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**NIGERIA**

**STUDY OF MANPOWER NEEDS, EDUCATIONAL CAPABILITIES,  
AND OVERSEAS STUDY**

**Report Number 2**

**Study Committee on  
Manpower Needs and  
Educational Capabilities  
in Africa**

**August 20, 1965**

**A.I.D. HISTORICAL AND  
TECHNICAL REFERENCE  
ROOM 2856 NS**

<u>page</u>	<u>line</u>	
15	15	Should read: "intake to more than 130,000."
16	38-40	Delete sentence from "Wastage" through "seven".
18	6	Should read: "increased from 113 in 1960 to 202 in 1964".
25	13	Change 6,914 to 6,655.
26	25-28	Should read: "The Faculties of Education at Ibadan, Nsukka and Ahmadu Bello and the Federal Advanced Teachers College, which will eventually be merged with the University of Lagos and become the Faculty of Education, are producing graduate teachers qualified not only to teach but to train teachers as well.
32	32	Add footnote after "institutions" as follows: " Postsecondary training as referred to below generally indicates postsecondary, non-university education."
38	last sentence	Should read: "Any possible oversupply of university graduates indeed could be absorbed readily in secondary school teaching, since these graduates would certainly be better qualified than the majority of existing teachers."

Errata

<u>page</u>	<u>line</u>	
1	20	Add following sentence: "This does not, of course, mean that action cannot be taken now."
1	31	Change "50 per cent" to "approximately 70 per cent".
5	10	Should read: "The prospects for increased import substitution of consumers' goods are promising, and the balance of payments situation has improved."
5	23	N.I. should read: "National Income".
6	12	Add footnote after "total of 30,000." reading as follows: "Harbison's figures are important because much of the policy for production of middle level personnel is based on his figure for that category, which is only half as great as the recent estimates of the Manpower Board".
11	37	Add footnote at end of line as follows: "Unfortunately, there have been no comprehensive manpower estimates made on a regional basis."
12	21	Add sentence to final paragraph as follows: "If the role of the National Manpower Board comes to be of evident value and if there is clearly a need for staff beyond those already provided by other external donors, AID should support the Board through the provision of expatriate advisers on a direct hire basis."
13	31	Add footnote after "University of Nigeria" as follows: "The University of Nigeria is located in Nsukka in the Eastern Region and is subsequently referred to in this report simply as Nsukka."
13	19	Should read: "Of this total, 1.4 million were enrolled in the East, 1.1 million in the West, etc."

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## NIGERIA

Report Number 2

## FOREWORD

### Frame of Reference

This report, based on surveys in Nigeria between August 1964 and July 1965, is submitted in partial fulfillment of USAID Contract AID/afr-198, dated June 2, 1964.<sup>1</sup> The study, undertaken at the request of AID, includes the following: (1) an assessment of available data concerning high-level manpower needs,<sup>2</sup> (2) an appraisal of the capabilities of indigenous African educational institutions to meet those manpower needs, and (3) a survey of opportunities for study overseas as they relate to high-level manpower needs.

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<sup>1</sup>This report is one of nine country studies, including Ethiopia, Guinea, Kenya, Liberia, Nigeria, Sudan, Tanzania, Tunisia, and Uganda. In addition, a summary report containing general conclusions and recommendations based on the individual country reports is being submitted to AID.

<sup>2</sup>The term "high-level manpower" has been given different meanings. As used in these reports, it generally includes two categories: (1) Class A occupations (sometimes identified as Senior) which are those requiring a university education or its equivalent and (2) Class B occupations (sometimes called Intermediate) which require two or three years of post-secondary training or its equivalent. Other categories which require less training were not examined closely, although some attention was given to middle-level or Class C occupations, which require secondary school education or the equivalent.

Subsequent to the initiation of this study in nine countries, AID entered into a separate contract with Education and World Affairs to conduct a continuing assessment of the strategy of human resource development in Nigeria, under the sponsorship of EWA's Committee on Education and Human Resource Development.<sup>1</sup> To a substantial degree, the terms of reference of the present study are encompassed by those of the second. Three members of the Study Committee on Manpower Needs and Educational Capabilities in Africa are members of the Committee on Education and Human Resource Development, and all three of these individuals have participated in field study in Nigeria on behalf of both assignments. Thus it has been possible in the preparation of this report to draw on observations of the EHRD Committee and its task forces, based on field work since January 1965. A further investigation of ultimate relevance to this study has been undertaken by the Council for the Study of Nigerian Rural Development.

Thus this present document, unlike others in this series, is in the nature of a preliminary report. The EHRD effort, because of its more comprehensive character, its greater staff capabilities, and the longer period of time available to it, is treating in depth topics which the present study has of necessity treated superficially or not at all. The EHRD Committee, moreover, will communicate its observations and recommendations to AID after this report is submitted, and will be doing so over a period of a year or more. Under the circumstances, the Committee on Manpower Needs and Educational Capabilities has refrained from specific, detailed conclusions and recommendations in areas of more direct and continuing concern to the EHRD Committee.

To facilitate the use of this report in the context of the more comprehensive undertaking of the Committee on Education and Human Resource Development, footnote references have been included guiding the reader to areas of continuing investigation by the EHRD Committee and its task forces.

The study director and members of the study committee are grateful to many individuals in Nigeria and elsewhere who gave generously of their time, sharing their experience

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<sup>1</sup>Contract AID/afr-285, dated April 1, 1965.

and providing advice and guidance. They particularly wish to thank members of the EWA staff who assisted directly in the preparation of this report: Sally V. Allen, Donald Eberly, Patricia Mulvey, Charles N. Myers, Rhoda Pauley, Richard Sharpe, and James R. Sheffield.

John W. Masland  
Director of the Study

## INTRODUCTION

The Federation of Nigeria, which gained independence from British rule in 1960, is of signal importance to the future of Africa. It is a large country, with a population in excess of 50,000,000 according to the somewhat controversial census of 1963. It is also one of the largest countries of the continent in territory, slightly greater in size than Texas and Oklahoma combined (356,500 square miles).

Nigeria is a federation consisting of four semi-autonomous regions, Northern, Eastern, Midwestern,<sup>1</sup> and Western, and the federal district of Lagos, the capital. Each region is characterized by a predominant tribal group and strong regional pride and aspiration. The political parties are basically regional in composition and loyalty. These factors exert centrifugal pressures on the federation, as demonstrated by the election crisis in December 1964. The nature of future educational development in Nigeria and the determination of appropriate external assistance to its development, will depend on the manner in which these political differences are ultimately resolved.

## NATIONAL AND HUMAN RESOURCE DEVELOPMENT

At the time of independence in 1960 Nigeria as a whole, in spite of rather significant economic growth in the period following World War II, remained relatively underdeveloped. The vast majority of the population was engaged in subsistence activities contributing only marginally to the market economy. About 75 per cent of the adult labor force was engaged in agriculture, forestry, and animal husbandry, and almost two-thirds of this group produced primarily for subsistence rather than for the market. The cultivation of crops accounted for 50 per cent of the national income, and 85 per cent of exports. Industry was not yet a major contributor to national income. The so-

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<sup>1</sup>The Midwest Region was carved out of the Western Region in May 1963. At this writing separate planning for the new region has not progressed far and much of the data used in the preparation of this study relates to the former Western Region as a whole.

called modern sector was small, consisting of the federal and regional governments, government corporations, a few large plantations, trading establishments, and some industries. Nevertheless migration to towns and cities was increasing and the urban population was growing at a correspondingly rapid rate. Nigeria's industrial economy was a mixture of public and private enterprises. The private sector was fairly extensive but was limited for the most part to small-scale activities. Large-scale ventures were characteristically undertaken by the governments or by expatriate concerns.

At independence, the country experienced a critical shortage of almost all categories of high-level manpower: professional and subprofessional, administrative and clerical, teachers, supervisors, and senior craftsmen. Nigeria remained dependent upon the continued employment of expatriates in a wide variety of high-level positions in major public and private institutions, and was faced with the task of preparing her own nationals to assume the responsibilities of leading and staffing these institutions, both through the formal educational system and through on-the-job training.

The Eastern and Western Regions were in a somewhat more favorable position than the North. Their educational systems had developed to the stage where they were beginning to satisfy some of the non-technical high-level manpower requirements. But these regions, too, were seriously short of certain types of high-level manpower, particularly engineers, scientists, and well qualified teachers and managers.

#### National Development Plan, 1962-1968

It is in the context of relative underdevelopment that Nigeria's ambitions for general development, as projected in the National Development Plan, 1962-1968, and her targets for high-level manpower should be examined. The plan was envisioned as the first in a series that would raise standards of living by modernizing and diversifying the economy.

Development planning in Nigeria actually dates from 1945, when the colonial administration prepared a ten-year plan in response to the British Colonial Development and Welfare Program. A revised plan was issued in 1951 for the

period 1951-1956. Neither was a true "plan"; rather, they were a series of projects unrelated to an overall economic target. The principal emphasis was confined to development of infrastructure, and throughout this period, new projects were substituted without proper coordination with the existing ones. In 1955 the report of an economic mission to Nigeria of the International Bank was published. But its usefulness as a basis for planning was limited by constitutional changes providing for considerable regional autonomy, which resulted in separate development programs for each region.

Preparation of the Development Plan, 1962-1968 was undertaken by the Federal Ministry of Economic Development in collaboration with the regional governments and an attempt was made to integrate federal and regional plans into the total national plan.<sup>1</sup>

The overall objective of the plan is an average annual increment in G.N.P. of 4 per cent. The plan gives highest priority to agriculture, industry, and training of high- and intermediate-level manpower. Total government capital expenditures over the six years were anticipated at £ 676.8 million, of which 71.4 per cent was apportioned to productive sectors of the economy such as agriculture, trade, industry, electricity and communications; 20.8 per cent to social overhead, including education (to which was allocated £ 69.8 million or 10.3 per cent of the plan total); and 7.8 per cent to administration, including defense. The governments expected to cover approximately one half the planned investment with foreign loans and grants. Thus they planned to contribute from their own resources almost half the cost of the capital program and to meet all recurrent expenditures, with the possible exception of certain education and health expenditures which could qualify for external assistance.

### Recent Economic Situation

Achievements under the Plan. It is clear that achievements under the plan will bear directly on Nigeria's manpower requirements and on her capacity for meeting them. High levels of

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<sup>1</sup>The plan was drafted by the Economic Planning Unit of the Ministry headed by Wolfgang E. Stolper, now of the University of Michigan, who served for 18 months under a grant from the Ford Foundation.

achievement will generate support for the further expansion of educational institutions, but will also increase the demand for their graduates. Low levels of achievement, on the other hand, will reduce this demand, but to an even greater extent will reduce the support available for educational expansion.

Accomplishments to date under the plan are difficult to assess with any real certainty. There seems to be general agreement that total investment has not reached the planned level. But there are wide disparities among estimates on how much of an increment in G.D.P. the investment to date has produced.

Fixed investment in the public sector during the first two years of the plan was considerably below expectations; private investment, on the other hand, was above -- although not enough to off-set the short falls in the public sector.

The lower level of public investment was, in part, the result of an overestimation by the planners of available administrative capacity and an underestimation of the costs (both capital and manpower) of older ongoing projects and the time required to launch new ones. In addition, the efforts were slowed by a preoccupation with the detailing of individual project plans, a level of foreign assistance lower than anticipated, and by the protracted character of loan negotiations. The mobilization of internal resources by the federal and regional governments has not yet reached the planned level and consequently, Nigeria's external reserves have been used at twice the anticipated rate. The cost of external debt service has increased markedly, and the recent wage settlement which increased recurrent costs has further reduced resources available for the initiation of new projects. Finally, there has been some distortion of the planned allocation of investment among the various sectors. The federal and regional progress reports for the first year, 1962-1963, show that 59 per cent of total investment went to the "Economic" sector as against a planned 71 per cent for the six-year period. In the "Social" sector, the figure was 25 per cent against a planned 21 per cent, and in the "Administrative" sector 15 per cent against 8 per cent.

On the basis of these difficulties, many observers concluded that Nigeria fell short of a 4 per cent annual

increment in G.D.P. during the first two years of the plan. Revised growth estimates in the Progress Report, 1964, however, indicate an increase of 5.7 per cent during the first year alone. The Federal Ministry of Economic Development ascribed this relatively high rate to a capital output ratio markedly lower than the plan assumption of 3.75.

