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STUDY ON EXISTING AND POTENTIAL MANPOWER DEVELOPMENT AND CO-OPERATION
BETWEEN AFRICA AND LATIN AMERICA

by

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The views expressed and the conclusions reached in this report are exclusively those of the author and are not necessarily shared or endorsed by the United Nations Economic Commission for Africa.

TABLE OF CONTENTS

	<u>Pages</u>
I. INTRODUCTION	1 - 4
II. THE MANPOWER SITUATION	4 - 15
III. PRESENT STATUS OF CO-OPERATION IN MANPOWER DEVELOPMENT BETWEEN THE TWO REGIONS	15 - 23
IV. PROGRAMMES FOR CO-OPERATION IN MANPOWER DEVELOPMENT AND UTILIZATION	23 - 32
V. STRATEGIES AND MECHANISMS FOR ACHIEVING CO-OPERATION IN MANPOWER DEVELOPMENT AND UTILIZATION	32 - 41
STATISTICAL APPENDIX	

I. INTRODUCTION

A. Background

Collective self-reliance and economic co-operation among developing countries (ECDC) are now generally recognised within the United Nations system as fundamental pillars of the programme of action for the attainment of a new international economic order. Various arms of the United Nations system have made attempts to formulate appropriate mechanisms and techniques aimed at assisting developing countries to enhance the objectives of self-reliance and ECDC. The latter has been promoted and implemented mainly at sub-regional and regional levels and particularly within the framework of economic integration and other regional co-operation programmes.

The concept of co-operation between Africa and Latin America has for long been the subject of interest to the Economic Commissions for Africa and Latin America. During the second half of the 70's the subject seems to have taken a more serious turn as the adoption of a series of resolutions finally led to the ECA/CEPAL/TCDC Project. The most significant resolutions are the ECA resolutions 302(XIII) Kinshasa and 355(XIV) Rabat of 28 February 1977 and 27 March 1979 respectively and CEPAL resolutions 363 (XVII) of 5 May 1977 and 387(XVII) and 403(XVIII) of 1979. With these resolutions African and Latin American countries expressed their desire to strengthen existing technical co-operation arrangements and to promote new programmes of technical co-operation among the countries of the two regions, using for that purpose their respective Commissions within the framework of their mandates and available resources. These resolutions of ECA and CEPAL recommended and urged the Executive Secretaries of the two regional Economic Commissions to co-operate with the United Nations organisations and specialised agencies with a view to making them centres for the formulation, co-ordination and implementation of programmes for the promotion of co-operation among State members of the respective commissions. 1/ The resolutions also authorized the Executive Secretaries in co-operation with each other to convene meetings of their respective secretariat officials to identify principles and priorities as well as a programme of action on co-operation.

The United Nations Conference on Technical Co-operation among Developing Countries (TCDC) which on 12 September 1978 adopted the Buenos Aires Plan of Action for promoting and implementing ECDC further strengthened the mandates of the regional commissions. It called on them to assist the governments of developing countries in initiating, inter alia, joint programmes to be undertaken by appropriate inter-regional organisations or at an interregional level by two or more entities belonging to different regions. 2/

With the United Nations General Assembly endorsing the Buenos Aires Plan of Action in December 1978, ECA and CEPAL moved further into action in 1979 by renewing their mandates to their respective secretariats. In resolution 355(XIV) of 27 March 1979, ECA endorsed the ECA/CEPAL interregional programme for the promotion of technical and economic co-operation between Africa and Latin America. Also, CEPAL in its resolution 387(XVIII) of 26 April 1979 observed

1/ ECLA Annual Report 7 May - 5 May 1977, Vol. I, p. 206.

2/ See the Buenos Aires Plan of Action (Recommendation 22)

with satisfaction and approval the decision of the Executive Secretaries of ECA and CEPAL to carry out interregional technical and economic co-operation activities between Africa and Latin America in the areas of trade, training and science and technology. Pursuant to these resolutions, the secretariats of the two commissions held repeated consultations, and agreed on the need to strengthen technical and economic co-operation between the two regions by, inter alia, designing concrete projects for joint implementation, beginning with three key sectors namely interregional trade, manpower development, and science and technology.

