintaining himself at the school locality.
- f. The regulations as they now exist for the registration and length of service of boys should be retained, that is under 17 and serve for 5 years.
- g. Provision should be made for the registration for training of mature people over 17 years of age. These older people should be classified as artisan-trainees and because of their maturity the length of their apprenticeship should be only 4 years. This length should be changed for particular trades if experience shows that a tradesman can become competent in a shorter period. To encourage the hiring of these more mature people their ratio in relation to the artisans could be higher as they should not require as much supervision. All the other regulations that apply to an apprentice should

be applicable to an artisan-trainee.

- h. No apprentice or artisan-trainee while working in the production area of an organization should receive less than 110 percent of the wages of a laborer in the same organization or if no laborers are employed, 110 percent of those in similar organizations.
- i. At the end of each year of his training the apprentice or artisan-trainee must pass the technical tests prepared by the Government training institution or the employer is not obliged to increase his wages.
- j. If an organization is not eligible to train apprentices but it requires help below the artisan level, it may employ graduates of the Technical Institute's two-year full-time courses as artisan-trainees for two years after which they will be eligible to write their artisan examinations. These employees will not have to be released for schooling.
- k. No registration of apprentices should take place in trades where the numbers do not justify the setting up of a formal apprenticeship program.
- l. No examination of artisans should be carried out in occupations where the numbers would not justify a formal apprenticeship program.

ANNEX C

Note on Amerindian Development

1. There are about 30,000 Amerindians in Guyana, mainly in the North West and Rupununi districts; others live in Reserves along the coast and in the Upper Mazaruni district. The more frequent contacts with the outside world have generated aspirations for change although progress will be very gradual because of the obstacles created by the learning of another language, the understanding and acceptance of another culture and way of life, the predominance of a subsistence non-monetary economy, the difficulty and high cost of transportation.
2. Any development thus depends on the quality of the human approach to it, in education, as well as in health, agriculture or community organization, and on the coordination of the efforts to avoid any disorientation of those supposed to be helped. Needless to say, the level of remuneration and the promotion possibilities of those expected to serve in remote areas, often without the most elementary comfort, should be - even more than for the cases mentioned in our general comments on manpower problems - kept in line with what could be obtained both in other professions with the same level of education (case of the diploma holders) and by staying in Georgetown.
3. By transferring the overall responsibility for running the development programs to each ministry according to its special field, the apparent technical efficiency may have been improved at the cost of its ultimate benefit to the Amerindians. To avoid the dispersion of efforts a planned and coordinated approach is required. A committee of those responsible, drawn from each Ministry, could be organized under the guidance of an officer from the Ministry of Home Affairs which has been involved with the problem for many years and enjoys the best understanding.
4. The Knapp Report (1965) suggested excellent schemes, many of which were incorporated in the 1966-1972 development plan, and insisted on the value of well-guided, self-help programs. Education introduces the children and the community to the understanding of English, to better hygienic and nutritional practices, and offers hope of a better living through employment. The remarkable efforts made by the Missions at primary education level will be supplemented by the construction of four secondary schools by the Government. The low population density justifies the construction of hostels although the financing of the recurrent boarding cost to the parents is unsolved. A sum of G\$582,000 covers the cost of the schools and hostels program, and mobile units for community development. Education should have a practical bias, and in many cases vocational courses would help either in finding employment, promoting local crafts, improving agricultural practices, or realizing self-help programs.

5. Next to education, water supply is the most urgently required improvement and was allocated G\$543,000 in the development plan. Canadian help fortunately provided two portable well-drilling machines, at a time when progress was slow in implementing the programs. Environmental sanitation, including water supply for the schools, was allocated G\$150,000. In the health sector an investment of G\$700,000 for hospital, health and other improvements is likely to be very slowly disbursed because of lack of personnel.

6. To move the population from subsistence to commercial agriculture, more extension officers and workers are needed than the few technical assistants and local counterparts available at present. The transportation and marketing of the crop produced, and the organization of the community for the repartition of the revenues may be critical points for the success of any such enterprise as the Kumaka-Quebanna scheme which, very sensibly, was reduced to a more manageable G\$500,000 against the original G\$2 million. Similar problems face a more commercial organization of the existing local handicrafts, (basketry, hammocks, etc.), the promotion of which was recommended in a 1966 ILO report. Any lasting success will depend on the regular follow-up advice given after a program has been started.

7. Many of the missions try to induce their best primary pupils to become teachers themselves. Specially adapted summer training courses could do much to improve the competence of these teachers. A few scholarships are allocated to cover the tuition of a small number of Amerindian students in some of Georgetown's best secondary schools; about ten others follow training courses at the hospital in Georgetown to become nurses and midwives; a few girls are at the Carnegie School of Home Economics and a few boys follow the certificate course in Agriculture at the School of Agriculture. Upon their return, if adequately trained in methods of leadership and community development, it is hoped that they will exert a decisive influence towards the success of the schemes in each of their specialities, i.e. education, health, nutrition, agriculture extension.

ANNEX D

Reports on Guyana (Education and Manpower)

- UNESCO 1963 Report of the UNESCO Educational Survey Mission to British Guiana, by C. L. Germanacos.
- Ministry of Education,
British Guiana, 1964 UNESCO Planning Recommendations 1966-71, by N. Larby.
- UNESCO 1965 Guyana - Teacher Training (January - December 1965), by E. Edualino.
- Report on the Amerindians of British Guiana and Suggested Development Programs, by S. C. Krapp, The Government Printery, Georgetown 1965.
- A Report on Vocational Education in British Guiana for the Government of British Guiana, by W. Partin - 1965.
- Feasibility Report - Industrial Training Center, Georgetown, British Guiana. Prepared for the AIFLD by Y.P. Schoemann and R.P. Walsh - 1965.
- Report on a Survey of Manpower Requirements and the Labour Force. British Guiana 1965 (5 Vol.) by O.J.C. Francis
- ILO 1966 Report on Small Scale and Cottage Industries Development, by Bijindra Bahadur

STATISTICAL APPENDIX

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| 3 | Teacher statistics by type of education. |
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| 23 | Unemployed: education attainment. |
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| 25 | A. Vacancies classified by occupation groups and regions.

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| 26 | Public Sector:
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Table
No.

27 Ministry of Agriculture. Extension services.

Chart

1 The Educational System

2 Educational Pyramid

Table 1: GUYANA: NUMBERS AND DESCRIPTION OF SCHOOLS BY ENROLLMENT AND EDUCATION LEVEL, 1962/63 - 1964/65

Schools	Primary and All-Age Schools				Secondary Schools				Teacher Training			
	Number of Schools	Enrollment			Number of Schools	Enrollment			Number of Schools	Enrollment		
		Boys	Girls	Total		Boys	Girls	Total		Boys	Girls	Total
1962/63												
Government	91	22,492	21,144	43,636	3	732	634	1,366	1	108	116	224
Aided	249	47,358	44,790	92,148	14	3,850	3,227	7,077				
Unaided	--	--	--	--	n.a.	n.a.	n.a.	n.a.				
Total	340	69,850	65,934	135,784 1/	17	4,582	3,861	8,443	1	108	116	224
1963/64												
Government	114	30,269	29,811	60,080	13	2,205	1,820	4,025	1	20	45	65
Government									7 3/	93	276	369
Aided	235	44,616	43,143	87,759	14	3,846	3,425	7,271	-	--	--	--
Unaided	--	--	--	--	40	n.a.	n.a.	(5,800) 2/	-	--	--	--
Total	349	74,885	72,954	147,839 1/	67	6,051	5,245	11,296	8	113	321	434
1964/65												
Government	140	33,396	32,539	65,935	18	3,224	2,399	5,623	1	116	124	240
Government									7 3/	289	359	648
Aided	230	46,510	45,401	91,911	14	3,757	3,195	6,952	-	--	--	--
Unaided	--	--	--	--	36	n.a.	n.a.	(5,200) 2/	-	--	--	--
Total	370	79,906	77,940	157,846 1/	68	6,981	5,594	12,575	8	405	483	888

1/ The enrollment in the secondary department of the primary schools are included in the total as follows:
24,131 (1962/63); 27,081 (1963/64); 31,700 (1964/65). The necessary schools are not included in these totals.