Future Prospects. For the future it would seem that some difficulties will lessen while others remain constant. The revenues from petroleum, for example, are likely to be far higher than anticipated. The prospects for increased import substitution are good and the balance of payments situation has improved. Most important, the proportion of total imports consisting of capital goods has jumped from 35 to more than 40 per cent indicating that the plan may now be gathering momentum. Nonetheless, it is likely that the investment pattern will continue to depart from the original plan, with a smaller than anticipated proportion of the total going to directly productive investment. In addition, the maintainance of a low capital output ratio in Nigeria's economy is uncertain at best. Thus the federal and regional governments will probably continue to operate on tighter budgets than had been anticipated. The proportion of N.I. spent on education cannot increase further and may even decline. And it is not yet certain whether the plan target for G.N.P. in 1967-68 will, in fact, be reached.

#### Manpower Requirements

Since independence, responsible officials in Nigeria have given considerable thought to manpower planning and there is a general awareness of its importance. Yet there is some question concerning the degree and effectiveness of coordination among development planners and between the planners and those responsible for educational development, as will be suggested below.

Harbison's Estimates, 1959. In 1959, in preparation for the work of the Commission on Post-School Certificate and Higher Education in Nigeria (the well-known Ashby Commission), Professor Frederick Harbison was assigned the task of estimating the country's high-level manpower needs for the decade 1960-1970. Although his report was not a comprehensive calculation and merely suggested minimum high-level manpower targets, his estimates have been widely used for educational planning purposes right up to the present.

Assuming an increase in G.D.P. of 4 per cent per year, Harbison estimated that the total ten-year requirement for senior personnel (top administrators, managers of large establishments and professionally trained persons, including fully qualified teachers, all requiring a university degree or its equivalent) would rise from 10,000 employed in 1959 to over 30,000 in 1970. The requirement for the intermediate category (technical and supervisory personnel, requiring two or three years of post-school certificate education or its equivalent) would rise from 15,000 to 54,000. Thus he suggested a minimum target for the two categories of 85,000 persons in ten years, against a 1959 total of 30,000. In 1959, moreover, about 10,000, or one third of the stock, were expatriates. Consequently the additional goal of Nigerianization of high-level manpower made the task of development even more difficult and Harbison concluded that his suggested targets would require more than a five-fold expansion in ten years. Yet even this achievement would raise the percentage of high-level manpower to a little less than two-tenths of one per cent of the population in 1970, against three-tenths of one per cent in Ghana in 1959, and two to five per cent in the developed societies of North America and Western Europe. (It should be noted, moreover, that Harbison based this calculation on a much lower estimate of the total population of Nigeria than is now officially accepted.)

The National Manpower Board. In response to a recommendation of Harbison and the Ashby Commission, the federal government late in 1962 established a National Manpower Board, which is composed of representatives of universities, industry, labor and federal and regional government agencies. The board is staffed by a secretariat, which has the responsibility of periodically determining the nation's manpower needs in all occupations and formulating programs for effective manpower development through university expansion, scholarships, and fellowships. Because of political and administrative difficulties the board has been slow in fulfilling its functions.

The principal effort of the Manpower Board secretariat under its former director, Dr. T.M. Yesufu, was the preparation of a comprehensive survey of Nigeria's high-level manpower needs. A first draft of this survey was prepared in 1963 and reviewed in March 1964 at an international

seminar of manpower experts. A revision of the survey, covering the senior and intermediate categories and taking into account criticisms and suggestions made at the seminar, was accepted by the Manpower Board late in 1964 and published in 1965.

In the new survey, establishments and institutions employing a total of 530,167 individuals in all categories were covered. Of this gross number, 113,297 were employed by teaching and research institutions. The total in the senior and intermediate categories was 87,143 of whom 57,893 were in public and private establishments and institutions, other than teaching and research, and 29,250 were in teaching and research.

TABLE 1  
EMPLOYMENT OF  
HIGH-LEVEL MANPOWER, 1963  
(Excluding Teaching and Research)

	<u>Senior</u>	<u>Intermed.</u>	<u>Total High-Level</u>	<u>Total Employment</u>	<u>Per Cent High-Level</u>
Federal, regional, local government	6,665	30,928	37,593	185,286	20.3
Public boards	1,149	3,195	4,344	67,531	6.4
Private establishments	<u>5,916</u>	<u>10,040</u>	<u>15,956</u>	<u>164,053</u>	<u>9.7</u>
Subtotals	13,730	44,163	57,893	416,870	13.9
<u>Teaching and Research</u>					
	<u>Senior</u>	<u>Intermed.</u>	<u>Total High-Level</u>	<u>Total Employment</u>	<u>Per Cent High-Level</u>
Schools & Universities	3,402	25,433	28,835	112,715	25.5
Research Institutions	<u>168</u>	<u>247</u>	<u>415</u>	<u>582</u>	<u>71.3</u>
Subtotals	3,570	25,680	29,250	113,297	25.8
GRAND TOTAL	17,300	69,843	87,143	530,167	10.7

The report clearly shows a severe shortage of skilled manpower in teaching and research. The bulk of the teachers shown in the above table are untrained or inadequately trained (Grade III) primary teachers (99,335 of the total of 112,715); indeed, 84 per cent of Nigeria's primary teachers are reported as inadequately qualified. In secondary schools, graduate teachers numbered only 2,185 out of a total of 9,689, or 22 per cent. And the majority of graduate teachers are still expatriates.

The low proportion of women in the senior and intermediate categories should also be noted. In occupations other than teaching and research, women numbered 5,646, or about nine per cent of the total. Of these only 667 were in the senior category. In teaching they numbered 5,154 or about 17 per cent.

The manpower survey revealed that 63 per cent of personnel in the senior and intermediate categories was employed in services, 10 per cent in commerce, 6 per cent in manufacturing, and 5 per cent in transportation and communication. Geographically, the proportional distribution of high-level manpower did not follow that of population: about 40 per cent was employed in the federal territory of Lagos, 24 per cent in the North, 20 per cent in the West (including Midwest), and 16 per cent in the East.

#### Future Manpower Needs

The manpower study also included a fairly elaborate projection of future manpower requirements for the period 1963-1970. It is not necessary here to describe in detail the methodology used in setting the targets. In simplified terms the secretariat assumed an annual increment in G.D.P. of four per cent and assumed that total employment would grow at the annual rate of two per cent. On this basis the demand for high-level manpower in the senior category was expected to expand at a rate of eight per cent per year, and for the intermediate category at 12 per cent per year. After allowances for wastage and other factors, the secretariat established minimum employment targets as follows:

TABLE 2

HIGH-LEVEL MANPOWER TARGETS

(Excluding teaching and research)

	<u>1968 Target</u>	<u>1970 Target</u>
Senior	25,250	28,250
Intermediate	83,400	95,600

Harbison in 1959 had proposed a 1970 target of 28,875 for the senior category. The revised minimum senior targets of 25,250 for 1968 and 28,250 for 1970 are remarkably close to his estimate, and it is significant for the purposes of this paper that the new targets for the senior category are not higher than the old.

In the intermediate category, on the other hand, the new targets are much higher than anticipated by Harbison. Whereas he suggested a goal of 54,000 in 1970, the secretariat has now fixed the minimum targets at 83,400 for 1968 and 95,600 for 1970, almost double Harbison's estimates. Indeed, employment in the intermediate category in 1963 already approximated Harbison's 1970 target. Harbison's targets were based on a ratio of intermediate to senior personnel of 1.5 to 1, but the 1963 employment figures showed a ratio of three to one. This change is explained in part by the fact that the base figures available to Harbison were deficient and that he defined intermediate personnel in terms of educational preparation, whereas the secretariat defined them according to an occupational count. For those concerned with building a strategy of human resource development in Nigeria this situation suggests the critical importance of education and training of intermediate manpower and in-service development of those already employed.

Africanization. Apart from meeting needs determined by the growth of the economy, Nigeria also faces the task of replacing expatriates in the high-level categories.

Although Africanization has progressed more than in many other countries on the continent, Nigeria still employs a considerable proportion of expatriates in these categories. Excluding teaching and research they constitute almost 40 per cent of the senior level and about 5 per cent of the intermediate level. The 1963 survey reveals that the federal and regional governments employed in selected occupations in the senior category 6,088 Nigerians and 1,726 expatriates, with 2,194 vacancies. In the private sector, again in selected occupations, 2,461 Nigerians and 1,380 expatriates were employed, with 509 vacancies. Relatively few expatriates were serving in the intermediate category. The areas of greatest shortage of skilled Nigerians were in the managerial and administrative grades, engineering, medicine, accountancy, agriculture, and geology.

In setting its targets for the senior level the secretariat proposed minimum and maximum limits, the lower indicating the absolute minimum number of additional individuals required to meet manpower needs without replacement of expatriates and the upper limit providing for full replacement. On this basis it then calculated the additional manpower that would be required to meet the upper and lower limits. These figures suggest the magnitude of the task facing Nigeria's educational system in the next five years.

TABLE 3

ADDITIONAL HIGH-LEVEL MANPOWER NEEDS  
SENIOR CATEGORY (GRADUATES)

	1968 Target		1970 Target	
	<u>Lower</u>	<u>Upper</u>	<u>Lower</u>	<u>Upper</u>
Senior Category (excluding teaching and research)	12,400	18,000	16,300	21,950
Graduate Teachers	2,550	6,250	3,700	8,250
Research Staff	<u>500</u>	<u>600</u>	<u>600</u>	<u>700</u>
Total	15,450	24,850	20,600	30,900

A review of the Manpower Board's estimates of requirements in specific occupations and calculations of the possible supply to meet these requirements is given below, after analysis of Nigeria's present and potential educational capabilities.

### Planning Machinery

Although the preparation of the manpower survey is a considerable achievement for the National Manpower Board and its secretariat, the planning machinery in Nigeria leaves much to be desired.

Overall national development planning is the responsibility of the Federal Ministry of Economic Development. This agency prepared the six-year development plan and is responsible for coordination of planning efforts. The four regions, however, have their own planning ministries and remain jealous of their prerogatives. Coordination is attempted through a National Economic Council. This body, composed of the federal prime minister and the regional premiers, meets only about twice a year and is mainly a political forum where the members argue the pros and cons of new factory locations and construction projects. The council is advised by a Joint Planning Committee, composed of senior officials of all of the governments. The economic adviser to the federal government, Dr. Pius Okigbo, serves as chairman of the JPC.

The National Manpower Board is a subsidiary of the National Economic Council and is affiliated with the federal Ministry of Economic Development. It is chaired by the permanent secretary of this ministry. Despite the seeming coordination, the work of the Manpower Board has not been brought to bear effectively on planning processes at the federal and regional levels. Quite clearly, there is a fair amount of consultation and exchange of information, some of it in committee meetings, seminars, and the like, among representatives of federal and regional agencies, but there is not yet adequate consideration of the implications of the present manpower situation. The regional governments, moreover, while nominally engaged in manpower planning, are woefully short of staff and information for this purpose. The situation is aggravated by the fact that the regions possess a high degree of autonomy in educational affairs. And rational manpower planning in Nigeria cannot be accomplished

on the assumption of a national labor market because of limitations on employment of Nigerians in regions other than their own. Either this situation must be ameliorated, or manpower planning must be undertaken on a regional basis.

In spite of these difficulties, responsible Nigerians appear to recognize the desirability of integrating manpower analysis with national planning and particularly with educational planning. The findings of the recent manpower survey, for example, are well known among federal and regional officials, university personnel, and others within the educational community of the country.

The real test of the National Manpower Board, however, is yet to come. On the basis of the survey, the secretariat is charged with preparing a statement on the policy implications of its findings. The way in which this situation is handled by the new director of the board, the federal Ministry of Economic Planning, the Joint Planning Committee, the National Economic Council, and by the regional governments will determine in considerable measure whether or not the present manpower planning machinery will play a significant role in the national development of Nigeria.