B. Study Objectives

Immediate Objectives

The joint ECA/CEPAL/TCDC project has the following immediate objectives:

- (a) To assess the potentialities for mutual co-operation between Africa and Latin America, by identifying specific projects for joint implementation in the areas of manpower development, promotion of interregional trade, and science and technology for development;
- (b) To compile information on existing bilateral and multilateral technical and economic arrangements or agreements between Africa and Latin American countries, with special regard to the above mentioned selected priority sectors; to assess the extent to which such arrangements or agreements are being implemented and to identify obstacles and suggest solutions; to indicate possibilities for new bilateral or multilateral co-operation arrangements in the selected sectors and make appropriate recommendations to the governments concerned;
- (c) With the co-operation of the ECA and CEPAL secretariats, to convene a joint meeting at expert level, at which common TCDC projects which may be identified can be discussed and agreed by the countries of the two regions;
- (d) To single out and formulate specific projects for UNDP financing aimed at promoting economic and technical co-operation activities between both regions in the field of manpower, interregional trade, and science and technology.

Ultimate Objectives

The project has as its ultimate objective the promotion of mutual co-operation between Africa and Latin America through the identification, formulation and execution of joint economic and technical co-operation activities beneficial to countries of both regions. The project will attempt to explore and map out appropriate forms of horizontal co-operation between Africa and Latin America and to establish modalities of implementing interregional TCDC projects in key development sectors beginning with trade, manpower, science and technology which presently occupy top priority, for both regions. Co-operation between the two regions could take place in various forms including co-operation between governments of both regions through bilateral arrangements, between groups of African and Latin American countries and between sub-regional or regional bodies of the two regions.

It is envisaged that the project will:

- (a) increase awareness in African countries of their development capabilities and potentials and those available in Latin American countries and vice versa;
- (b) establish and strengthen the necessary supportive arrangements - institutions, information, human and other resources on which TCDC must be firmly based.

C. Study on Existing and Potential Manpower Development and Co-operation Between Africa and Latin America

The choice of manpower development as one of the three areas of co-operation between Africa and Latin America is not only appropriate but is imperative. Other sectors earmarked for co-operation would not get off the ground without the availability of skilled manpower. The degree of a country's development, its ability to exploit its natural resources, its need for technical assistance and/or capability to offer same are largely a reflection of its own state of manpower. These underline the significance of human resource development as a crucial factor affecting other areas of national development and its important role in any TCDC.

D. Terms of Reference

The following terms of reference were laid down for the study on manpower development:

Within the overall scope of the long-term and immediate objectives spelt out in the UNDP Project, the consultant in the field of Manpower Development will undertake study visits to Algeria, Mozambique, Nigeria, Senegal and Zambia in order to:

- (a) Compile data and information on resources of indigenous experts by occupational specialization and on existing bilateral and multilateral economic and technical arrangements between these African countries and Latin America in the field of Manpower Development;
- (b) Review present economic and technical relations in the field of Manpower Development and Training;
- (c) Explore other areas in which both Africa and Latin America are likely to develop expertise in the future;
- (d) Identify institutions and facilities for collaborative use between the two regions in the development and utilization of manpower and related technologies applied in the field of human resources development;
- (e) Suggest necessary institutional arrangements for promoting collaborative exchange of data information, knowledge and expertise and for improving the contacts between the regions;
- (f) Develop effective mutual assistance through exchange programmes, fellowships for study and observations aimed at improving human skills;

(g) Identify arrangements including institutional facilities for manpower planning and development and for the formulation of manpower policies in both regions. In this connexion to identify the range of manpower policies and measures involved in both regions and suggest aspects of significance and interest which might benefit the other region;

(h) Submit a report on the basis of the above embodying any other pertinent areas or issues which in the course of the study might crop up or considered significant to the study.