2/ Numbers are approximate.

3/ In-Service teacher training centers.

Source: Ministry of Education. Statistical Office.

Table 2: GUYANA: DISTRIBUTION OF PRIMARY AND ALL-AGE SCHOOLS ACCORDING TO DENOMINATION AND DISTRICT
(as of October 1966)

Denominational	East Berbice	New Amster- dam	West Berbice	East Coast Demerara	George- town	East Bank Demerara	West Bank Demerara	Essequibo	North West District	Interior	Total
Government	20	6	22	26	4	13	23	19	1	4	141
Anglican	4	6	3	5	7	12	8	12	17	12	86
Roman Catholic	2	2	-	4	8	2	-	4	10	22	54
Church of Scotland	6	6	1	-	2	-	4	2	-	12	22
Congregational	1	3	2	1	2	2	5	1	-	-	17
Lutheran	-	12	1	2	1	2	-	-	-	-	18
Methodist	-	1	2	4	3	1	1	3	-	-	15
C. C.	1	-	-	-	-	1	1	-	-	1	3
Hindu	-	1	-	1	1	-	-	-	-	-	3
S.D.A.	-	1	-	-	-	-	-	1	-	2	4
Moravian	-	-	-	1	1	-	-	-	-	-	2
A.M.E.	-	-	-	-	1	-	-	-	-	-	1
C.B.	-	-	-	-	-	2	-	-	-	-	2
P.H.	-	-	-	-	-	-	-	-	-	2	2
Unde.	-	-	-	-	-	2	1	-	-	2	5
<u>Total</u>	34	38	31	44	30	37	43	42	28	46	372

Source: Ministry of Education

Table 3: GUYANA: TEACHER STATISTICS BY TYPE OF EDUCATION

	Primary and All-Age Schools			Secondary Schools			
				Government		Government Aided	
	1961/62	1963/64	1964/65 1/	1962/63	1963/64	1962/63	1963/64
Total number of students	133,049	147,839	157,846	1366	4025	7077	7271
Total staff number	3271	4348	4900	67	176	279	279
Numbers of qualified staff 2/	1514	2517	n.a.	51	76	50	52
Numbers of trained staff	833	937	1371	31	45	35	36
Numbers of qualified and trained staff	434	562	n.a.	27	35	25	24
% of qualified teachers	46.3	57.9	n.a.	76.1	43.2	17.9	18.6
% of trained teachers	25.5	21.6	28.0	46.3	25.6	12.5	12.9
Student-Teacher ratio	40.7:1	34:1	32.2:1	20.4:1	22.9:1	25.4:1	26.1:1
Student-Trained teacher ratio	160:1	157.8:1	115.1:1	44.1:1	89.4:1	202.2:1	202:1

1/ Provisional

2/ Primary teachers having completed 5 years secondary education; graduate secondary teachers.

Source: Ministry of Education

Table 4: GUYANA: TEACHER TRAINING

Pre-Service Teacher Training

Year		Intake	Of whom specializing in		Output
			Mathematics	Science	
1963/64	Ordinary course (2 yr.)	49	11	6	-
	Home Economics (3 yr.)	16	-	-	-
	Handicraft (3 yr.)	-	-	-	-
1964/65	Ordinary course	113	44	23	45 ^{1/}
	Home Economics	24	-	-	-
	Handicraft	-	-	-	-
1965/66	Ordinary course	62	15	10	96 ^{2/}
	Home Economics	16	-	-	14 ^{1/}
	Handicraft	10	-	-	-
1966/67	Ordinary course	82	15	12	-
	Home Economics	29	-	-	-
	Handicraft	27	-	-	-

In-Service Teacher Training

Year		Number of Students	Number of Successes	Number of Centers	Observations
1963/64		344	301	7	1 year course
1964/66	Primary Teachers	260		8	2 year course
	Secondary Teachers ^{3/}	347	527	8	2 year course
1966/67		16		1	1 year course
1966/68	Primary Teachers	84		2	2 year course
	Secondary Teachers ^{3/}	61		2	2 year course

^{1/} 1963 entrants

^{2/} 1964 entrants

^{3/} For the all-age schools

Source: Ministry of Education and Teacher Training College

Table 5: GUYANA: TEACHER SALARIES (GOVERNMENT PRIMARY & SECONDARY SCHOOLS)

(in Guyana dollars)

	Initial		Maximum	
	Monthly	Equivalent per year	Monthly	Equivalent per year
<u>Pupil Teacher</u>				
1st Year	84.50	1014		
End of 4th Year			104.50	1254
<u>Temporary Unqualified -</u>				
<u>Master/Mistress</u>				
End of Second Year of Pupil Teacher	96.50	1158		
End of Third Year of Pupil Teacher	108.50	1302		
End of Fourth Year			116.50	1398
<u>Qualified-Master/Mistress</u>				
Grade II Class III (GCE "O" 5 subjects)	142.50	1710	203	2436
Grade I Class I (GCE "A" 3 subjects)	149.50	1794	259	3108
Grade I Class I (by examination)	156.50	1878	296	3552
<u>Graduate - Teacher</u>				
Graduate - Teacher	326.00	3912		
" " (Sciences)	356.00	4272		

EXAMPLE OF SALARY SCALES (Public Service)

	Scale	Annual Salary (G\$)	
		Initial	Maximum
Class I Clerks	A 32	1404	2652
Class I Clerks	A 25	2760	3552
Diploma Scale 1/	A 10	3336	5616
Graduates Scale 1/	A 4	4656	7776

1/ Including teachers at Queen's College, Bishops' High School, Anna Regina, Government Technical Institute, Government Teacher-Training College

Sources: Ministry of Education and Establishment of the Ministry of Finance.

Table 6: GUYANA: GOVERNMENT TECHNICAL INSTITUTE

1961/62 - 1965/66 Aggregate Enrollment

		Full time	Day- release	Block- release	Evening	Other	Total
1961/62	Preliminary craft	-	43	132	162 ^{1/}	-	337
	Trade courses	-	187	190	113	-	490
	Technician courses	36	-	81	49	175	341
	Commercial courses	24	-	-	-	-	25
	Handicraft teachers	14	-	-	-	-	14
	Business educ.(for teachers)	-	-	-	72	-	72
	Other Special courses	-	25	31	66	-	122
	Total	75	255	434	462	175	1401
1962/63	Preliminary craft	-	25	64	174	-	263
	Trade courses	38	241	173	26	-	478
	Technician courses	33	93	-	-	105	231
	Commercial courses	44	-	-	-	-	44
	Handicraft teachers	12	-	-	-	-	12
	Other special courses	-	-	-	-	28	28
	Total	127	359	237	200	133	1056
1963/64	Preliminary craft	-	50	178	60	-	288
	Trade courses	28	207	176	123	-	534
	Technician courses	-	88	46	36	14	184
	Commercial courses	48	-	-	-	-	48
	Other special courses	-	-	-	17	-	17
	Total	76	345	400	236	14	1071
1964/65	Preliminary craft	-	67	185	58	-	310
	Trade courses	43	226	193	115	-	577
	Technician courses	86	127	-	21	-	234
	Commercial courses	49	-	-	-	-	49
	Other special courses	-	16	-	13	-	29
	Total	178	436	378	207	-	1199
1965/66	Preliminary craft	-	93	188	94	-	375
	Trade courses	113	216	109	148	-	586
	Technician courses	81	130	-	46	-	257
	Commercial courses	47	-	-	-	-	47
	Handicraft teachers	12	-	-	-	-	12
	Other special courses	-	12	-	72	-	84
	Total	253	451	297	360	-	1361

^{1/} Including evening courses for 66 students held in New Amsterdam, Port Mourant, Uitvlugt, and Mackenzie.