## EDUCATIONAL CAPABILITIES

Although Nigeria's educational capabilities are low in contrast to those of developed societies, remarkable progress has been made in the last 20 years, and particularly in the short period since independence in 1960. As in other African countries, but perhaps to a degree surpassed in no other, education is supported with national fervor. It is regarded as the key to modernization and development by the nation and as the means of personal emancipation and achievement by the individual.

The Educational System at Independence. Under the educational structure existing on the eve of independence, more than half the population would never have attended any school. Yet there were marked variations throughout the federation. The two regions in the south were making a large-scale effort to achieve universal primary education; the federal territory of Lagos was approaching this goal. By 1960, total primary enrollment amounted to 2.9 million in the country as a whole. Of this total 1.4 million were enrolled in the West, 1.1 million in the East, 74,000 in Lagos, and only 283,000 in the North, a region containing more than half of the total national population. Relatively few students had the opportunity to go beyond primary school. Enrollment in secondary schools of all types up to school certificate level amounted to 135,000. In 1960 only 900 were enrolled in post-school certificate classes, although a number several times larger prepared themselves independently for the General Certificate of Education. Teacher training enrollment totaled 28,000 and another 5,000 were enrolled in technical institutes, trade centers, and vocational institutes. At the two universities then existing, Ibadan and the new University of Nigeria, there was a total of 1,500 students, and in the three branches of the then Nigerian College of Arts, Science and Technology another 1,150. About 1,000 Nigerians, perhaps more, were attending universities and colleges abroad.

In Nigeria the largest share of primary and secondary education has been provided by the so-called voluntary agencies, many of them church-related. The schools of these agencies must conform to regulations established by the governments and they receive grants-in-aid from public revenues calculated on a formula basis. At the secondary level in all regions in the North at the primary level, and in the East at the upper half of the primary level, fees are also charged.

This, then, was the base from which the Nigerian educational system has advanced in the five years since independence. It is difficult to measure its precise capabilities at the present time because the whole system is expanding and changing rapidly at all levels.<sup>1</sup> Many new schools and programs are now in operation, producing graduates in increasing numbers; others are just getting underway or are still in the planning stage. Thus at best only rough estimates may be made of the degree to which Nigerian educational institutions will be able to satisfy demands for high-level manpower in the next five years.

### Plans for Educational Development

The Ashby Commission Report. The report of the Commission on Post-Secondary Certificate and Higher Education in Nigeria, chaired by Sir Eric Ashby, has been the Bible of educational development in the country since its preparation in 1959.

The Ashby Commission set forth the following general principles as the bases for its specific recommendations:

1. The educational system must produce enough children with post-secondary education to satisfy the nation's needs for high-level manpower.
2. It must be properly balanced between primary, secondary and post-secondary education.
3. It must narrow the gap between educational opportunities in the North and the South, without producing an unbalanced educational system in the North.

The commission proposed that of every 1,000 children of age 12 in the South, all 1,000 should complete primary school, and 70 should enter secondary grammar schools. Of these 70, 63 would be likely to complete the School Certificate course, of whom 47 should seek employment and 16 proceed to further full-time or "sandwich" training. Of these 16, 10 or 11 should

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<sup>1</sup>Assessment of the overall evolution of the educational system in Nigeria is being undertaken as a part of the larger EWA project referred to in the Foreword.

take intermediate training and 5 or 6 go into a university. In the North, on the other hand, only 250 out of every 1,000 children could be expected to complete primary school (25 per cent against the then 9 per cent or less). Only 22 could be expected to complete secondary schools. Of these 22, 15 should seek employment, and 7 should go on for further education or training. Of these 7, 4 or 5 should take intermediate training and 2 or 3 should attend a university.

To accomplish these targets the commission recommended the extension of primary education in the North to enroll about 25 per cent of the age group, together with a massive improvement of the quality of primary education throughout the nation. In order to provide an adequate flow of students into post-secondary education, it urged an increase in secondary intake to more than 30,000. At the secondary level, moreover, it proposed that the imbalance toward literary and academic studies be rectified by increased attention to technical subjects, secretarial study, and vocational and agricultural courses. Of an estimated eventual out-turn of 29,000 at the School Certificate level, the commission proposed that 21,000 seek employment and 8,000 go on to further training. Of this number, 3,500 should study for the Higher School Certificate or G.C.E. advanced level, in sixth forms, including 500 preparing to teach. The commission recommended that sixth form work be carried on both in existing secondary schools and in new national high schools.

At the post-secondary level the Ashby Commission proposed expansion and improvement of teacher training, technical, commercial, agricultural and veterinary education. University development was to be expanded to ensure that by 1970 there would be an enrollment of at least 7,500 students, with substantial growth beyond that figure in the decade 1970-1980. The commission envisaged four universities in Nigeria.

Federal Government Acceptance of Ashby Aims. Following a comprehensive review by representatives of the federal and regional governments and of educational institutions, including an exercise in costing the recommendations by J.N. Archer, the federal government accepted in principle the Ashby Commission report. Its position was set forth in a White Paper issued in 1961 (Sessional Paper No.3 of 1961). With respect to primary education in the North, the government optimistically established a target of 50 per cent of school-age population,

doubling the commission's proposal. It upped the secondary school intake from 30,000 to 45,000 by the year 1970, and doubled the goal for sixth form enrollment. It endorsed the commission's emphasis upon expansion of post-secondary teacher training, and technical and vocational programs. The 1970 target for university enrollment was reset at 10,000, 2,500 above the commission's figure. By this time the Western Region had authorized establishment of the University of Ife, making five universities planned in all.

The federal government, in the 1961 White Paper, acknowledged the immense cost of these educational goals. It estimated a total capital expenditure for the period 1961-1970 in the order of £75 million and a total recurrent cost in 1970 of the same amount. This represented an effort more than three times as great as the then current level. The federal government recognized that achievement of these high aspirations would be possible only by a large increase in external aid as well as larger tax revenues.

#### Accomplishments and Projections at the Primary and Secondary Levels

As indicated above, expenditures for services, including education, have been proportionately higher than anticipated. This is understandable, given the high political priority attached to education, the existence of an administrative structure in the educational area reasonably well prepared to carry out plans, and the fact that expansion of educational facilities can be accomplished more quickly than construction of factories, highways, and dams.

Primary Enrollments. At the primary level enrollments are behind the White Paper goals. Primary enrollment, indeed, has been stabilized at slightly less than 3 million, and has actually declined since 1960, due to several factors including raising the school entry age, reducing the length of primary school, and reinstatement of fees after the third year in the East. In the North, however, primary enrollment has increased from 283,000 in 1960 to 452,000 in 1964. Enrollment pyramids are sharply tapered, reflecting both wastage and expansion of the system, and the fact that some schools do not offer all grades. Wastage, in sample schools, has been about seven per cent between grades one and four and about ten per cent between grades five and seven. Except for the special situation in the North, the number of students completing primary school is more than adequate to fill the

secondary school places available. The quality of much of the primary education remains poor, however, due, in part, to the overwhelming proportion of inadequately qualified teachers. Indeed, in the North, development of primary education must wait upon the preparation of more teachers.

TABLE 4

PRIMARY EDUCATION, 1962  
(nearest hundredth)

<u>Region</u>	<u>Total Population</u>	<u>Enrollment</u>	<u>Percentage School-age Population</u>
Lagos	675,000	100,000	73.7
North	29,778,000	360,000	6.9
East	12,389,000	1,267,000	68.15
West <sup>1</sup>	<u>12,812,000</u>	<u>1,109,000</u>	<u>57.71</u>
TOTALS	55,654,000	2,835,000	31.1

<sup>1</sup>Including Midwest.

Perhaps the most serious problem in primary education in Nigeria is its effect upon students. The curriculum is still heavily academic and the real value of completing a primary education can only be realized if the student is able to move on to higher educational levels. Students unable to enter secondary schools leave the primary grades unwilling to work on the land but unprepared to do anything else. The educational system is now producing approximately 280,000 primary school leavers a year and most eventually end up in the cities where job opportunities are severely limited and discontent is growing.

Secondary Enrollments. Whereas primary enrollment has been fairly stable, secondary enrollment has more than doubled in the period 1958-1962, reaching a total of 195,000 in 1962.

But even so, this represented only 10 per cent of the school-age population in Lagos, 2.4 per cent in the East, 2.1 per cent in the West (including Midwest) and 0.3 per cent in the North.<sup>1</sup> Enrollment will continue to expand if present plans are fulfilled. In the Eastern Region, for example the number of secondary schools increased from 84 in 1960 to 202 in 1964 and a total of 300 is projected for 1969, with a two-fold increase in enrollment. The Western Region likewise anticipates a doubling of enrollment over this same period. If this rate of expansion can be maintained, Nigeria's secondary schools will be able to enroll the annual intake of 45,000 projected in the 1961 White Paper. There is reason to doubt that the pace can be maintained, however. Recurring costs for education at all levels are higher than anticipated, and funds for capital expansion are short.

The statistics tell only part of the story. Nigeria's secondary schools have a strong tradition of preparing students for university entrance rather than for subprofessional and vocational training programs. They have emphasized literature and history rather than science, technical subjects, and other areas of instruction that prepare for intermediate level employment. Secondary modern schools, following the British pattern, have not been well regarded in Nigeria. The comprehensive schools established with American assistance at Port Harcourt in the East and Aiyetoro in the West have been designed to encourage development of multiple field secondary schools which prepare both for vocations and for university study as is being done in Britain and the United States.<sup>2</sup>

Some sources in Nigeria believe that 70 per cent of secondary school students should concentrate in science if the country's manpower needs are to be satisfied. The achievement of this ideal will be extremely difficult because of the acute shortage of science teachers and the high costs of instruction in the sciences. Secondary school costs are relatively high as it is because of the prevailing practice of

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<sup>1</sup>Because of uncertainty of census data used, these percentages are approximate.

<sup>2</sup>Detailed analysis of secondary education and comprehensive schools in Nigeria is being undertaken as a part of the larger EWA project referred to in the Foreword.

maintaining these schools as boarding institutions and providing staff housing.

Staffing Secondary Schools. Staffing secondary schools imposes a heavy burden. As the manpower survey figures above indicated, Nigeria is very short of qualified teachers and this situation is particularly acute at the secondary level. The recent manpower survey indicates that only 2,185 or 22.5 per cent of a total of 9,689 secondary teachers have graduate qualifications. Approximately 15 per cent of secondary teachers are expatriates, and the Peace Corps contribution of some 500 teachers has helped significantly in making up the deficit. In the North more than two thirds of the teachers are expatriates. Any effort to Nigerianize the secondary staff in the North is complicated by the fact that Nigerians from other regions do not ordinarily find employment in secondary teaching in the North.

The Ashby Commission urged a very considerable expansion of sixth form enrollment, as a means of preparing students for the Higher School Certificate and university admission. The federal and regional governments have set a high priority on this goal. By 1962 total enrollment was 2,500, more than two and a half times the figure in 1960. Yet this pace must be maintained if the White Paper target of 10,000 students preparing for the Higher School Certificate or the G.C.E. is to be achieved, and there has been a growing concern in Nigeria over the desirability of supporting such a massive expansion of the sixth form.<sup>1</sup> Inadequate preparation in the sciences and English and the existence of unused capacity at the universities seem to suggest that an increase in concessional entry might be a more desirable alternative, as will be explained below.

#### Post-Secondary, Intermediate Education

In his 1959 report, Frederick Harbison declared that "Nigeria's urgent need in the near future is for expansion of intermediate education." Six years later, the urgency -- and the recommendation -- still apply. The country suffers from an acute

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<sup>1</sup>Detailed analysis of the Sixth Form issue is being undertaken as a part of the larger EWA project referred to in the Foreword.

shortage of sub-professional and technically trained manpower: teachers, managers, technicians, and administrative assistants. Although the Ashby Commission set ambitious goals in the areas of teacher training, technical education and agricultural education, progress has been uneven and the potential effectiveness of the plans is still uncertain.

Teacher Training.<sup>1</sup> Teacher training is receiving a high priority in Nigeria. The overwhelming majority of primary teachers, as indicated above, are poorly prepared. A large majority (Grade III) have only about two years' preparation in small training colleges spread throughout the country. Nigeria hopes eventually to eliminate this category entirely. Grade II teachers have completed a four-year (five in the North) post-primary course or two years of training following secondary school. Grade II teachers are certified for the upper primary, and in some regions for lower secondary grades. Completion of an advanced teachers' course following school certificate leads to Grade I classification, and assignment to all secondary grades.