II. THE MANPOWER SITUATION

To examine existing and potential areas of cooperation in manpower development and utilization between Africa and Latin America, it is necessary to assess the current manpower situation in both regions. Although the following analysis will focus on the two regions, greater emphasis will be on the African manpower situation due to lack of information on the situation in Latin America and with the hope that the report being prepared by the Latin American expert on manpower will fill the gap.

A. Economic and Demographic Indicators

Tables 1 and 2, which show several economic and demographic indicators for African and Latin American countries respectively, reveal that there are marked differences in population size, ranging between 385, 000 for Comoros and 30.6 million for Nigeria in Africa and between 250,000 for Barbados and 119.6 million for Brazil in Latin America (1978 population estimates). Per capita gross national product (GNP) also varies quite markedly among the countries, being as low as \$120 for Ethiopia and as high as \$6,910 for Libya in Africa and \$260 for Haiti and \$2,910 for Venezuela in Latin America in 1978. Many African countries are at the bottom of the development pyramid indicating that most of their citizens are poor. Life expectancy at birth is generally lower in Africa than in Latin America, a reflection of better health conditions in the latter region. The level of literacy is much higher in Latin America than in Africa where it is deplorably low in many countries. African economies are still predominantly agricultural as shown by the very high proportions of the labour force in agriculture. The relatively lower proportions of the labour force in agriculture in Latin American countries reflects greater degree of industrialization and the concomitant development of the service sector.

Of great significance is the average annual population growth rates shown for two periods 1960-70 and 1970-78. With high fertility rates and declining mortality rates, many countries, particularly in Africa, registered increased average annual population growth rates during the second period with most of them having at least 2.5 percent average annual growth rate, a great contrast to the very low growth rate (0.7 percent) recorded by the industrialized countries during the same period. One implication of the high population growth rates in Africa and Latin America is the relative youthfulness of the population. This implies a relatively low percentage of population of working age (15-64 years) for the two regions, averaging about 55 percent in 1978 compared with about 65 percent for the advanced countries. There is, therefore, a considerable concentration of the population in the 0-14 age group in both regions, meaning a heavy youth dependency burden

for the working population which must finance development efforts. Thus, apart from financial constraints, the high population growth rates which give rise to youthful populations aggravate the problem of providing primary and secondary education for youths. This, in part, accounts for the very low participation rates at both educational levels in Africa and to a lesser extent in Latin America as will become evident shortly.

Demographic analysis is not only very crucial for estimating future needs for educational facilities such as the requirements for teachers but for estimating the extent of employment generation necessary to ensure effective labour utilization. A major cause of the unemployment problem in developing countries is rapid population growth which adds to the supply of labour at a much faster rate than can effectively be absorbed in employment. The ramifications of demographic factors on educational and manpower planning and development are quite obvious and should not be under-estimated.

Some Latin American countries have adopted population policies to check the alarming rates of population growth. As observed in the World Bank Report 1980, "a major development in Latin America during the past Decade has been the slowing down of the population growth rate by many countries". 1/ In Colombia, Costa Rica, Panama and Uruguay, for example, population growth rates have decelerated significantly. The Brandt Report has also observed that Chile, Colombia and Costa Rica, the first countries in Latin America to adopt systematic family planning policies, have reduced their birth rates by close to one-third in the last twenty years. 2/ Thus, an area where African and Latin American countries can co-operate is in the formulation and implementation of population policies.

B. Educational Development

Educational planning has very much in common with manpower planning. Education, being a major weapon in the eradication of ignorance and poverty, has been accorded priority by developing countries in their attempt to turn societal aspirations into reality. The education sector in any country, particularly in a developing country, is very strategic: as a proportion of government budget; as a supplier of trained manpower that is essential for the accomplishment of other developmental objectives; and as an employer of that same trained manpower. In this section of the Report, an attempt is made to analyse the comparative educational attainment in Africa and Latin America with occasional reference to the advanced countries. The analysis is expected, inter alia, to lead to the identification of areas of strength and weakness in both regions and subsequently to the identification of potential areas of collaboration and technical co-operation.