Source: Government Technical Institute

Table 7: GOVERNMENT TECHNICAL INSTITUTE

1965/66 Enrollment

	Full time	Day- release	Block- release	Evening	Total
Preliminary craft	-	<u>93</u>	<u>188</u>	<u>94</u>	<u>375</u>
<u>Trade Courses</u>	<u>113</u>	<u>216</u>	<u>109</u>	<u>148</u>	<u>586</u>
1. Electrical trades	<u>50</u>	<u>79</u>	-	<u>40</u>	<u>169</u>
2. Radio Servicing	17	-	-	24	41
3. Motor Vehicle trades	-	-	40	30	154
4. Agricultural mechanics	-	84	22	-	22
5. Fitting and Machining	-	47	47	-	94
6. Welding	-	-	-	17	17
7. Concrete Practice Craft	13	-	-	13	26
8. Carpentry and Joinery	33 <u>1/</u>	6	-	24	63
<u>Technician Courses</u>	<u>81</u>	<u>130</u>	-	<u>46</u>	<u>257</u>
1. Mechanical Engineering	22	36	-	-	58
2. Electrical Engineering	19	31	-	-	50
3. Building	17	29	-	-	46
4. Land Surveying	23	-	-	-	23
5. Telecom. Engineering	-	-	-	46	46
6. Diagnostic course					
a) in Engineering	-	20	-	-	20
b) in Construction	-	14	-	-	14
<u>Commercial Course</u>	<u>47</u>	-	-	-	<u>47</u>
<u>Special Courses</u>	<u>12</u>	<u>12</u>	-	<u>72</u>	<u>96</u>
1. Handicraft Teachers	12	-	-	-	12
2. Special Electrical	-	-	-	21	21
3. Road laboratory Technicians	-	-	-	17 <u>2/</u>	17
4. Special Police	-	-	-	20	20
5. Land Surveying (refresher)	-	-	-	14	14
6. Chart Work for Captains and Mates	-	<u>12</u>	-	-	<u>12</u>
Total	<u>253</u>	<u>451</u>	<u>297</u>	<u>360</u>	<u>1361</u>

1/ Including cabinet-making

2/ Part-time day and evening

Source: Government Technical Institute

Table 8: GUYANA: GOVERNMENT TECHNICAL INSTITUTE

Level of Utilization of Selected Courses 1/

Course and Year	Enrollment Figures (1963-1964)	Capacity
Radio Servicing 1st year (full time)	10	20
Radio Servicing 1st year (E)	16	20
Radio Servicing 2nd year (E)	6	20
Concrete Practice 1st year (E)	11	20
Concrete Practice 2nd year (E)	10	20
Agricultural Mechanics 3rd year Block Release	8	15
Carpentry and Joinery D2/3 year	3	20
" " " D4/5 year	-	20
" " " E 1st year	3	20
Welding 1st year (D)	9	15
Welding 2nd year (E)	6	15

Note: D = Day release - attendance one day per week

E = Evening - attendance three evenings per week

1/ In motor vehicle repair and electrical installation maintenance,
enrollment exceeded prescribed capacity

Source: 1965 Manpower Survey.

Table 9: GUYANA: PERSONS RECEIVING TRAINING CLASSIFIED
BY TYPE OF TRAINING, LOCATION AND SEX

Location	Registered Apprentices		Other Trainees Taking Vocational Courses		Other Trainees		Total	
	M	F	M	F	M	F	M	F
Georgetown	50	-	54	43 <u>1/</u>	144	5	248	48 <u>1/</u>
MacKenzie/ Wismar	70	-	-	-	13 <u>2/</u>	1	83 <u>2/</u>	1
Other Areas	<u>171</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>77</u>	<u>13</u>	<u>248</u>	<u>14</u>
Total	291	-	54	44	234	19	579	63

1/ Includes 38 nurses in training at a private hospital.

2/ In addition, over 1,000 employees at the Demerara Bauxite Company's MacKenzie installation receive some form of on-the-job training while being currently employed as helpers or tradesmen.

Source: Manpower Survey, 1965

Table 10: GUYANA: NUMBER OF APPRENTICES REGISTERED
WITH THE BOARD OF INDUSTRIAL TRAINING

(as of July 31, 1966)

	<u>Number</u>
Welders	7
Steel Fabricators	3
Electricians	15
Blacksmiths	1
Pattern Makers	-
Machinists	9
Carpenters	5
Molders	3
Motor Mechanics	27
Masons	-
Draftsmen	6
Automobile Electricians	2
Agricultural Mechanics	6
Fitters <u>1/</u>	205
Printing Trades	3
Plumbers	<u>-</u>
Total	292

1/ Initial classification during the first two years
of apprenticeship

Source: Board of Industrial Training.

Table 11: GUYANA: UNIVERSITY ENROLLMENT, 1966-67

(as of October 1966)

A. Undergraduates
Admissions (1966/67)

Faculty	Applications	Admissions		
		Men	Women	Total
Arts	197	49	21	70
Sciences	164	46	7	53
Social Sciences	185	60	10	70
Total	546	155	38	193

Total Enrollments (1966/67)

Faculty	Study Year				Total
	1	2	3	4	
Arts	70	28	37	32	167
Sciences	53	26	19	15	113
Social Sciences	70	31	33	34	168
Total	193	85	89	81	448
of whom boys:	155	71	74	68	368

Retention Rates (1963-66)

School Year	Study Year			
	1	2	3	4
1963/64	164	-	-	-
1964/65	154	114	-	-
1965/66	120	112	86	-
1966/67		85	89	81
Retention Rates		71%	77%	94%

B. Diploma Courses (1966/67)

Type of Course	Application	Admission	Registration
Public Administration	93	23	21
Medical Technology (Certificate or Diploma Course)	103	25	9
Radiography	27	6	6
Radiotherapy	20	-	-
Special Studies	n.a.	n.a.	7

Source: University of Guyana

Table 12: GUYANA: GUYANESE STUDENTS IN UNIVERSITIES ABROAD AND IN SELECTED FACULTIES CLASSIFIED BY COUNTRY OF STUDY AND EXPECTED YEAR OF GRADUATION - 1963