Throughout Nigeria, efforts are being made to improve the quality as well as supply of teachers. Changes occur so rapidly that accurate description is difficult. Steps have been taken to improve the many teachers colleges and also to upgrade Grade III personnel. In the North a special effort is being undertaken with American assistance to produce teacher trainers, in order to increase as well as improve the supply of primary teachers. To staff secondary schools the emphasis has been to provide strong advanced post-secondary teacher training institutions, offering the Nigerian Certificate of Education. So far six of these advanced colleges have been established, with assistance from the United States, UNESCO and several other external donors. It is hoped, moreover, that the proportion of qualified secondary teachers providing instruction in science and mathematics can be increased to 60 per cent, far above the present low level.

Graduate teachers at the degree level are being produced by the faculties of education at the universities. These programs will be explained below.

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<sup>1</sup>A detailed analysis of teacher training in Nigeria is being undertaken as a part of the larger EWA project referred to in the Foreword.

Technical Education. Technical education (as distinguished from vocational training, which is carried on in trade centers and vocational programs at the secondary level) <sup>1</sup> prepares for the sub-professional or intermediate level of employment. Nigeria, as a whole, has lagged behind some other African countries in technical education. A committee chaired by Vice-Chancellor Dike, for example, reported in 1962 that for every 100,000 population, there were 621 students in technical education in Ghana, 245 in Sierra Leone, 217 in Gambia and only 88 in Nigeria. Plans now are going forward to expand capabilities at this level with the help of external donors.

The federal government's technical education program includes the Yaba Technical College, outside Lagos (for which Shell-BP contributed £500,000 as an independence gift) and plans for a National Technical Teacher Training College. Technical education in the West is centered at Ibadan Technical College, with American assistance. In the East the region expects to expand the present Technical Institute at Enugu and to provide new buildings, with assistance to be provided by the British. There also are plans for a technical institute at Port Harcourt. The Kaduna Technical Institute serves at this same level in the North. There is talk of establishing an institute in the Midwest as well. Some of these institutions occupy handsome, well-equipped facilities and plans are underway to match them elsewhere.

Yet in spite of these efforts and the clear shortage of intermediate manpower, technical education is not making a significant contribution to the needs of the country. Indeed, even after numerous studies and reports, the character of technical education remains a subject of debate and controversy. The traditional bias of secondary education toward university entry has made the technical institutes unattractive to students and their parents. Staffing has remained a serious difficulty, with heavy reliance upon expatriates and external sources of support. Enrollments remain low, below theoretical capacity, and the curricula appear insufficiently related to the realities of Nigeria's needs. Many students who are unable to enter universities enroll in technical institutes, hoping to upgrade their preparation in order to pass university

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<sup>1</sup>The problems of lower level technical education (and training) are to be studied by a special task force in the larger EWA project referred to in the Foreword.

entrance examinations. This practice tends to waste valuable technical institute resources.

Technical education is very expensive in terms of capital investment and qualified teaching personnel, both of which are in short supply. Much more needs to be known about this area of education before further investments are made. Courses of study must be more effectively related to the actual long-term requirements of employment, with greater emphasis upon fundamentals of lasting value. In some instances at least, specialized instruction should be shifted to on-the-job training, avoiding narrow formal preparation for an occupation which the individual may never enter. Finally, incentives must be developed to overcome the relative unattractiveness of intermediate level employment, and more effective counseling programs are needed.

Agricultural Education. For a country heavily dependent upon agricultural production, Nigeria has so far invested relatively little in agricultural education. The field is not attractive to young Nigerians. Although the Ashby Commission emphasized the urgent need for sub-professionals in this field, much of the task of identifying and preparing such persons remains to be done.

Farm institutes for school leavers provide a one-year course (at three institutes in the West) and a two-year course (at 12 institutes in the North) to prepare for farming. In the East the agricultural school at Umudike, which is operated by the regional Ministry of Agriculture, has been expanded to provide a crash program for training agricultural assistants, plus special courses for upgrading presently employed personnel. American assistance has been provided to Umudike. In the North two-year programs are offered at Samaru and Kabba schools of agriculture, and a number of farm training centers to train agricultural instructors. The West operates a school of agriculture at Ibadan offering a two-year post-school diploma course, and at Akure a two-year secondary level certificate course. American assistance has been provided to agricultural schools and institutes in all of the regions. There appears to be insufficient coordination, however, between the regional ministries of agriculture and education in developing these agricultural training programs, and there is no federal ministry, which might provide over-all leadership. Hopefully, when the faculties of agriculture of the universities become stronger, they can provide leadership, personnel, research and general know-how

in this important area of national concern. There is particular need to apply knowledge derived from research to the practical problems of farming.

### The Universities<sup>1</sup>

There are now five universities in Nigeria and talk of a sixth. In response to the Asquith and Elliot Reports, which set the pattern for university development in British West Africa, University College was established in 1948 at Ibadan, in the Western Region. Set up with a special relationship to the University of London, Ibadan in 1963 became an independent institution and began to confer its own degrees in 1964. Ibadan is a federal institution and is now accommodated on a new campus, having received substantial support not only from the federal government but from external donors, principally the British government and American foundations.

In October, 1960, Dr. Nnamdi Azikiwe, now President of the Federation was instrumental in founding a new University of Nigeria at Nsukka, 40 miles north of Enugu, the eastern regional capital. Almost all of the capital investment for the entirely new campus has come from Nigerian sources, although external assistance, notably in the form of the AID-supported relationship of Michigan State University to the new institution, has contributed significantly to the success of this venture. The university also utilizes the buildings of the Enugu branch of the former Nigerian College of Arts, Science and Technology.

In quick succession three additional universities were established -- the western regional University of Ife, the northern Ahmadu Bello University, and a second federal University of Lagos. Ife occupies the site of the Ibadan branch of the former Nigerian College, but hopes to move to an entirely new campus in the city of Ife. Ahmadu Bello was formed by the fusion of several existing diploma-level institutions, and utilized the facilities of the Zaria branch of the Nigerian College. The University of Lagos, now emerging from the recent crisis, occupies temporary quarters while awaiting the completion in 1965 of its spacious new campus on the lagoon facing the island of Lagos. The Ashby Commission had recommended the establishment in or near Lagos of an urban-type

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<sup>1</sup>A more detailed analysis of problems in higher education in Nigeria is being undertaken as a part of the larger EWA project referred to in the Foreword.

institution, largely non-residential, emphasizing work in commerce, business administration, economics and social science, and offering evening and extension courses as well as a regular program. While responding in part to this proposal, the new university will be at least 50 per cent residential.

In addition to the relationships of Ibadan and Nsukka to London and Michigan State, each of the universities has some link with an overseas institution. The Netherlands Universities Foundation of International Cooperation also assists the University of Nigeria. The Faculty of Agriculture at Ife is receiving assistance from the University of Wisconsin, the Institute of Administration at Ahmadu Bello is linked with the Universities of Pittsburgh and Manchester, the Faculties of Agriculture and Veterinary Medicine with Kansas State University, and the Faculty of Business and Social Studies at Lagos with New York University. These arrangements have been supported by AID.

Following the British practice and a recommendation of the Ashby Commission, the federal government of Nigeria has established the National Universities Commission, a representative body to advise on the distribution of funds to the five universities. The commission, which has a small staff with headquarters in Lagos, is charged with the responsibility of developing a rational, overall program for the development of the five universities. It has attempted to confine expensive specialized programs to specific campuses in order to avoid unnecessary duplication and expense. It has sought to strengthen its effectiveness by the appointment of several staff experts capable of reviewing the proposed programs, facilities and budgets of the universities. While private foundation support has been available for this purpose, it has been difficult to fill all of the positions, and it now seems unlikely that the NUC will be able to restrain regional ambitions unless its legal powers are increased.

Some coordination is provided by the Committee of the Vice-Chancellors, who are reviewing such matters as common entrance qualifications, student fees and loans, and the sixth form. This committee is also seeking staff support.

#### University Enrollment Targets

The Ashby Commission had recommended four universities with

a total enrollment of 7,500 by 1970. The federal government accepted the goal of five institutions, with a total enrollment of at least 10,000 in 1970. It warned, however, that its grants to regional universities would be based only on their respective quotas of the 10,000 target.

Upon recommendation of the National Universities Commission, the federal government declared that priority should be given to development of scientific and technical faculties of the universities, and that 75 per cent of the ultimate 10,000 enrollment should be taking courses in pure and applied sciences.

The five universities are now moving forward to achieve their ambitious goals. Enrollment in the 1964-1965 academic year is already 6,914. The National Manpower Board has estimated that enrollment will reach 10,000 by 1968, two years ahead of the National Universities Commission target, and 12,500 by 1970. The figure at Ibadan is 2,600 and at the University of Nigeria, now in its fifth year, 2,480.

At this writing there are faculties of social studies at all five universities, of arts, pure science and agriculture at all but Lagos, engineering at Lagos, Nsukka and Ahmadu Bello, medicine at Ibadan and Lagos, pharmacy at Ife, pre-veterinary medicine at Ibadan and Nsukka, veterinary medicine at Ahmadu Bello, secretaryship and librarianship at Ibadan, Nsukka and Ife, commerce and law at Lagos. Nsukka also has programs in journalism, home economics, and physical education. There are faculties of education, producing graduate teachers, at Ibadan, Lagos, Nsukka and Ahmadu Bello, and affiliated Institutes of Education. It is also possible that the Federal Advanced Teachers College in Lagos will be associated directly with the University of Lagos, when the university moves to its new campus.

This is indeed an impressive array of instructional programs. At this writing, however, only two of the universities have reached what might be termed the operational level in the principal areas of competence to which they aspire. Only in the arts and sciences, moreover, are enrollments at substantial levels. In the more specialized areas, except perhaps at Ibadan, plans are still being formulated and personnel and resources assembled. Enrollments remain low. It will be some years before Nigeria's universities achieve a significant out-turn of graduate engineers,

agriculturalists, veterinarians and medical doctors.

The imbalance in enrollment by faculties is shown by the following figures for the academic year 1962-1963. The situation has improved somewhat since, but the basic pattern of distribution remains. It will be some time before Nigeria's universities will have the resources to enroll 75 per cent of their students in the pure and applied sciences, and it will be some time before the country's secondary schools can produce a flow of qualified students sufficient to attain this goal.

TABLE 5  
UNIVERSITY ENROLLMENT BY SUBJECT, 1962-1963

Arts	25.3 %
Social Studies	25.0 %
Pure Science	16.0 %
Medicine	8.5 %
Technology	7.4 %
Agriculture	6.0 %
Secretarial and Librarianship	2.0 %
Pharmacy	1.7 %

This paper has emphasized Nigeria's severe shortage of trained teachers and the need to improve the quality of instruction in primary and secondary schools. The country's new universities aspire to make a significant contribution to the alleviation of this situation. The Faculties of Education at Ibadan, Lagos, Nsukka and Ahmadu Bello are producing graduate teachers, qualified not only to teach but to participate in teacher training. Finally, the Institutes of Education at these institutions are developing programs of consultation, conference extension courses and the like for school teachers and administrators.

#### Matters Requiring More Attention

In attempting to measure the potential capabilities of the five Nigerian universities, there are several matters which require more attention than is possible in this summary paper. The first two have to do with financing. The first of these involves the capacity of the country to supply the resources, both from domestic and external sources, to support further

expansion and meet the mounting recurrent costs. University education in Nigeria is expensive. The precise figures are not available, but it is likely that average per student cost is in the order of £1,000 per year, roughly comparable to the cost in the United States. Yet whereas the cost in the United States approximates per capita income, in Nigeria it is 30 times that. So far the universities have received sufficient funds to meet their ambitions fairly well, although the federal government has not been able to provide the amounts recommended by the National Universities Commission.<sup>1</sup> This year, for example, Ibadan is short £250,000 of its budget request, and may be cut even more next year. Much more needs to be known about costs and levels of government support.<sup>2</sup>

The second financial matter has to do with the ability of Nigerian students to pay the fees. Actually the drop-out rates from all causes, including financial, are very low by American standards, but in a country in which the need for skilled manpower is high, the supply of students eligible for admission to the universities relatively small, and university capacity not fully utilized, the rates should be held as low as possible. The problem has been serious enough to cause university authorities some concern. At the request of the National Universities Commission a study has been made of the feasibility of a student loan program, and action on this report will be taken in the near future. Since the returns to a university education are high in Nigeria, it might also be possible to consider higher fees as a means of meeting recurring costs.