(i) Enrolment at First, Second and Third Levels of Education

Table 3, which is on enrolment at three levels of education for selected countries, clearly shows the marked differences in educational attainment among individual countries, between Africa and Latin America, and between the two regions and the advanced countries. Latin American countries and the advanced countries have virtually achieved universal primary education while most African countries

1/ World Bank, World Bank Report 1980, Washington DC, 1980, p.62

2/ Brandt Report, North-South: A Programme for Survival, p. 107

are still far from such an achievement. For example, Upper Volta recorded only 17 percent enrolment ratio at the primary level in 1978. Some African countries such as Benin, Nigeria, Algeria and Zambia made considerable progress in increasing participation rates at the primary level in the 1970s with the last two countries being very close to achieving universal primary education.

Enrolment at the second educational level shows more contrasting differences between Africa and Latin America on the one hand and between both regions and the advanced countries on the other. Enrolment ratios are very low in Africa, much lower than those in Latin America. The advanced countries have attained high enrolment ratios with Japan and Canada being close to attaining universal secondary education. Enrolment ratios at the third level depict the same phenomenon as at the lower levels - Africa lags very much behind Latin America and both regions lag behind the advanced countries. Among African countries, only Egypt compares favourably with the countries of Latin America where Puerto Rico registered the highest enrolment ratio at the third level in 1976.

(ii) Third Level Education: Enrolment Per 100,000 Inhabitants

During the period, 1970-77, the numbers of students per 100,000 inhabitants at the third level of education increased steadily in Africa and Latin America except in a few countries such as Mozambique and Tanzania which along with Upper Volta had less than 20 students per 100,000 inhabitants in 1977 (Table 4). Generally Latin American countries compare favourably with the advanced countries. The situation in Africa is quite appalling and only Egypt compares favourably with Latin American countries. Puerto Rico had the highest enrolment of 3,600 students per 100,000 inhabitants in Latin America in 1977, an achievement greater than that of any of the advanced countries except the United States.

The above analysis shows that although many African and Latin American countries have made appreciable progress in the provision of educational facilities during the last two decades or so, they (particularly African countries) still have a long way to go to fill the educational gap between them and the advanced countries. Also, it is evident that Latin America is more advanced than Africa in educational attainment.

(iii) Education at Third Level: Enrolment and Graduates by ISCED Levels and Fields

Tables 5 and 6 give detailed breakdown of enrolment and graduate out-turn at the third level education in selected African and Latin American countries. The breakdown shows, *inter alia*, countries and disciplines where facilities for post-graduate studies (level 7) are well developed; for example, Egypt in several disciplines and Algeria in medical and related health sciences. Other countries which have developed substantial facilities for post-graduate studies but for which details are not available include Brazil, Mexico and Nigeria. This is a significant indicator of educational achievement and a vital information on potential co-operation in human resources development. Although student exchange between Africa and Latin America at undergraduate and sub-professional levels may involve many of the third-level educational institutions in both regions, student exchange at the post-graduate level should be concentrated in institutions where considerable facilities are available. Egypt is quite more advanced than other African countries in both student enrolment and graduate out-turn and compares impressively with Latin American countries.

An important manpower issue that can be observed from tables 5 and 6 is the distribution of students and graduates between science-based and non-science-based disciplines. The situation is quite unhealthy in many African countries where there is a preponderance of training in the non-scientific disciplines. For example, less than 20 percent and about 35 percent of the graduates produced in 1977 in Senegal and Zambia respectively were in the technical and scientific fields. These compare quite unfavourably with countries such as Mexico, Uruguay and Cuba which respectively had 60 percent, 49 percent and 46 percent of their graduates in the technical and scientific disciplines in that year. The shortage of teaching staff in the technical and scientific disciplines and the inadequacy of qualified students (with sound background in science and mathematics) for intakes into these disciplines tend to perpetuate the acute shortage of technical and scientific manpower in various sectors of the economies of African countries. These areas, being very strategic to the development of science and technology, are where Africa and Latin America can pool their resources together to form a strong basis for technical co-operation.