Faculty	Distribution with Respect to Countries						Expected Year of Graduation					
	U.W.I.	U.K.	U.S.A.	Canada	Other European Countries	Total	1964	1965	1966	1967	1968	1969
Arts	35	17	76	2	-	130	32	44	1	36	-	-
Education	-	23	13	-	-	36	23	3	2	-	-	-
Engineering	14	59	16	1	8	98	39	24	11	12	2	-
Medicine	51	47	23	1	4	126	25	16	25	20	20	3
Natural Science	22	24	32	6	2	86	42	12	7	8	-	-
Social Sciences	22	31	21	1	7	82	30	29	5	7	1	-
Agriculture	8	1	4	8	-	21	6	10	2	-	-	-
Total	144	201	181	11	21	579	197	138	62	83	23	3

Source: 1965 Manpower Survey

Table 13: GUYANA: NUMBER OF STUDENTS ON SCHOLARSHIPS ABROAD
(as of October 1966)

Field of Study	Number of Students
Analytical Chemistry	1
Agriculture	6
Architecture	3
Biochemistry	1
Civil Engineering	8
English	1
Education	2
Electrical Engineering	4
Geography	2
Geology	6
Physics	1
Telecommunications Engineering	1
Quantity Surveying	2
Statistics	1
Sociology	1
Town Planning	2
Teacher Training	2
Veterinary Science	5
Valuation	3

Source: Ministry of Education

Table 14: GUYANA: AWARDS UNDER BILATERAL AGREEMENTS STILL IN OPERATION

(as of July 1965)

<u>Caribbean Organization</u>		<u>Canada</u>	
Economics	1	General Science	1
Agriculture	1	Arts	1
Engineering	1	Geochemistry	1
Education	1	Machine Shop	
		Engineering	1
		Anaesthesiology	1
		Teachers	
		Handicraft	1
<u>United States of America</u>		<u>India</u>	
Economics	1	Agriculture	1
Home Economics	1	Medicine	3
Mathematics	1	Library	
Education	1	Science	1
International			
Services	1		
Chemistry	2		
Agriculture	2		
Electrical			
Engineering	2		
Economic & Social			
Geography	1		
Conservation	1		
Plant Pathology	1		
Business			
Administration	1		
		<u>Israel</u>	
		Agricultural	
		Engineering	7
		Medicine	4
		Natural	
		Science	1
		<u>United Nations</u>	
		Hydrology	1
		Hydraulic	
		Engineering	1
		Public	
		Administration	1

Source: 1965 Manpower Survey

Table 15: GUYANA: PUBLIC EXPENDITURE ON EDUCATION:
A. RECURRENT EXPENDITURE (ACTUALS)

(in thousands of G\$)

Ministry of Education	1962	1963	1964	1965	1966 (budget estimates)
I <u>Total Ministry of Education</u>	n.a.	<u>9,817.9</u>	<u>11,468.7</u>	<u>13,797.1</u>	<u>14,192.0</u>
<u>Administration</u>	n.a.	<u>3,147.8</u>	<u>2,252.8</u>	<u>2,238.3</u>	<u>2,314.9</u>
personnel	n.a.	<u>4/ 419.8</u>	<u>479.8</u>	<u>456.0</u>	<u>482.9</u>
materials and other 1/	n.a.	<u>2,728.0</u>	<u>1,773.0</u>	<u>1,782.3</u>	<u>1,832.0</u>
<u>In-service Teacher Training</u>	-	-	<u>117.5</u>	<u>153.8</u>	<u>156.1</u>
personnel			<u>90.9</u>	<u>129.4</u>	<u>132.4</u>
other			<u>26.6</u>	<u>24.4</u>	<u>23.7</u>
<u>Primary and all-age Schools</u>	<u>6,298.3</u>	<u>5,775.3</u>	<u>8,096.3</u>	<u>10,199.3</u>	<u>10,213.1</u>
personnel	<u>5,971.4</u>	<u>5,526.3</u>	<u>7,728.8</u>	<u>9,701.6</u>	<u>9,680.1</u>
school feeding scheme	<u>78.8</u>	<u>32.6</u>	<u>43.0</u>	<u>101.9</u>	<u>90.0</u>
other 2/	<u>248.1</u>	<u>216.4</u>	<u>224.4</u>	<u>395.8</u>	<u>443.0</u>
<u>Practical Instruction Centers</u> (Home economics and handi- crafts; equipment for science teaching)	<u>83.5</u>	<u>68.5</u>	<u>117.8</u>	<u>170.4</u>	<u>379.2</u>
personnel	<u>61.8</u>	<u>48.3</u>	<u>80.0</u>	<u>98.8</u>	<u>281.7</u>
other	<u>21.7</u>	<u>20.2</u>	<u>37.8</u>	<u>61.6</u>	<u>97.5</u>
<u>Teacher Training</u>	<u>164.2</u>	<u>161.0</u>	<u>115.1</u>	<u>149.3</u>	<u>160.7</u>
personnel	<u>73.4</u>	<u>83.5</u>	<u>103.0</u>	<u>115.0</u>	<u>116.5</u>
other 3/	<u>90.8</u>	<u>77.5</u>	<u>12.1</u>	<u>34.3</u>	<u>44.2</u>
<u>Technical Institute</u>	<u>207.3</u>	<u>188.2</u>	<u>241.7</u>	<u>306.2</u>	<u>291.4</u>
personnel	<u>179.9</u>	<u>166.8</u>	<u>189.9</u>	<u>250.8</u>	<u>230.8</u>
materials and power	<u>22.2</u>	<u>15.4</u>	<u>38.5</u>	<u>43.8</u>	<u>51.5</u>
other	<u>6.2</u>	<u>6.0</u>	<u>13.3</u>	<u>11.6</u>	<u>9.1</u>
<u>Carnegie School of Home</u> <u>Economics</u>	<u>92.2</u>	<u>59.1</u>	<u>76.5</u>	<u>81.7</u>	<u>97.6</u>
personnel	<u>66.9</u>	<u>48.1</u>	<u>55.2</u>	<u>60.7</u>	<u>71.1</u>
materials and power	<u>12.7</u>	<u>6.9</u>	<u>11.4</u>	<u>12.2</u>	<u>13.1</u>
other 12.6	<u>12.6</u>	<u>4.1</u>	<u>9.9</u>	<u>8.8</u>	<u>13.4</u>
<u>Queen's College</u>	<u>267.5</u>	<u>237.0</u>	<u>248.4</u>	<u>261.8</u>	<u>302.2</u>
personnel	<u>215.7</u>	<u>217.5</u>	<u>228.2</u>	<u>243.0</u>	<u>278.8</u>
other	<u>22.2</u>	<u>19.5</u>	<u>20.2</u>	<u>18.8</u>	<u>23.4</u>

Continued ...