Another matter requiring more attention than is possible in this paper is that of university entrance requirements, with particular reference to the sixth form issue. The Ashby Commission recommended, and the federal and regional governments accepted, the goal of very substantial sixth form output. Many Nigerians believe with deep conviction that sixth

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<sup>1</sup>In 1964, the federal government agreed to provide the entire costs of Ibadan and Lagos, and to provide the three regional universities with 50 per cent of their shares of a capital grant of £17.3 million. It also agreed to provide Nsukka and Ife with 30 per cent of their shares of the recurrent grant of £30 million, and Ahmadu Bello with 50 per cent of its share of the total recurrent grant.

<sup>2</sup>An analysis of the economics of education in Nigeria is being undertaken by a task force of the larger EWA project referred to in the Foreword.

form is the only acceptable entry to the university. For some years Ibadan offered a preliminary course enrolling students after the fifth form, which it justified as a temporary expedient until sixth form enrollments reached a satisfactory level. This has now become a permanent arrangement. Nsukka, on the other hand, from the start has accepted and indeed encouraged admission from fifth form and almost one third of its students have come in at this level, achieving the degree after four years rather than the three common to Nigerian universities.

At least some individuals in positions of responsibility are now having second thoughts about the sixth form. Expansion of this level appears to be costly, particularly in terms of faculty-student ratios, and relative to the low marginal costs of a preparatory year in the university. The supply of science teachers, where the demand is greatest, is inadequate. Some university instructors, moreover, conclude that one year of more general study in a university environment is a more worthwhile educational experience than two years in sixth form in a small school. The Vice-Chancellors have initiated a review of this whole problem and the outcome of their deliberations may alter the pattern of university development and expansion. Acceptance of more students at the fifth form (School Certificate level) and provision of instruction in appropriate prerequisite courses in the sciences, as well as remedial English, would make it possible to feed more students into the faculties of engineering, agriculture and veterinary medicine--fields in which enrollments are too low and where the total output from the sixth form cannot fill the places now available at Ibadan alone. Proponents of the sixth form, on the other hand, are arguing with some force that despite the many advantages of concessional entry, a sixth form -- broadened and reoriented along the lines of a community college -- offers the only hope for meeting intermediate level manpower needs. Whatever the outcome of this dialogue it is safe to predict that the sixth form tradition will not die quickly.

The problem of staffing the five Nigerian universities should also be mentioned here. Three of the five institutions are now headed by Nigerian Vice-Chancellors but only at Nsukka is the majority of the faculty (supported directly by the university) composed of Nigerians. Reliance upon expatriate personnel remains heavy, particularly in areas of specialization such as engineering, agriculture and medicine. Considerable assistance in recruiting and supporting foreign teaching personnel is provided by external donors, but the turnover

is fairly high. Stability and growth based on the leadership and contributions of predominantly Nigerian staff seem unlikely to be achieved in the near future.

Lastly, the problem of relating Nigeria's universities to the needs of the country should be identified. Some observers have concluded that institutions of higher education in Africa in the past tended to remain somewhat aloof from the realities of developing societies. The curricula stressed what was deemed to be important in the metropole and research unlikely to be applied to particular local needs. If this has been the situation in Nigeria in the past, many people in the universities now, expatriates as well as Nigerians, are conscious of the need to expand the service role of their institutions, establish better relationships with relevant ministries and justify their own work in terms of specific Nigerian needs. Nsukka has declared this almost as doctrine; and in the programs of its Institute of Education and Center for Continuing Education and the research of its Faculty of Agriculture is setting an example for others to follow. While this dimension of university development may not materially affect the number of graduates turned out to meet Nigeria's high-level manpower requirements, it may well have a great impact in improving the quality of their contribution to Nigeria's development.

One cannot conclude even such abbreviated comment on Nigeria's universities without a word of praise for the remarkable progress they have made in a few short years. It is easy for outsiders to be critical; ambitions may outrun resources, programs may be unbalanced, and curricula may not yet be adjusted to the realities of Nigerian needs. But these universities have made significant strides forward. The foundations have been built for future accomplishment.

#### Training of Employed Manpower

This paper has been concerned with Nigeria's formal educational system. Perhaps no less important to human resource development are programs designed to improve the capabilities of individuals already employed. Necessity has compelled the ministries, public sector corporations and private sector establishments to operate their own training programs to provide administrators, managers, technicians, craftsmen and artisans. It is estimated that in any one year as many as 2,000 employees will pass through either long or short courses offered by these in-service training centers.

In the governments a very large amount of training is

carried on in ministries, chiefly for their own personnel, where courses are provided for such varied positions as agricultural field overseers, accountants, stenographers, nurses, medical technicians, draftsmen, librarians, surveyors, plumbers, railway apprentices, and so forth. With the assistance of the Ford Foundation, the Eastern and Northern governments have established staff training centers, offering a variety of in-service courses for members of the establishments. In the North, the Institute of Administration at Zaria, now part of Ahmadu Bello University, offers in-service programs for public officials. The several institutes of technology, described briefly above, also offer evening, extension and sandwich courses for employed personnel. Employers sponsor some of their people for these courses and a few sponsor students at the universities.

While strictly speaking the various in-service programs operated by the large government and private corporations do not prepare for high-level employment, those persons who are trained may achieve the potential for the intermediate level. Both the Electricity Corporation of Nigeria and the Nigerian Port Authority, for example, maintain crafts training programs in the Lagos area. United Africa Company, and its subsidiary Niger Motors, maintain training schools, as does Lever Brothers. At Port Harcourt, Shell B.P. has a first-class training school, offering 54 positions each year for entering craftsmen. As an indication of the school's reputation in 1963 more than 20,000 applied for the 54 openings, and in three years only three dropped out.

Representatives of these corporations have testified that individuals coming to them from the technical institutes require up to two years further apprenticeship on the job.

The various in-service programs in Nigeria are supplemented by the AID-supported participant training program which provides for short periods of observation and training abroad and which has been used as a device to partially adjust for the shortage of counterparts in most of the AID contracts in Nigeria.

#### Scholarship Support

Many students enrolled in post-secondary institutions abroad as well as in Nigeria receive scholarships and other forms of aid, from their own governments and from external donors. Because so many donors offer assistance, it is not possible to determine just what proportion of students are sponsored.

The National Universities Commission estimated that of the 4,847 students enrolled in 1963-1964 in the universities of Ife, Ahmadu Bello, Ibadan and Nsukka, 2,533 -- or more than half -- had some sort of scholarship. The year before 2,070 out of 3,496 had been assisted.

Within Nigeria, scholarships are offered at the secondary and post-secondary levels by the federal and regional government scholarship board and by a few corporations. The Federal Scholarship Board, for example, provides three categories of awards annually:

1. about 40 secondary scholarships principally in Lagos;
2. about 800 university scholarships; and
3. about 120 post-graduate scholarships.

The board screens applicants in accordance with the broad guidelines set by the Manpower Board. These manpower priorities are not narrowly defined and seem to include all areas of study.

The Secretary of the Scholarship Board in the Federal Ministry of Education is responsible for keeping tabs on students in Nigeria and overseas. For this purpose a Registry of Students has been established and an attempt is being made to assemble information on all students. In late 1964 several statisticians were coding questionnaires that had been distributed to the students, listing field of study, occupational goals, expected date of completion of studies, and so forth. These data will then be punched onto cards. Unfortunately returns have been coming in slowly and the task has fallen behind. Some students, at least, appear to be sceptical of the motives of the government, or question the value of the Registry to them personally. The goal is to feed this information to the National Manpower Board, to potential employers, and to government agencies.

The Manpower Board, likewise, is in the process of compiling a national register of high-level manpower to obtain data on all Nigerians, whether employed or not, who possess training and qualifications in professions and occupations which are of vital importance to national development. It is expected that the information will be used by the board to analyze the utilization, quality and distribution of available manpower and to develop policies for balanced output and further training of manpower. In late 1964 the board issued a preliminary summary of available manpower in selected occupational fields.

## OVERSEAS STUDY

Overseas study clearly is an important factor in the development of high-level manpower in Nigeria. Although local institutions are developing rapidly they do not yet offer instruction in certain specialized fields. Study abroad moreover retains high prestige value, and the total number of students outside Nigeria has increased steadily in recent years.

### Statistics on Nigerians Overseas

Unfortunately it is extremely difficult to measure the flow of students overseas. Estimates of the number of Nigerian students in the United Kingdom, the country attracting the most Nigerians, range from 7,000 to 15,000 and even more. Obviously these are no more than guesses. Statistics of the British Council and Commonwealth Universities Yearbook for 1963-1964 list a total of 8,600. The figures used below are for the most part based upon identifiable sources of information.

Assuming that at least one half of the Nigerians abroad, in areas other than the United States and the United Kingdom are enrolled at the university level, the present total overseas university enrollment is about 2,500, or about one half that of Nigeria's five universities. The number of Nigerians overseas receiving the first degree in June 1964 was about 450. The number graduating in Nigeria was about 750. The National Manpower Board estimates that in a few years about 1,300 Nigerian students will be returning from overseas annually, including graduates of non-university programs.

During 1963-1964, the total number of Nigerians in formal study abroad amounted to about 10,500. Of these, the bulk were in the United Kingdom--a total of 8,600, of whom 1,000 were in universities and 7,600 were in other post-secondary institutions. The second largest group, about 1,150 at university level, was in the United States. About 340 were studying in West Germany. As many as 50 students appeared to be enrolled in Commonwealth countries and perhaps an additional 150 in European, other Western or non-aligned countries. There were probably not more than 200 Nigerians in the U.S.S.R. and 50 elsewhere in Bloc countries.

### Nigerians in the United Kingdom

In the United Kingdom, at least six times as many students

have been enrolled at the post-secondary as at the university level--a recorded total of 7,600 in 1963-1964. About 3,000 were enrolled in technical colleges (non-degree), 1,700 in professional and practical training, 1,300 in nursing, 570 in Inns of Court (law), and about 1,000 in private colleges (non-degree) and other institutions.

Whereas there has been a net increase in the number of post-secondary students in the United Kingdom since 1961, the number of university students has declined steadily. Yet, significantly, the total number of graduate students has increased. Comparative enrollments in various fields, however, indicate that some students have not been working in priority areas. Almost half the Nigerians at the university level in 1963-1964 were studying social sciences and the arts. The next highest enrollments, in descending order, were in medicine, technology, pure science, agriculture and forestry, veterinary science and dentistry. It is interesting to note that the proportion of Nigerian students in technical colleges, but working for the GCE Examinations, has not been as high as it has been for East African students and that the ration has declined from 25 per cent in 1961-1962 to 15 per cent in 1963-1964. This situation probably is due to two factors: one, increased job opportunities for technical school graduates, and two, increased opportunities for university study, which have resulted in reduction of enrollments in technical schools by university-bound students who previously had not been able to gain entrance to a university because of limited facilities.

#### Nigerians in the United States

Although more Nigerians have studied in the United Kingdom, the dimensions of study in the United States indicate a closer response to Nigerian needs. The total number of Nigerian students at United States colleges and universities has increased steadily since 1960 at a rate of 200 to 300 annually. The influx of new students, however, has actually declined, indicating that more students are staying for longer periods. The percentage of graduate students has not changed noticeably between 1961-62 (25 per cent) and 1963-64 (23 per cent). Although, as in the United Kingdom, most students have been enrolled in the social sciences, the next highest enrollments have been in engineering and the physical and natural sciences, followed by the humanities and the medical sciences.

The most highly organized and effective programs available to Nigerians for study in the United States are the AID participant training program, which selects persons in priority fields and trains them for particular jobs, and the ASPAU and AFGRAD programs which focus on exposing students to an American academic education and which are moving steadily towards limiting their selections to priority fields.