C. Manpower Problems

Like many other developing countries, African and Latin American labour is characterized by a fundamental disequilibrium which is manifested in the form of a large unskilled or semi-skilled work force, very often under-utilized, and a persistent shortage of high-level and skilled professional, technical and related manpower. African countries have varying degrees of manpower problems some of which are highlighted below.

(a) Manpower Shortages

Like the first and second development plans, Zambia's Third National Development Plan, 1979-83, was launched against the continued spectre of manpower shortages especially in the professional, managerial and technical occupations. The mining industry, the key sector to the economy, is heavily dependent on expatriate skilled manpower. Teachers especially in the secondary and technical schools and in institutions of higher learning, are in short supply and the bulk of those employed there are expatriates working under contract terms. In 1974, about 60 percent of the professional, technical and related posts were occupied by expatriates, 30 percent by nationals and the remaining 10 percent were vacant. 1/

Senegal depends heavily on technical assistance especially on French personnel mainly in the teaching of science subjects at the secondary and university levels. During the 1977/78 session, only 49.4 percent of the 539 academic staff of the University of Dakar were Africans (i.e. Senegalese and other Africans) while the rest were expatriates mainly from France. The same situation prevails in many French-speaking African countries such as Ivory Coast where, in 1974, the number of nationals in the teaching force was about 22 percent with the remainder being expatriates supplied through French technical assistance.

Nigeria also depends on expatriate manpower towards the relaxation of its manpower constraints. Expatriate participation is relatively high (being over 20 percent) for manpower categories such as architects, engineers, medical

1/ Republic of Zambia, Third National Development Plan, 1979-83, Lusaka, October 1979, p.74

practitioners and most of the other medical specialists. During the country's Fourth National Development Plan, 1981-85, and in the light of the substantial gap between manpower-demand and supply prospects and the limitations of the expansion of training facilities, it has been found necessary to continue to facilitate free flow of qualified expatriate personnel particularly in the scientific and technical occupations where the problem of manpower shortage is most seriously felt.^{1/} With the existing manpower shortage and the huge investment programmes envisaged in the various sectors of the economy during the Fourth Plan period, huge additional manpower requirements are needed during the period (Table 7). In the manpower categories including architects, accountants, engineers, medical doctors, architectural and engineering technicians where existing vacancy rates are very high (usually over 40 percent) the additional requirements of the economy are more than the existing stock.

The picture of serious manpower shortages which has necessitated heavy dependence on expatriates as depicted above, is what operates in virtually all other African countries. Many strategic positions remain unfilled for many years. The dependence on expatriates contributes considerably to the high cost of development. Quite often, for example, the cost of accommodation for a French national on technical assistance in a French-speaking African country is higher than the salary of a local graduate.

One salient feature of manpower problems in Africa is the severe shortage of sub-professional or intermediate manpower especially intermediate technical manpower. According to a study of Nigeria's manpower requirements carried out in 1977, there were acute shortages as regards engineering technicians, veterinary technicians, draughtsmen, agricultural assistants, etc. As can be seen from Table i, Kenya faces manpower constraints at the intermediate level during its current national development plan 1979-83 particularly in respect of public health technicians, laboratory technicians, agricultural assistants and nurses. The shortage of intermediate technical manpower is due largely to the relative neglect of technical education, lack of qualified teachers and the inadequacy of students with science and mathematics background. Also, wages and incomes policy in many African countries often act as disincentives to the pursuit of intermediate technical education as it does not usually reflect the scarcity and the need for intermediate technical manpower.

African Universities and other third level educational institutions which train high-level manpower are also constrained by a general shortage of teaching staff. In Egypt, a study of the teaching staff at universities submitted to the National Council of Education and Science Research in 1978 revealed that the increase in the number of students did not correspond with the increase in the number of teaching staff, especially at the newly established universities. The study also revealed that the shortage in the number of teaching staff at the universities was over 10,000 noticeably in the faculties of humanities and engineering at the old universities and in all faculties at the newly established universities. This is exactly what is happening in Nigeria where many new universities have been established within the last few years and more are expected to be established before the end of the current plan period, 1981-85.