Table 15: GUYANA: PUBLIC EXPENDITURE ON EDUCATION:
A. RECURRENT EXPENDITURE (ACTUALS) (CONT'D)

(in thousands of G\$)

Page 2

Ministry of Education	1962	1963	1964	1965	1966 (budget estimates)
<u>Bishops' High School</u>	158.3	154.9	174.4	205.1	233.4
personnel	146.8	143.3	157.3	194.7	218.8
other	11.5	11.6	17.1	10.4	14.6
<u>Anna Regina Sec. School</u>	25.6	26.1	28.3	31.2	43.4
personnel	23.6	25.1	26.1	30.1	39.7
other	2.0	1.0	2.2	1.1	3.7
II. <u>Total Other Ministries</u> 5/	n.a.	n.a.	208.6	303.4	338.0
<u>Ministry of Health</u>					
School nurses and midwives	n.a.	n.a.	140.8	158.0	181.0
Training for public health inspectors	12.3	1.9	18.9	31.4	35.0
<u>Ministry of Agriculture</u>					
Guyana School of Agriculture	-	-	40.0	105.0	110.0
Other agriculture education	43.3	22.7	8.9	9.0	12.0
III. <u>Total recurrent expenditure on education</u>	n.a.	n.a.	11,677.3	14,100.5	14,530.0
IV. <u>Total Revenue on Education</u>	135.2	126.4	138.3	61.0	26.0
V. <u>Total Public Recurrent Expenditure</u>	61,360.5	61,344.1	70,016.0	81,998.0	84,209.6

- 1/ Of which University
 (incl. UWI) 667.3 1,829.2 809.6 702.8 729.6
- Grants to aided sec. school 315.7 299.2 319.2 387.4 500.0
- School broadcasting - - 18.3 32.0 35.0
- Scholarships 44.2 235.8 189.6 193.4 478.8
- Museum and Library 197.2 207.0 200.9 258.5 261.0
- 2/ Incl. grants to aided schools 146.1 126.1 170.5 n.a. 186.1
- 3/ Incl. boarding and allowances 82.6 54.1 - - -
- 4/ The accounts do not distinguish the expenditure on education from the expenditure on social assistance
- 5/ Reformatory education is not included.

Source: Annual reports of the Accountant General.

Table 15: GUYANA: B. CAPITAL EXPENDITURES
(Actuals)
(in thousand G\$)

Ministry of Education	1962	1963	1964	1965	1966 (budget estimates)	1966 (actuals 9 months)
Primary and all-age schools, (incl. equipment)	1,364.3	220.9	172.2	382.9	1,615.0	650.1 <u>2/</u>
Domestic science and handicrafts	10.9	-	12.6	455.4	50.0	29.0
Secondary Schools	16.8	-	6.0	.3	-	-
Technical Education	-	-	-	28.2	100.0	-
Higher Education	-	155.6	42.9	121.0	50.0	50.0
Teacher Training	-	-	-	-	50.0	-
Amerindian Education	-	-	-	-	40.0	-
Miscellaneous	39.7	31.6	2.2	.4	35.0	40.1
I Total Ministry of Education	<u>1,431.7</u>	<u>408.1</u>	<u>235.9</u>	<u>988.2</u>	<u>1,940.0</u>	<u>769.2</u>
II Ministry of Agriculture	3.3	66.4	17.1	.6	100.0	n.a.
III Total Capital Expenditure on Education <u>1/</u>	1,435.0	474.5	253.0	988.8	2,040.0	-
IV Total Public Capital Expenditure	19,387.2	12,147.1	9,569.8	24,060.0	45,876.0	-
Education Capital Expenditure:						
External Sources of Finance						
Ministry of Education						
a. Commonwealth Development and Welfare Acts	1,128.0	151.9	140.8	n.a.	1,359.0	-
b. Other sources	-	-	-	-	170.0	-
Ministry of Agriculture <u>3/</u>						
CD & W funds	-	11.5	n.a.	n.a.	80.0	-

1/ The capital expenditure by the Ministry of Health is not identified in the total accounts.

2/ G\$103,400 included in the total were spent on schools built by self-help.

3/ Oxfam awarded grants for the construction of the School of Agriculture for a total amount of G\$188,000 but the annual allocation is not known.

Source: Annual reports of the Accountant General.

Table 16: GUYANA: 1963-1966 EXPENDITURE BY THE MINISTRY OF EDUCATION
COMPARED TO TOTAL PUBLIC EXPENDITURE

(in G\$ million)

Type of Expenditure	1963	1964	1965	1966 (budget estimates)
<u>Ministry of Education</u>	<u>10.2</u>	<u>11.7</u>	<u>14.8</u>	<u>16.1</u>
recurrent expenditure	9.8	11.5	13.8	14.2
capital expenditure	.4	.2	1.0	1.9
Total Public Recurrent Expenditure	61.3	70.0	82.0	84.2
Total Capital Expenditure (public)	<u>12.1</u>	<u>9.6</u>	<u>24.1</u>	<u>45.9</u>
Total Public Expenditure	73.4	79.6	106.1	130.1
Education Recurrent Expenditure as a % of total Public Recurrent Exp.	16.0	16.4	16.8	16.9
Education Capital Expenditure as a % of total Public Capital Exp.	3.3	2.1	4.1	4.1
Total Education Expenditure as a % of Total Public Expenditure	13.9	14.7	13.9	12.4

Source: Table 15.

Table 17: GUYANA: 1966-1972 DEVELOPMENT PLAN SUMMARY OF EDUCATION PROJECTS

Projects	Cost (in thousands of Guyana dollars)	Percentage
<u>Primary and All-age Schools</u>		
30,000 places	2,600	
30 laboratories	150	
22 home economics and handicraft departments	484	
Handicraft Center, Georgetown	100	
Total	3,334	26.8
<u>Comprehensive Secondary Schools (7,000 places)</u>	2,520	20.3
<u>Technical Education (excluding University)</u>	380	3.0
<u>Teacher Training College</u>	900	7.2
<u>University of Guyana</u>		
general faculties	2,500	
higher technical studies	450	
	2,950	23.7
<u>Furniture</u>	500	4.0
<u>Libraries</u>	300	2.4
<u>Amerindian Education</u>	642	5.2
<u>Agriculture Education</u>	200	1.6
<u>Others 1/</u>	718	5.8
Total 2/	12,444	100.0

1/ Sites and surveys, physical education (equipment), audio-visual aids, handicapped children, home economics, civil service training.

2/ Excluding health and reformatory training.

Source: 1966-72 Development Plan of Guyana

Table 18: GUYANA: INDICATIVE PHASING OF SUGGESTED CAPITAL EXPENDITURE
(in thousand G\$)

Ranking of Projects	Estimated 1966 1/ Expenditure	1967	1968	1969	1970	1971	1972	Projects Total 1966-1972	
								Present Estimate	Plan Estimates
Secondary Teacher Training (UG)	-	25	175	50	-	-	-	250	-
Secondary Comprehensive Schools	180 2/	-	500	1,000	1,000	500	500	3,680	2,520
Workshops, Laboratories and Science Kits (Secondary Schools)	-	-	185	185	180	100	100	750	-
University of Guyana	220	380	800	1,200	1,200	-	-	3,800 4/	2,950
School of Agriculture	-	-	100	100	-	-	-	200	200
Technical Institute (New Amsterdam)	30	315	240	65	-	-	-	650 5/	250
Primary Teacher Training College	-	-	-	120	400	400	280	1,200	900
Trade Training Center	-	310	-	-	-	-	-	310 6/	-
Primary Schools	680	200	150	75	100	175	175	1,555	3,334
Amerindian Education	40	90	90	90	90	90	90	580	642
Other Technical Education	-	-	-	-	-	-	-	-	130
Furniture, Libraries	n.a.	50	80	150	150	200	170	800	800
Others	40	110	110	110	110	110	128	718	718
Total	1,190	1,480	2,430	3,145	3,230	1,575	1,443	14,493	12,444
Estimated Foreign Finance	250	890	830	1,065	1,100	-	-	4,135	-
Committed 3/									
Additional Foreign Finance	-	-	615	900	1,000	635	550	3,700	-
Desirable									
Local Financing	940	590	985	1,180	1,130	940	893	6,658	-

1/ Based on actual expenditure for 9 months

2/ Grammar secondary schools.

3/ No provision is included for potential CD & W grants to cover part of the capital expenditure on primary education.

4/ G\$3.4 million foreign finance committed (50% from Canada; 50% from UK).