The total number of Nigerians trained all or partially in the United States under the AID participant training program is 670. More than one third of these have been in agriculture. The ASPAU Program began as a pilot project in Nigeria in 1960, and since then has sponsored more than 320 students. Almost half of this total has studied engineering. To date, 20 Nigerian students have studied at the graduate level in the United States under AFGRAD auspices.

#### Relation of Overseas Study to Manpower Needs

Precise information on fields of study pursued by Nigerians overseas is not available, but many appear to be working in fields of low priority. The UNESCO report Study Abroad for 1960-1961, for example, showed that of 3,115 Nigerians then abroad more than 1,100 were in law and 600 in humanities. The Register of Students indicated that of the 450 overseas students graduating in June 1964, 110 were in the social sciences, 80 in engineering, 74 in the sciences, 50 in humanities or general studies, and only eight in agriculture.

The Nigerian government is augmenting its efforts to relate scholarship offers to manpower needs and to improve its record-keeping machinery with a view to minimizing the problems of recovery. There are two channels for the administration of awards: technical assistance is handled by the Division of Technical Assistance of the Federal Ministry of Economic Development; and academic scholarships are the province of the federal and regional scholarship boards in the Ministries of Education. Overseas technical training is closely tied to identified manpower needs. Academic awards, however, are more subject to personal and political factors. It is probable that one third to one half of the students abroad are not sponsored and, consequently, no effort has been made to direct them into priority fields.

## MANPOWER BALANCE SHEET

How well will Nigeria's educational system, augmented by study overseas, meet high-level manpower needs? Obviously an answer to this question can be no more than a rough estimate, since it must be derived from measurements of the future out-turn of educational programs, many of which are not yet geared up to full operation, and the plotting of the results against targets that are themselves only informed estimates. Circumstances may change, moreover, such as the government's abilities to meet the rising costs of education.

### National Manpower Board Supply-Demand Equation

The recent survey by the National Manpower Board secretariat includes the only attempt so far to make this calculation. In this survey an attempt has been made to estimate the out-turn of persons from educational and training institutions in Nigeria and those undergoing training under various scholarship schemes by the governments and private employers, whether in Nigeria or overseas. There is double counting of the sponsored students in Nigeria, but on the other hand unsponsored students overseas are not included. The secretariat concludes that these factors are counterbalanced by the level of need established in its upper targets, and that the figures serve their primary purpose of indicating the relative emphasis that should be placed upon different categories of education and training.

In the senior category of high-level manpower, excluding teaching and research, the manpower survey indicated an additional need of 12,400, if the lower target is to be met in 1968, and of 18,000 if the upper target is achieved. By subtracting anticipated out-turn and allowing for wastage, shortfalls of 3,500 at the lower level and 9,100 at the upper level result.

TABLE 6

HIGH-LEVEL MANPOWER: ADDITIONAL NEEDS BY OCCUPATION, 1963-1968

Senior Category - Excluding Teaching and Research

Occupation	Shortfall Lower	or (Excess) Upper
Senior managerial and administrative	1,200	4,400
Architects and town planners	100	200
Engineers		
Civil	(100)	200
Electrical	300	400
Others		700
Surveyors	100	200
Chemists and pharmacists	300	350
Physicists	(250) <sup>1</sup>	(250) <sup>1</sup>
Geologists	400	500
Veterinarians	50	100
Agriculturalists	550	650
Doctors (not private practitioners)	450	700
Dentists (not private practitioners)	50	50
Lawyers and jurists	(100)	
Journalists	250	250
Accountants and auditors	(450)	50
Librarians and archivists	200	250
Specialist economists and statisticians	50	50
Interpreters/translators	50	50
Occupations not otherwise classified	<u>350</u>	<u>450</u>
TOTALS	3,500	9,100

<sup>1</sup> This is not an absolute excess. It indicates the number available for appointment in teaching and research.

Similar calculations were made with respect to the intermediate category, excluding teaching and research, plotting anticipated out-turn against lower and upper targets. These estimates were based upon the assumption that the various

technical institutes and subprofessional training programs would be enlarged as planned. The results are as shown on the following table:

TABLE 7

HIGH-LEVEL MANPOWER: ADDITIONAL NEEDS BY OCCUPATION, 1963-1968

Intermediate Category - Excluding Teaching and Research

Occupation	Shortfall Lower	or (Excess) Upper
Junior Managerial and Administrative	18,900	19,250
Nurses and Midwives	550	750
Medical Technicians	250	300
Surveying assistants	300	300
Engineering and technical assistants	1,600	2,100
Laboratory technical assistants	200	250
Journalists	150	150
Draftsmen	350	300
Radio and telephone operators	350	350
Accounting and audit assistants	(300)	(200)
Library assistants	450	450
Cashiers, bookkeepers, storekeepers	950	1,000
Secretary-typists	(100)	150
Agricultural assistant and extension workers	1,450	1,450
Forest assistants	1,200	1,200
Foremen and Supervisors	(1,400)	(850)
Statistical assistants	(50)	
Occupations not otherwise classified	<u>2,150</u>	<u>2,300</u>
TOTALS	27,000	29,250

Although the manpower secretariat calculated the future needs for senior and intermediate teaching and research personnel, it did not calculate the supply that might be expected to meet this demand.

Reviewing the results of its manpower survey, the secretariat pointed out that statistics relating to the out-turn of students are not yet sufficiently comprehensive, particularly with regard to individuals studying outside of Nigeria, to make accurate calculations of future demand and supply. Yet they concluded that certain observations were justified.

The secretariat indicated that Nigeria faced a possible oversupply in certain senior-level occupational categories by 1968, particularly if the lower target figures are accepted. These are civil engineers (100), lawyers and jurists (100), and accountants and auditors (450). But this interpretation must be used with caution. It does not allow, for example, for promotion of engineers into managerial positions, an area of acute need. Any remaining excess could be applied to replacement of expatriates. The secretariat concluded, however, that the tendency to train first degree engineers abroad should be reviewed so as to enable the engineering faculties in the Nigerian universities to develop by absorbing students who otherwise would go overseas.

The areas of greatest shortfall are obviously in management and administration, agriculture, medicine, veterinary medicine, electrical engineering, architecture and town planning, and pharmacy.

With respect to Nigeria's five universities, the manpower survey suggests that the present rate of development, reaching enrollment of 10,000 by 1968, will meet the country's high-level manpower requirements (in quantitative but not disciplinary terms) for that year, if the lower target figure is accepted. This is assuming an annual out-turn of between 3,100 and 4,100, but does not take into account an estimated 1,300 graduates returning from overseas each year. The excess of supply over demand, as indicated by the lower target, can be applied to the reduction of Nigeria's reliance upon expatriates, and some at least can be directed into teaching and research. Any possible "oversupply" of university graduates, indeed could be absorbed readily in secondary school teaching.

It is in the intermediate category that the most critical shortages clearly are indicated. For example, the survey indicates a need for graduates of technical institutes numbering 33,450 by 1968, giving an annual out-turn requirement of approximately 6,600 as against the current out-turn of 700 per year.

The secretariat dismisses the apparent oversupply of foremen and supervisors, pointing out that this will be offset by promotion into the junior managerial and administrative grades and other factors. The principle danger of oversupply at the intermediate level appears to be only in the accounting assistants group.

## CONCLUSIONS AND RECOMMENDATIONS

The terms of reference of this study call for recommendations on "the desirable directions" of United States government aid relating to (a) post-secondary institutional development, (b) scholarship assistance to provide study at African institutions of higher learning, and (c) scholarship assistance to provide undergraduate and graduate study outside Africa, especially in the United States.

These three areas of assistance must be considered not only in close relationship to each other, but also in the larger context of human resource development. AID should give first priority in its assistance strategy to the development of indigenous institutions, second priority to scholarship and other forms of student aid at Nigerian institutions, and lower priority to assistance to study by Nigerians in the United States.

### Post-Secondary Institutional Development

EWA's Committee on Education and Human Resource Development will be making recommendations to AID within a comprehensive framework of educational development in Nigeria, and those recommendations will include proposals of a detailed character directed to specific institutions, programs and courses of action. Thus the conclusions of this report, are limited to summary observations, suggestions for further investigation, and general proposals on the direction of AID assistance.

#### 1. Intermediate-Level Manpower

Quantitatively Nigeria's most serious manpower shortage is at the intermediate-level, as demonstrated by the estimates of the recent manpower survey. The figures now indicate that the earlier estimates for this category, upon which proposals for educational development were based by the Ashby Commission, were much too low. The solution of this situation, insofar as educational development is concerned, must be sought at many levels and through a variety of programs, private as well as public.

#### Greater Attention to the Training of Employed Manpower.

Greater attention should be given to the development of manpower already employed, as perhaps the most promising source of intermediate personnel. Government policy should be

directed toward encouragement of further extension of present in-service training programs in the private sector, as well as in the public services. Wherever practical, the costs of such training should be shifted to private industry and government corporations.

Reexamination of Technical and Vocational Training. In connection with the shortage of intermediate manpower, Nigeria's approach to technical education and vocational training should be reexamined. As suggested in this paper, progress here has been slow and the character of much of the work offered does not yet appear to be properly related to Nigeria's needs. This type of education, moreover, is extremely costly and the supply of experienced Nigerian teachers is very low. Before commitments are made to new programs in technical and vocational training Nigerian officials should be encouraged to reappraise practical needs as well as proposed solutions.

## 2. Secondary Education

Review of Educational Developments at the Secondary Level. The future development of secondary education needs to be carefully reviewed and better understood. Traditionally, Nigerian secondary schools have been oriented to preparation for university admission. As educational capabilities at the secondary level expand, they should be related increasingly not only to university study but to other avenues of career development. This calls for a broadening of the curriculum, particularly in the sciences and in technical and vocational fields, and for the cultivation of attitudes which will cause young people to seek advancement outside of the traditional and prestigious university pathway. All aspects of secondary education, including selection of students, single versus multipurpose curricula, teaching methods, and real and opportunity costs, must be reexamined, particularly in terms of the role of secondary schools in preparing individuals for a variety of career choices, most of which will not involve further university level preparation.

Emphasis on Teacher Training. Basic to the healthy development of secondary school education is the supply of well-qualified Nigerian teachers. In the country's entire system of education, the shortage of secondary teachers is perhaps the most acute bottleneck -- particularly in the North. Nigeria requires expatriate teachers to a considerable

degree, and as secondary enrollments increase the country will be hard pressed to keep up with demand, much less replace expatriate teachers. The most severe need for many years will be in the sciences, particularly if the national goals in this area are to be achieved. This situation points to the need to place even greater emphasis on the preparation of Nigerian teachers. Efforts such as strengthening teacher training institutions at all levels deserve attention, and should be examined in terms of specific programs and also with a view to restructuring the approach to teacher training. Greater emphasis should be placed upon the preparation of teachers who will be ready to accept change and assume leadership in experimentation and innovation.

#### Encouragement of Educational Research in Universities.

The role of the universities in educational research, extension programs, and the preparation of teachers should be enhanced. In Nigeria, as in other African countries, teaching has not been an attractive career to university graduates. As the opportunities in government service decrease, the universities should encourage their students in all fields to enter the teaching profession. Experimental programs designed to stimulate the attractiveness of teaching, such as work-study combinations and summer teaching internships, deserve more attention.

Likewise, support might be given to develop programs to facilitate the return of students abroad to teaching positions, such as a one-year graduate-level course of study at a Nigerian university including an internship experience, as has been proposed at University College, Nairobi in East Africa.

#### 4. Agricultural Education and Training

High priority should be given to development of Nigeria's agricultural resources. Skilled personnel is required to provide leadership in transforming agricultural production from basically subsistence farming to larger-scale production of food and animal products, both for domestic consumption and for export. Before this can be accomplished, efforts in basic and applied research must be strengthened and the agricultural services of the governments improved. Agricultural and animal husbandry extension services must reach out and down to the individual farm family. Farming as a way of

life must be made attractive to restrain the exodus of primary school leavers to the urban areas.

In terms of skilled manpower this is less a problem of quantity than of quality. Apart from the need to relate primary and secondary education more closely to the realities of an agricultural society, the requirements at the higher manpower levels are for agricultural scientists and administrators and for teaching and research personnel in the universities and government research institutes and extension services. Developments in agricultural education and training at all levels and in the largest possible context are being examined by the Council for the Study of Nigerian Rural Development.

#### 5. Sixth Form, Intermediate-Level Education and University Entrance Levels

Need for Further Review. The Committee of Vice-Chancellors is now undertaking a review of sixth form instruction and its relationship to university entrance levels and curricular developments. Many other Nigerians, moreover, are concerned about the sixth form as well as other types of education following school certificate (fifth form in Nigeria) -- roughly comparable in grade level but not necessarily in content or method to the junior or community college in the United States. There have been suggestions for broadening the sixth form as an institution apart from secondary schools, to include a variety of terminal programs. This situation offers an opportunity to reconsider the relationship of secondary education to the shortage of intermediate-level manpower.

Likewise, the situation provides an opportunity to reconsider the appropriate entrance level for the Nigerian universities. The official position of the federal government and of other agencies favors sixth form entry, and this attitude may be slow in changing. Yet the University of Nigeria has encouraged fifth form entry and the other universities have accepted it in association with a preparatory year of study. The difficulty of establishing additional sixth forms, the shortage of students with sixth form preparation in the sciences, the lack of adequate training in English, the desire of the universities to enroll to full capacity, and changing attitudes suggested above,

all point to a situation in which further review and clarification is required. It is likely that opportunities will be presented for external assistance to new experimental programs that will contribute to a breakthrough in this important area of educational development in Nigeria.

## 6. University Development

Need for Coordinated Development. The development of Nigeria's five universities has been an impressive achievement. In spite of the realities of regional competition, every effort should be continued to build the universities in a closely coordinated, integrated fashion so that they may provide effective leadership not only in turning out graduates to help fill manpower needs, but in seeking solutions to the basic problems of national development. Relative to other areas of growth, investment in the universities has been great, and costs per student are high. The country should be reassured that it is receiving maximum return on its investment. Thus it is appropriate to support efforts to achieve the greatest possible utilization of university resources.

The Problem of Growth. Each of Nigeria's five universities is ambitious to grow not only in total enrollment but in the variety of instructional and related programs offered. This situation involves a paradox. On one hand the present high per pupil costs, the low faculty to student ratio and the underutilization of plant suggest the potentialities of enrolling more students without appreciably increasing investments in faculty and facilities. The specialized needs of the country, moreover, point to the appropriateness of building up the specialized capabilities of the universities in agriculture, veterinary medicine, engineering and education. But on the other hand, the recent survey of the Manpower Board indicates that the present rate of growth of the universities will meet high-level manpower needs by 1970. And it is recognized that any further expansion of the specialized faculties will be very costly. What is needed is a slowing up of the growth of overall enrollment, with greater attention being directed toward integrated and balanced growth of the five institutions, so that unnecessary duplication can be avoided, resources in the narrower fields of specialization shared, and a better division of labor secured.

Emphasis on the Universities' Service Orientation.

While notable advances have been achieved, such as the Center for Continuing Education at Nsukka and the Institute of Education at Ibadan, much needs to be done to relate Nigeria's universities more intimately to the practical needs of the country. The universities need to concern themselves increasingly with the problems of education at other levels and to find ways of working together with ministries of education and other ministries, such as agriculture, which are responsible for training and research programs. AID should be prepared to give advice and assistance to accomplish these purposes.

7. Expert Personnel

The Provision of Expatriate Personnel and Training of Counterparts. Educational development in Nigeria has been retarded by shortages of experienced administrators and specialists. Assistance by external donors in providing personnel for ministries of education and other agencies serving educational institutions, such as the Manpower Board, Bureau for External Aid, National Universities Commission, and the Vice-Chancellors Committee is appropriate when requested.

Such assistance, however, should give new emphasis to the preparation of Nigerians to replace temporary expatriate personnel. Unfortunately, the effort to train counterparts has not been fully successful. Too few counterparts are made available and many of those who are trained are inappropriately assigned. Further consideration should be given to the realities of this situation and to development of alternative means of preparing Nigerians to take over.

Student Aid at Nigerian Universities

This report testifies to the remarkable development of Nigerian universities. This development has been uneven and costs have been high, particularly when measured against the economic capabilities of the country. Student to faculty ratios are low and facilities are not fully utilized. While the federal and regional governments have been generous in their support, it is evident that they are facing the limits of their ability to support university development. Likewise, many students are having difficulty meeting even

the modest charges that are made.

Attention to Costs. Under these circumstances AID should given close attention to the costs of university development and should use its assistance to help the Nigerian universities to use their facilities fully, through such devices as subsidies, scholarships, bursaries and particularly through loans. The study committee suggests that AID follow the plan to establish a university loan program in Nigeria with the assistance of the Ford Foundation, and that it consider participating in this program if additional external help is needed and is appropriate.

Balancing Pressures for Duplication. AID also should investigate the possibility of using scholarship and loan assistance to balance pressures for duplication of costly specialized facilities at the five universities. This might take the form of an inter-regional compact, along the lines of inter-state compacts in the United States, designed to guarantee places in medical and other professional schools for out-of-state students while at the same time providing for the sharing of costs and opportunity.

### Study Abroad

Undergraduate Study Abroad Limited to Priority Fields. Study abroad has contributed significantly to the development of Nigeria's high-level manpower and will continue to play an important role. But now the capabilities of the country's universities have reached the level that a smaller proportion of her students should seek opportunity for study abroad. Increasingly, external scholarship schemes supported by public funds should place less emphasis upon study for the first degree abroad and should limit work at this level to those fields in which facilities are not available in Nigeria. Scholarships at the undergraduate and particularly at the graduate level should be geared to specific manpower needs. Programs that select students in terms of identified career development should be strengthened. Scholarships for study in the United States should not be granted automatically to a certain percentage of Nigerian students at the university level. Consideration should be given to the problems of recovering students who go beyond the first degree in a special field of study. Where public funds are used for undergraduate study, provision should be made to

guide the returning student into special areas of employment determined by manpower needs.

New Patterns of Support. Nigeria is the first African nation from which large numbers of students have come to the United States for undergraduate study which soon will have the capability of enrolling almost all students at this level in indigenous universities. Others will attain this situation but not for some years. In relating its programs of scholarship assistance to the changes in Nigeria, the United States should seek to experiment with new patterns of support at the graduate level abroad and at the undergraduate level in Nigeria that can provide experience from which to develop programs later in other countries.

Thus, for example, as undergraduate study abroad is reduced, AID might assist in making it possible for selected students at Nigerian universities to spend one year of study in a high priority field in the United States, either during or at the conclusion of their studies at home. This would make it possible for a considerable number of Nigerians to have experience in the United States, while at the same time reducing the strain between programs of study in Nigeria and in the United States, and avoiding any compromise in the growth of Nigerian universities. Another possibility is to increase efforts to guide Nigerian students in the United States into graduate programs definitely tied to an assignment at home. One form of this arrangement might provide for return to Nigeria after the first degree with an expectation of return to the United States for a second degree after two or three years of secondary school teaching or employment in some other high priority area.

Development of Scholarship Administration Machinery. Nigeria should be encouraged in the further development of scholarship administrative procedures that will facilitate the selection and recovery of students abroad in terms of manpower requirements. Thus the work of such agencies as the National Manpower Board, the federal Register of Students, and the federal and regional Scholarship Boards should be strengthened.

## SELECTED BIBLIOGRAPHY

This study has been based principally on information obtained by personal observations and interviews and upon documentary information not available for distribution. The following bibliography is limited to items that are particularly relevant to the terms of reference of this study. Those items marked by an asterisk (\*) are available in the library of Education and World Affairs, 522 Fifth Avenue, New York City.

### National Development

International Bank for Reconstruction and Development. The Economic Development of Nigeria. Report of a Mission Organized by the IBRD at the Request of the Governments of Nigeria and the United Kingdom. Baltimore: The Johns Hopkins Press, 1961. 686 p. \*

The first major work on Nigerian economic development. Although much of the data are now out of date, the study contains information and analysis which are still very relevant.

Nigeria. Estimates of the Government of The Federal Republic of Nigeria, 1964-65. Lagos: Federal Ministry of Information, Printing Division, 1964. \*

More recent estimates should be available soon.

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. Report of the Commission on the Review of Wages, Salary and Conditions of Service of the Junior Employees of the Federation and in Private Establishments, 1963-64. Lagos: Federal Ministry of Information, Printing Division, 1964. 155 p. \*

Examines the existing wage structure and the need for upward revision of salaries and wages, the abolition of the daily wage system and the introduction of a national minimum wage. Includes recommendations. See also Federal Government White Paper in response to this report.

Eastern Nigeria. Ministry of Economic Planning. Eastern Nigeria Development Plan 1962-68. Enugu: The Government Printer, 1962. 62 p. (Official Document Number 8 of 1962.) \*

\_\_\_\_\_. Ministry of Economic Planning. First Progress Report, Eastern Nigeria Development Plan, 1962-68. Enugu: The Government Printer, 1964. 64 p. (Official Document Number 15 of 1964.) \*

\_\_\_\_\_. Ministry of Economic Planning. Statistics Division. Statistical Digest of Eastern Nigeria. Enugu: The Government Printer, 1963. 69 p. (Official Document Number 22 of 1963.) \*

Includes statistics on the region's population, area, number and enrollment of primary, secondary and commercial schools and teacher training colleges, health services, agricultural and mineral production, and the economy.

Nigeria. Federal Ministry of Economic Development. Federal Government Development Programme 1962-68, First Progress Report. Apapa: Nigerian National Press, March 1964. 54 p. (Sessional Paper Number 3 of 1964.) \*

\_\_\_\_\_. Federal Ministry of Economic Development. National Development Plan, 1962-68. Apapa: The Nigerian National Press, Ltd., 1962. 362 p. \*

\_\_\_\_\_. Federal Ministry of Economic Development. National Development Plan -- Progress Report 1964. Apapa: Nigerian National Press, Ltd., 1965. 201 p. \*

Northern Nigeria. Ministry of Economic Planning. Development Plan 1962-68. Kaduna: The Government Printer, 1962. 112 p. \*

\_\_\_\_\_. Ministry of Economic Planning. Development Plan 1962-68, First Progress Report. Kaduna: The Government Printer, 1964. \*

Western Nigeria. Ministry of Economic Planning and Community Development. Western Nigeria Development Plan, 1962-68. Ibadan: Government Printer, 1962. 74 p. (Sessional Paper Number 8 of 1962.) \*

\_\_\_\_\_. Ministry of Economic Planning and Community Development. Western Nigeria Development Plan, 1962-68, First Progress Report. Ibadan: The Government Printer, 1964. 36 p. (Western Nigeria Official Document No. 2 of 1964.) \*

\_\_\_\_\_. Ministry of Economic Planning and Community Development. Statistics Division. Statistical Bulletin, June and December 1963. Vol. V, Numbers 1 and 2. Ibadan: Government Printer, n.d. 137 p. \*

Includes statistics on the region's population, government administrative structure, public finance, commerce and trade, education, public health, agriculture and livestock, forests, cooperatives, transport and communications, and cost of living.

### Manpower Studies

Dike, K. Onwuka. "Manpower Training for Economic Development: Professional and Managerial Staff." Seminar on Manpower Problems in Economic Development with Special Reference to Nigeria, 2nd March - 13th March, 1964. 22 p. (Mimeographed.) \*

Selected comments from this paper were incorporated in the revised manpower survey published in 1965.

Eastern Nigeria. Eastern Nigeria Manpower Committee. "Proposals for Solving the Problem of Unemployment in Eastern Nigeria." n.d. 29 p. (Mimeographed.)\*

Discusses problems of unemployment and makes proposals covering agricultural and rural development projects and educational programs.

Fafunwa, Dr. A.B. "Educational Philosophy and Structure for Economic Development." Seminar on Manpower Problems in Economic Development with Special Reference to Nigeria, March 2 - 13, 1964. (Mimeographed.)

Selected comments from this paper were incorporated in the revised manpower survey, published in 1965.

Harbison, Frederick H. "The Objectives, Machinery and Methodology of Manpower Planning." Seminar on Manpower Problems in Economic Development with Special Reference to Nigeria, 2nd March - 13th March, 1964. 34 p. (Mimeographed.) \*

Selected comments from this paper were incorporated in the revised manpower survey published in 1965.