5/ G\$425,000 committed by Canada to cover the foreign exchange cost.

6/ Full cost covered by US.

Source: Mission Estimates.

Table 19: GUYANA: BASIC POPULATION AND LABOR STATISTICS
(1965)

Age	Population		Labor Force		Unemployed	
	M	F	M	F	M	F
14 - 19	35552	34757	18377	8936	8987	5438
20 - 24	19909	22687	19158	8184	4724	2947
25 - 29	15473	16127	15153	4869	2255	1541
30 - 44	40487	46076	39527	13854	4264	2335
45 - 59	29093	26527	27225	9291	2135	871
60 and over	14121	16645	7043	2602	926	151
Not stated	<u>542</u>	<u>424</u>	<u>412</u>	<u>141</u>	<u>70</u>	<u>-</u>
Total	155177	163243	126895	47877	23361	13283

Source: 1965 Manpower Survey.

Table 20: GUYANA: SOME BASIC STATISTICS FOR YOUNG PERSONS
(1965)

Age	Population		Labor Force				Rate of Unemployment		Percentage Emp loyed		Numbers at School		Percentage at School	
			Employed		Unemployed									
	(1)	(2)	(3)		(4)		(5)=(4) ÷ [(3)+(4)]		(6)=(3)÷(2)		(7)		(8)=(7) ÷ (2)	
	M	F	M	F	M	F	M	F	F	F	M	F	M	F
14	5071	3976	436	60	361	172	45.3	74.1	8.6	1.5	4064	2986	80.1	75.1
15	6974	6210	798	90	1044	850	56.7	90.4	11.4	1.4	4851	3301	69.6	53.2
16	6686	6522	1327	357	1732	872	56.6	70.9	19.8	5.5	3517	2867	52.6	44.0
17	5200	6367	1538	612	1446	1090	48.5	64.0	29.6	9.6	2146	1603	41.3	25.2
18	5676	6353	2483	1117	2013	1389	44.8	55.4	43.7	17.6	1050	806	18.5	12.7
19	5935	5329	2808	1262	2391	1065	46.0	45.8	47.3	23.7	635	410	10.7	7.7
20	3925	4943	2560	1258	1135	820	30.7	39.5	65.2	25.4	230	240	5.9	4.9
21	<u>3916</u>	<u>4144</u>	<u>2592</u>	<u>1105</u>	<u>1154</u>	<u>766</u>	<u>30.8</u>	<u>40.9</u>	<u>66.2</u>	<u>26.7</u>	<u>70</u>	<u>110</u>	<u>1.8</u>	<u>2.7</u>
Total	43383	43844	14542	5861	11276	7024	43.7	54.5	33.5	13.4	16563	12323	38.2	28.1

Source: 1965 Manpower Survey

Table 21: GUYANA: PROFESSIONALLY QUALIFIED PERSONS
CLASSIFIED BY OCCUPATION AND EMPLOYER 1/

(1965)

Occupation	Public Sector	Large Private Establishments	Adjustment from other information	Total
Architect	3	-	3	6
Civil Engineer	30	3	-	33
Electrical Engineer	8	4	-	12
Mining Engineer	1	13	-	14
Mechanical Engineer	10	20	-	30
Chemical Engineer	-	17	-	17
Other Engineers	7	16	-	23
Land Surveyor	92	6	-	98
Quantity Surveyor	2	-	-	2
Mine Surveyor	-	1	-	1
Other Surveyors	1	-	-	1
Chemist	4	4	-	8
Geologist	10	3	-	13
Other Physical Scientists	2	1	-	3
Physician and Surgeon	65	23	72	160
Dentist	5	-	12	17
Optometrist	-	1	8	9
Veterinarian	5	-	-	5
Silviculturist or Forest Officer	8	-	-	8
Other related				
Agricultural Scientists	17	-	-	17
Graduate Teacher	121	6	-	127
Accountant and Auditor	19	24	-	43
Sociologist and Social Worker	2	2	-	4
Economist and Statistician	10	-	-	10
Barrister, Solicitor, Judge	50	9	166	225
Education Officer	17	-	-	17
Other Professions	<u>3</u>	<u>9</u>	<u>-</u>	<u>12</u>
Total	492	162	261	915

1/ Only persons with degrees or equivalent are considered professionally qualified.

Source: 1965 Manpower Survey.

Table 22: GUYANA: EXPATRIATES AND ALL EMPLOYEES CLASSIFIED BY OCCUPATION GROUP AND SEX 1/

(1965)

Occupation Group and Code	Greater Georgetown						Other Areas					
	Expatriates			All Workers			Expatriates			All Workers		
	M	F	T	M	F	T	M	F	T	M	F	T
0 Professional Occupations	11	4	15	47	8	55	71	-	71	100	7	107
1 Non Professional Workers with Specialized training	3	-	3	73	74	147	3	1	4	270	121	391
2 212 Administrator, Managing Director, etc.	55	2	57	295	27	322	19	-	19	171	8	179
213 Manager and Senior Executive	82	1	83	445	20	465	30	-	30	140	7	147
221-249 Supervisors of Craftsmen	14	-	14	237	5	242	34	-	34	572	1	573
251 Supervisor of Clerical and Sales Workers	20	-	20	360	85	445	5	-	5	123	9	132
252 Supervisor of Agricultural Workers	2	-	2	7	-	7	2	-	2	414	16	430
253 Supervisor of Manual and Service Workers	3	4	7	190	28	218	2	1	3	190	15	205
254,259 Other supervisors	3	-	3	71	-	71	1	-	1	32	-	32
3 Clerical and Sales Workers	32	9	41	2606	1692	4298	4	6	10	1473	428	1901
4 Craftsmen and Technicians	37	-	37	2968	572	3540	11	-	11	8073	236	8309
5 Service Workers	3	-	3	1213	507	1720	1	1	2	1186	262	1448

Table 22: GUYANA: EXPATRIATES AND ALL EMPLOYEES CLASSIFIED BY OCCUPATION GROUP AND SEX 1/
(1965)

Page 2

Occupation Group and Code	Greater Georgetown						Other Areas					
	Expatriates			All Workers			Expatriates			All Workers		
	M	F	T	M	F	T	M	F	T	M	F	T
6 Manual Workers	5	-	5	3040	359	3458	8	-	8	20011	3051	23076
All Occupation Groups	270	20	290	11552	3377	14988	191	9	200	32755	4161	36930

1/ In establishment with 5 persons or more.