Kingsley, J. Donald and Sir Arthur Nevil Rucker. "Staffing and Development of the Public Service of Northern Nigeria." Report of a Commission organized by the Ford Foundation at the request of the government. Kaduna, January 1961. 9 chapters + appendix + tables. (Mimeographed.) \*

Discusses the organization for staff management, administration, development of intermediate supervisory levels, clerical and secretarial classes, professional and technical personnel in relation to the manpower picture from 1960-70; includes recommendations.

Nigeria. National Manpower Board. A Study of Nigeria's Professional Manpower in Selected Occupations 1964. Apapa. The Nigerian National Press, Ltd., n.d. 16 p. (Manpower Study No. 3.) \*

The first analysis of persons who have a university degree or high professional or high technical qualifications in the fields of architecture and town planning, engineering, medicine and dentistry, veterinary science, economics, statistics and mathematics, and accountancy and who were registered with the National Register of High Level Manpower as of October 31, 1964.

---

\_\_\_\_\_. National Manpower Board. "Committee Report on the Problem of Unemployed Youth in Nigeria." Study by the National Manpower Board in affiliation with the Minister of Economic Development. June 1963. (Mimeographed.)

---

\_\_\_\_\_. National Manpower Board. Manpower Situation in Nigeria (Preliminary Report) 1963. Lagos: Federal Ministry of Information, Printing Division, 1963. 19 p. \*

The first report of the National Manpower Board which was formally constituted in 1962 as recommended by the Ashby Commission.

\_\_\_\_\_. National Manpower Board. Nigeria's High-Level Manpower 1963-70. Apapa: The Nigerian National Press, 1965. 67 p. (Manpower Study No. 2.) \*

The result of the most recent survey of current and projected trained manpower supply and demand between 1963 and the end of the development plan period, up to 1968, and in some categories up to 1970.

\_\_\_\_\_. The Nigerianization Office. Guide to Careers in the Federal Public Service of Nigeria, No. 1.

Lagos: Federal Government Printer, April, 1961. \*

An outline of established posts in the various federal government ministries, the common services (legislature, accounting, library, stenographic, and general executive and administrative classes) and the police and prisons. More recent information has been compiled by public and private sources.

### Educational Capabilities

#### General:

Allen, A.R. and William J. Miller, Education Terminology Guide for Northern Nigeria. Zaria: Institute of Administration, Ahmadu Bello University, 1965, 25 p.

Describes the pre-university education system in Northern Nigeria.

Awokoya, Stephen O. "Educational Philosophy and Structure for Economic Development: The Nigerian Point of View." Seminar on Manpower Problems in Economic Development with Special Reference to Nigeria, 2nd March - 13th March, 1964. 44 p. (Mimeographed.) \*

Selected comments from this paper were incorporated in the revised manpower survey, published in 1965.

Callaway, Archibald. "Unemployment among African School Leavers," The Journal of Modern African Studies. Vol. 1, Number 3, 1963, pp. 351-371. \*

Discusses the background of the unemployed school leaver problem and outlines several practical solutions; one of several articles on this topic by the author.

Eastern Nigeria. Ministry of Education. Policy for Education. Enugu: The Government Printer, 1963. 6 p. (Official Document No, 7 of 1963.) \*

The first government policy paper on education since 1954; indicates a shift of emphasis from primary and secondary grammar education to technical and scientific education.

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. Ministry of Education. Report of the Conference on the Review of the Educational System in Eastern Nigeria. Enugu: The Government Printer, 1964. 53 p. (Official Document No. 25 of 1964.) \*

A report of a conference of educationists from Nigerian universities, training colleges, secondary and primary schools and ministry experts; reviews primary, secondary and teacher education in Eastern Nigeria and makes recommendations.

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. Ministry of Education. Report on the Review of the Educational System in Eastern Nigeria. Enugu: The Government Printer, 1962. 96 p. + tables. (Official Document No. 19 of 1962.) \*

The committee which reviewed the region's educational system was chaired by Professor K.O. Dike. The report, often called the Dike Report, discusses the background of education in the region from 1948-58, the situation as of 1962, and includes recommendations for the future.

Ikejiani, Dr. Okechukwu (editor). Nigerian Education. With a Foreword by Dr. Nnamdi Azikiwe. Contributors: O. Ikejiani, J.W. Hanson, P.U. Okeke, J.O. Anowi. Bristol: Western Printing Services, Ltd., 1964, 243 p. \*

Includes background articles on Nigerian education and analysis of current problems.

McQueen, Albert J. "Education and Unemployment and the Future of Nigerian Youth." Presented at the Conference of the African Studies Association, San Francisco, October 25, 1963. 12 p. (Xeroxed.) \*

A preliminary report on the consequences of rapid educational expansion in Nigeria, particularly with reference to the school leaver problem; one of a series of articles on the topic by the same author.

Nigeria. Federal Ministry of Education. Educational Development in Nigeria 1961-70. Prepared by J.N. Archer. A report on the phasing and cost of educational development on the basis of the Ashby Commission's report on post-school certificate and higher education in Nigeria. Lagos: Federal Government Printer, March 1961. 137 p. \*

\_\_\_\_\_. Federal Ministry of Education. Educational Development 1961-70. Lagos: Federal Government Printer, 1961. 10 p. (Sessional Paper Number 3.) \*  
Official government comment and policy with regard to the Ashby and Archer reports.

\_\_\_\_\_. Federal Ministry of Education. Investment in Education. The Report of the Commission on Post-School Certificate and Higher Education in Nigeria. Norwich: Jarrold and Sons, Ltd.; 1960. 140 p. \*  
The report of the well-known Ashby Commission, chaired by Sir Eric Ashby.

\_\_\_\_\_. Federal Ministry of Education. Statistics of Education in Nigeria 1963. Series No. 1, Vol. 3. Apapa: Nigerian National Press, Ltd., 1965. \*  
The third edition of a series of nation-wide education statistics published annually. Includes summary data for 1959-63 and detailed information on enrollments, schools, classes, teachers, examination results and graduates at all levels in 1963.

Northern Nigeria. Ministry of Education. Planning and Development Division. Classes, Enrolments, and Teachers in the Schools of Northern Nigeria 1964. Kaduna: Government Printer, 1964. 32 p.  
The fourth annual publication of statistical information on the schools in Northern Nigeria; series was previously designated School Statistics of Northern Nigeria.

The West African Examinations Council. Annual Report for the Year Ended 31 March 1963. Oxford: The University Press, 1964. 88 p. \*

Includes discussion of various examinations and examination statistics for 1962-63.

Western Nigeria. Ministry of Economic Planning and Community Development. Statistics Division. Annual Abstract of Education Statistics, 1962 and 1963 Combined.

Ibadan, January 1964. 79 p. \*

Includes statistics on enrollments at all levels, number of schools (primary, secondary modern, teacher training colleges), number of teachers, and information about adult education, trade and occupational centers, and West African School Certificate results -- for the Western Region.

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. Ministry of Education. Report of the Commission Appointed to Review the Education System of Western Nigeria. Ibadan, The Government Printer, 1961. 89 p.

The commission which reviewed the region's educational system was chaired by Chief, the Rev. Canon S.A. Banjo. The report discusses the background of education in the West and includes recommendations for the future.

#### Programs and Institutions:

Eastern Nigeria. Ministry of Education Eastern Nigeria. Report on Investigation of Vocational Education in Eastern Nigeria. Prepared by Michael Goldway. Enugu: The Government Printer, 1962. 37 p. (Official Document No. 13 of 1962.) \*

Discusses vocational education at all levels in the Eastern Region, trade tests, methods of selection, and includes recommendations.

Gailer, J.W. Federal Ministry of Education. "A National Plan for the Development of Technical Education in the Federal Republic of Nigeria." (Draft, Chapters 1-8) (Mimeographed.) \*

Provides valuable background information on the need for expanded and improved technical education and presents a comprehensive plan to meet the need.

Kilby, Peter. "Technical Education in Nigeria." Bulletin, Oxford University Institute of Economics and Statistics, Vol. 26, May 1964. pp. 181-194. \*

Reviews technical education programs and planning in Nigeria in relation to the overall educational structure, supply and demand factors and manpower needs.

Northern Nigeria. Ministry of Education. The Administration of Primary Education. Prepared by H. Oldman. Kaduna: Government Printer, 1964. 184 p. \*

The so-called Oldman report discusses the problems of administration and finance related to the development of primary education in Northern Nigeria; includes recommendations.

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. Ministry of Education. Planning and Development Division. Characteristics of Teachers in the Primary Schools of Northern Nigeria 1963. Prepared by Jefferson N. Eastmond, Statistical Officer. Kaduna: Government Printer, 1964. 21 P. \*

Concludes that the average primary school teacher in Northern Nigeria in 1963 had only two years of post-primary education, and that there were no university graduates teaching at the primary level.

Shaplin, Judson T. "Problems of Teacher Training in Nigeria." A Report prepared for the Ford Foundation. January 30, 1961. 39 p. + appendices. (Mimeographed.) \*

A comprehensive study of teacher training in Nigeria, including an evaluation of the Ashby Report's recommendations and proposals for improving the teacher training system.

Solaru, T.T. Teacher Training in Nigeria. Edited and with a final chapter by Ian Espie. Ibadan: University Press, 1964. 109 p. \*

An historical survey of teacher training in Nigeria covering the period 1842-1962.

Western Nigeria. The Development of Technical Education and its Relation to the Educational System in Western Nigeria, 1962-1970. Prepared by Dr. Adam Skapski with the assistance of USAID for the Government of Western Nigeria. Ibadan: Government Printer, May 1962. 45 p. \*

A discussion of technical education in the secondary modern and secondary grammar schools; includes both long-range and short-range recommendations.

University Education:

Michigan State University. "Report of Progress Michigan State University - University of Nigeria Program." In cooperation with the United States Agency for International Development (AID Contract #1398). July 1 - December 31, 1964. 110 p. (Mimeographed.) \*

Includes an account of major developments at the University of Nigeria, an outline of achievements of MSU Advisory Group and their activity targets, and description of the University of Nigeria Participant Program.

Nigeria. Federal Ministry of Education. Decisions of the Government of the Federal Republic of Nigeria on the Report of the National Universities Commission. Lagos: Federal Ministry of Education, 1964. 9 p. (Sessional Paper No. 4 of 1964.) \*

Official federal government reaction and policy on the development of Nigeria's university system.

\_\_\_\_\_. National Universities Commission. University Development in Nigeria. Apapa: Nigerian National Press, Ltd., 1963. \*

Includes information on the status of Nigerian universities as of 1963, the future outlook, the problem of financing the universities and recommendations for university financing for 1963-68.

University of Wisconsin. An Evaluation of Teacher Education in Northern Nigeria, 1962. Report of a study performed by Paul W. Eberman, Associate Dean, School of Education, and Howard E. Wakefield, Professor of Educational Administration, for the University of Wisconsin, Madison, Wisconsin, under contract AID/afr-56 with the Agency for International Development. August 1963. 69 p. \*

Discusses the current status of primary teacher education, problems of staffing and financing teacher training colleges and includes proposals for mounting a cooperative program for meeting the primary teacher education problems of Northern Nigeria.

The Expansion of Teacher Education in Northern Nigeria, 1961-70. Report of a study performed by the University of Wisconsin, Madison, Wisconsin, under Contract AID/afr-56 with the Agency for International Development. February 1963. 191 p. \*

Includes information on the background to teacher education and status of primary and secondary education in Northern Nigeria, educational goals, projections of primary school enrollments and need for teachers, criteria for new teacher training colleges and projections of costs for planned expansion of teacher training colleges.

### Overseas Study

Eberly, Donald J. "Overseas Scholarships, Policies and Machinery for a Developing Country." The Nigerian Institute of International Affairs, April 10, 1964. 9 p. (Mimeographed.) \*

A description of the Nigerian effort to develop machinery to best utilize overseas scholarships by the then undersecretary of the Bureau for External Aid to Education.

Institute of International Education. Open Doors, 1965: Report on International Exchange. New York City: Institute of International Education, June , 1965. 64 p. (Issued annually.) \*

The most recent statistics on foreign students in the United States. Annual reports from 1960-1965 were used in this study.