Source: 1965 Manpower Survey

Table 23: GUYANA: UNEMPLOYED EDUCATIONAL ATTAINMENT

(1965)

	<u>Inexperienced</u>				<u>Experienced</u>			
	<u>Georgetown</u>		<u>Other Areas</u>		<u>Georgetown</u>		<u>Other Areas</u>	
	M	F	M	F	M	F	M	F
<u>Primary</u>								
less than 4 years	40	-	103	380	80	20	1315	1066
4 - 8 years	660	750	3603	2256	2020	1270	8858	2143
9 or more	360	590	617	1029	730	600	2256	1170
not stated	-	-	-	70	20	-	5	-
<u>Secondary</u>								
less than 4 years	160	280	802	551	220	120	326	195
over 4 years	170	270	175	182	210	120	201	140
with school certificate	-	20	-	1	20	40	160	-
not stated	-	-	30	-	20	-	70	10
type of school not stated	-	-	40	10	40	-	50	-
Total	1390	1910	5370	4479	3360	2170	13241	4724

Source: 1965 Manpower Survey

Table 24: GUYANA: JUVENILES REGISTERED WITH THE EMPLOYMENT
EXCHANGE TO DATE: 18 October, 1966

A. BOYS

Classification	Georgetown	Berbice	Essequibo	Total
Carpenter/Apprentices	9	4	2	15
Mason "	3	1	-	4
Painter "	-	-	-	-
Plumber "	3	1	1	5
Boiler Boys	4	-	-	4
Welder "	8	8	-	16
Electrician/Apprentices	51	22	-	73
Mechanic "	122	59	7	188
Greasers	-	14	2	16
Radiotrician/Apprentices	-	-	-	-
Cabinetmaker "	6	3	-	9
Office Clerks	84	57	8	149
Office Boys	515	-	-	515
Delivery Boys	2	5	-	7
Cash Boys	1	-	-	1
Deck Boys	27	9	-	36
Messengers	294	102	14	410
Agricultural Workers	26	5	-	31
Printers/Trainees	1	-	-	1
Shop Assistants	45	63	-	108
Postal Assistants	60	186	20	266
Laboratory Assistants	1	-	-	1
Surveyor Laborers	-	-	-	-
General Laborers	614	196	101	911
Checkers	-	9	13	22
Bookkeepers	-	1	-	1
Tailor/Apprentices	-	2	-	2
Total	1876	747	168	2791

Source: Ministry of Labor Employment Exchange

Table 24: GUYANA: JUVENILES REGISTERED WITH THE EMPLOYMENT
EXCHANGE TO DATE: 18 October, 1966

Page 2

B. GIRLS

Classification	Georgetown	Berbice	Essequibo	Total
General Domestic	47	39	5	91
Ward Orderlies	-	22	2	24
Telephone Operators	56	58	-	114
Receptionists	33	-	-	33
Clerical Assistants	63	42	1	106
Typists	18	20	4	42
Printers Trainees	3	-	-	3
Sewing Girls	7	15	-	22
Shop Assistants	183	71	-	254
Total	410	267	12	689

Source: Ministry of Labor Employment Exchange

Table 25: GUYANA: A. VACANCIES CLASSIFIED BY
OCCUPATIONAL GROUPS AND REGIONS 1/

(1965)

Occupation Groups	Number of Workers - Regions						Total
	George- town	Mackenzie	E. C. Demerara	North West Dist.	Esse- quibo	Other	
(0) Professional	8	8	1	-	2	-	19
(1) Non Professional work- ers with specialized training	3	2	1	1	-	1	8
(2) Administrative Execu- tive and Supervisory Personnel	13	4	-	2	3	2	24
(3) Clerical and Sales Workers	72	-	-	2	1	-	75
(4) Craftsmen & Techni- cal Workers	28	44	5	18	22	3	120
(5) Service Workers	9	-	1	-	-	-	10
(6) Manual Workers	<u>18</u>	<u>-</u>	<u>36</u>	<u>12</u>	<u>10</u>	<u>-</u>	<u>76</u>
Total	151	58	44	35	38	6	332

1/ Establishments with 5 persons or more

Source: 1965 Manpower Survey

Table 25: GUYANA: B. WORKERS PERFORMING UNSATISFACTORILY
CLASSIFIED BY OCCUPATION GROUPS AND LOCATION 1/

(1965)

Page 2

Occupational Groups	Georgetown	New Amsterdam	Other Areas
(0) Professional	#3	-	-
(1) Non Professional with Specialized Training	1	-	-
(2) Administrative Executive and Supervisory Personnel	6	-	4
(3) Clerical and Sales	31	-	3
(4) Craftsmen and Technicians	100	3	59
(5) Service Workers	19	26	1
(6) Manual Workers	17	-	14

1/ Establishments with 5 persons or more

Source: 1965 Manpower Survey

**Table 26: GUYANA: PUBLIC SECTOR: A. NUMBER OF EMPLOYEES AND VACANCIES
BY TYPE AND DEPARTMENTAL GROUP**

(as of June 1965)

Departmental Group	Present Number of Employees	(i) Current vacancies in which no substantive appointments have been made <u>1/</u>			(ii) Current vacancies in which no officer is acting or performing the duties			(iii) Current vacancies unfilled for three months and over		
		M	F	T	M	F	T	M	F	T
I	2482	93 (16)	4	113	76 (7)	3	86	76 (7)	3	86
II	1706	140	12	152	138	12	150	136	12	148
III	5804	601	447	1048	28	15	43	27	13	40
IV	4653	156	4	160	38	2	40	38	2	40
V	1311	14	5	19	10	2	12	9	2	11
VI	3165	166 (6)	9	191	138 (16)	7	161	138 (16)	7	161
VII	2688	143 (2)	25	170	112 (2)	15	129	108 (2)	18	128
VIII	<u>3707</u>	185	29	<u>214</u>	105	29	<u>134</u>	96	29	<u>125</u>
Total	25515			2057	754	739	754			739

Note: Numbers in brackets () denote vacancies in which either sex is recruitable.

1/ Whether or not persons were acting in them at the time of the survey.

Source: 1965 Manpower Survey

Table 26: GUYANA: B. CURRENT VACANCIES (ALL POSTS NOT SUBSTANTIVELY FILLED TYPE (i)) CLASSIFIED BY OCCUPATION GROUP AND DEPARTMENTAL GROUP

Page 2

Occupation Group	Departmental Group								Total
	I	II	III	IV	V	VI	VII	VIII	
Professional	6	31	63	39	1	4	31	5	180
Non Professional Workers with Specialized Training	3	54	1	23	1	-	44	36	162
Administrative and Executive	29	11	12	9	1	40	18	12	132
Supervisory	11	8	--	35	-	12	22	33	121
Clerical Workers	53	22	4	24	6	12	30	8	159
Craftsmen and Technicians	3	8	1	17	2	5	--	77	113
Service Workers	6	11	966	9	7	118	25	43	1,185
Manual Workers	2	7	-	4	1	-	-	-	14
<u>Total</u>	<u>113</u>	<u>152</u>	<u>1,048</u>	<u>160</u>	<u>19</u>	<u>191</u>	<u>170</u>	<u>214</u>	<u>2,067</u>

Source: 1965 Manpower Survey.

Table 26: GUYANA: C. TYPE (ii) VACANCIES OTHER THAN "PROFESSIONAL" CLASSIFIED BY OCCUPATION GROUP AND DEPARTMENTAL GROUP

Page 3

Occupation Group		Departmental Groups								Total
		I	II	III	IV	V	VI	VII	VIII	
Nurse and Midwife	(11)	-	-	-	-	-	-	5	-	5
Pharmacist, Medical Technician, etc.	(12)	-	-	-	-	-	-	24	-	24
Other	(13)	3	55	1	4	1	-	5	32	101
Administrative Officer	(21)	-	2	-	-	-	4	-	-	6
Executive Officer	(22)	13	5	4	-	1	22	13	-	58
Supervisor of Craftsmen	(23)	-	2	-	-	-	2	-	10	14
Supervisor of Clerical Workers	(24)	4	3	-	-	-1	1	1	2	11
Supervisor of Manual Workers	(25)	-	1	-	1	-	-	-	1	3
Other Supervisors	(26)	-	2	-	1	-	-	6	3	12
Accounting and Audit Officer	(31)	7	-	-	-	-	-	-	-	7
Accounting and Audit Clerk	(32)	14	2	-	3	-	1	3	1	24
General Clerk	(33)	26	11	-	1	4	4	22	1	69
Other Clerical	(34)	2	4	-	2	-	1	1	1	11
Typist, Stenographer, etc.	(35)	1	3	-	1	2	4	-	1	12
Craftsmen and Technicians	(40)	3	7	1	1	1	5	-	72	90
Service Workers	(50)	6	11	21	7	2	116	25	8	196
Manual Workers	(60)	2	7	-	-	1	-	-	-	10
All Occupations		81	115	27	21	12	160	105	132	653

Source: 1965 Manpower Survey

Table 26: GUYANA: D. EXPLANATION: ARRANGEMENT OF MINISTRIES, DEPARTMENTS, PUBLIC CORPORATIONS, STATUTORY BODIES, ETC., IN DEPARTMENTAL GROUPS

<u>Group I</u>	<u>Group V</u>
Guyana Marketing Corporation Guyana Rice Development Corp. Ltd. Guyana Industrial Development Corporation Ministry of Trade & Industry Guyana Rice Marketing Board	Mayor & Town Council, Georgetown Mayor & Town Council, New Amsterdam Local Authorities employing more than 5 persons Ministry of Local Government
B.G. Credit Corporation Licence & Revenue Department New Widows & Orphans Fund Caribbean Currency Board	<u>Group VI</u>
Ministry of Finance (including Customs, Accountant General, etc.) Ministry of Economic Affairs (including all attached units)	Office of the Governor Office of the Premier Ministry of Development & Planning Information Services Attorney General
<u>Group II</u>	Supreme Court Public Service Commission External Affairs Ministry of Home Affairs Prisons, Constabulary Special Service Unit
Ministry of Agriculture ^{1/} (including all attached units) Ministry of Forests, Lands & Mines ^{1/} (including all attached units)	Volunteer Force (permanent staff) Probation Reform of Delinquents Fire Protection Interior
<u>Group III</u>	<u>Group VII</u>
Ministry of Education (including all attached units) Anna Regina Secondary School Government Technical Institute Bishops' High School Queen's College	Ministry of Health & Housing Ministry of Labor & Social Security Sugar Industry Labor Welfare Fund Committee
<u>Group IV</u>	<u>Group VIII</u>
Guyana Electricity Corporation Ministry of Works and Hydraulics	Ministry of Communications (including Guyana Airways Corporation)

^{1/} These two Ministries have been merged as of January 1967.

Source: 1965 Manpower Survey

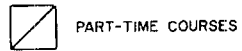
Table 27: GUYANA: AGRICULTURE: DISTRIBUTION OF
EXTENSION OFFICERS AND FIELD ASSISTANTS

District	Number of	
	Agricultural Officers	Field Assistants
Berbice	1	9
East Demerara	1	6
West Demerara	1	5
Essequibo	1	7
North West	1	3
Rupununi	<u>1</u>	<u>-</u>
Total	6	30

Source: Ministry of Agriculture

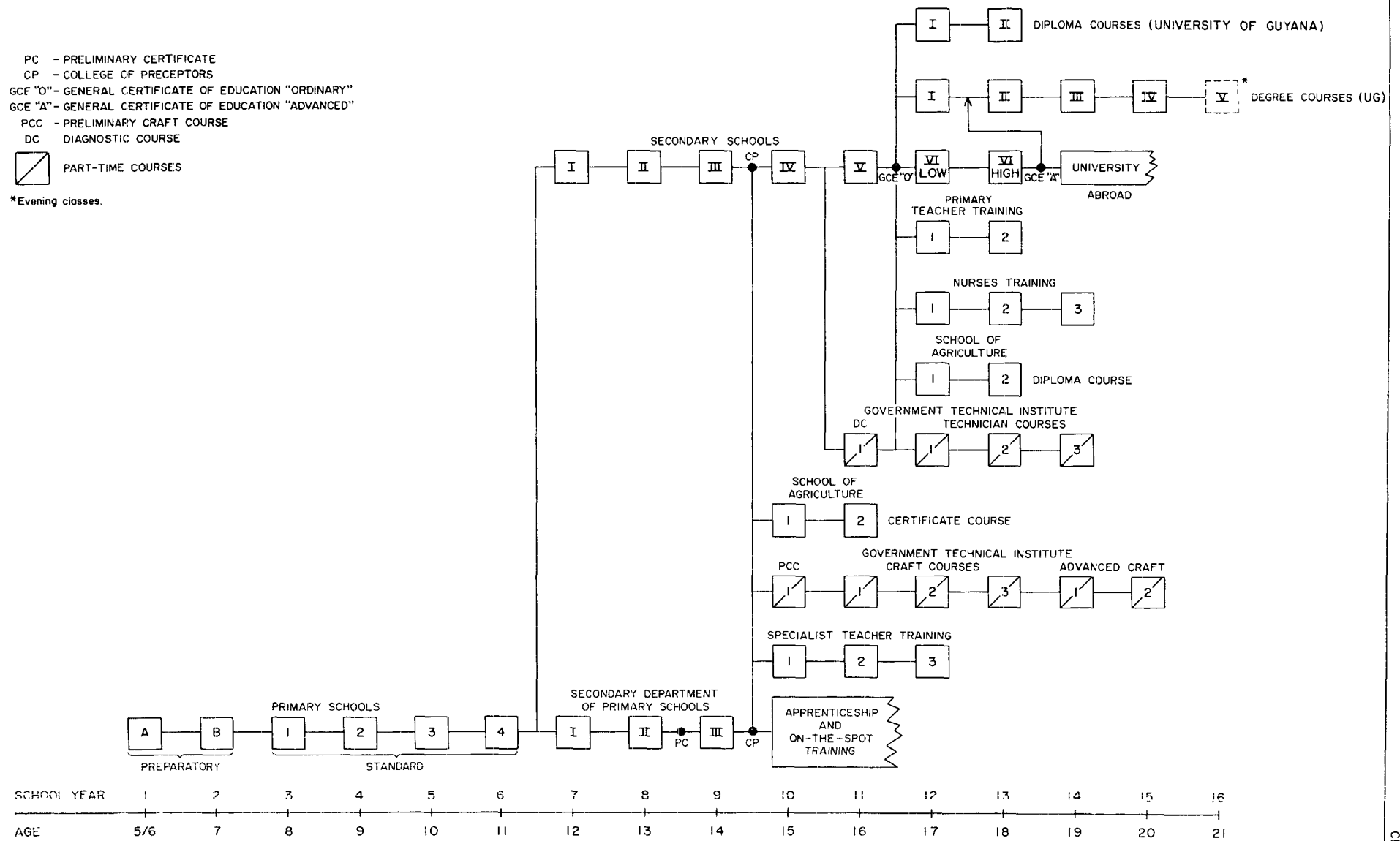
GUYANA: THE EDUCATIONAL SYSTEM, 1966

PC - PRELIMINARY CERTIFICATE
 CP - COLLEGE OF PRECEPTORS
 GCE "O" - GENERAL CERTIFICATE OF EDUCATION "ORDINARY"
 GCE "A" - GENERAL CERTIFICATE OF EDUCATION "ADVANCED"
 PCC - PRELIMINARY CRAFT COURSE
 DC - DIAGNOSTIC COURSE



PART-TIME COURSES

*Evening classes.



GUYANA: EDUCATIONAL PYRAMID

PRIMARY, ALL-AGE AND SECONDARY SCHOOLS, 1963-64

(IN GOVERNMENT AND GOVERNMENT-AIDED SCHOOLS)

GRADE