^{1/} Federal Republic of Nigeria, Outline of the Fourth National Development Plan 1981-85, Federal Ministry of Planning, Lagos, 1981, p.97

(b) Quality of Manpower

The manpower problem in the developing countries in general and in Africa in particular is not only one of quantitative inadequacy as highlighted above but also that of qualitative deficiency. The emphasis is placed mainly on accelerating the supply of fresh graduates from the various educational institutions with only minimum effort on increasing the practical content of their training programmes (especially in the technical and professional fields) which is usually inadequate in relation to labour market demands. The qualitative deficiency of manpower also has to do with the combinations of the products of educational institutions, that is, the mix between scientific and non-scientific disciplines as well as the inadequate in-service training facilities for employed skilled manpower. These lead to inefficiency of employed labour. This problem was underscored by some of the officials I met during my mission to Senegal where the economic sector is finding it difficult to absorb the output of the educational system particularly at the third level due to lack of relevance. As observed earlier, less than one fifth of the 1977 graduates of the University of Dakar, Senegal, specialized in scientific and technical disciplines and as a result graduates in the non-science-based fields usually find it difficult to secure jobs.

(c) Manpower Under-Utilization

The under-utilization of labour, manifested in the form of under-employment and unemployment mainly in urban areas and involving predominantly young school leavers with no specific skills is a very serious and pressing problem in Africa. The main causes of this problem are high population growth, the irrelevance of the educational system, the relative neglect of rural development, and the limited capacity to generate employment. Limited employment generation is due, among other things, to over-pricing of labour in urban areas and cheapening of capital through several industrial incentives thereby enhancing the adoption of capital intensive techniques. In effect, the distortion in the factor pricing mechanism and the existence of rural-urban income differentials which periodic wage reviews tend to accentuate and lead to rural-urban migration, have negative effect on employment generation, and aggravate the problem of labour under-utilization in urban areas.

The future of the unemployment situation even looks gloomier in the developing countries where the dimensions of the unemployment challenge are unprecedented. The labour force is expected to increase by about 550 million during the last quarter of this century, being more than double the increase in the previous quarter of the century.^{1/}

Policies aimed at comprehensive rural development programmes (including the establishment of agro-based or cottage industries) and the adoption of intermediate, as opposed to advanced technology, where appropriate, will go a long way to solving the problem of labour under-utilization. Such policies can enhance the employment generating capacity of the economies particularly in rural areas and thereby lessen the degree of rural-urban migration. This is where co-operation between Africa and Latin America in the area of science and technology becomes vital.

^{1/} World Bank, World Development Report 1979, Washington DC, 1979, p. 110.

African countries need to concentrate more on the adoption of intermediate technology and the establishment of cottage industries which can use their raw materials (many of which are left to waste at present) and generate more employment. Many Latin American countries have much to offer in this area.

(d) Neglect of Non-Formal Education

A major defect of manpower development strategy in Africa is the relative neglect of non-formal education such as agricultural extension services, functional literacy, in-plant training and indigenous apprenticeship system. Non-formal education has neither been subjected to the same type of planning nor has it been accorded any priority in financial allocation as has formal education.

The role that non-formal education can play in Africa cannot be over-dramatized. With the deplorably low level of literacy, the irrelevance of formal education and high rates of unemployment of unskilled school leavers, non-formal education can serve as an alternative and/or a supplement to formal education. It is generally believed that non-formal education is less expensive and more flexible than formal education and that it yields quicker and higher returns on investment in education. It is usually more related to the requirements of the labour market. In a world characterized by rapid technological changes, flexibility both in terms of the quality of manpower required and techniques of training them becomes an important and desirable element of manpower development. The area of non-formal education is one which the third world can develop and use to enhance labour productivity and to mobilize unused or underutilized human resources at minimum cost and effort. Furthermore, it is an area where governments can harness the resources of the private sector and make employers play a more active role in manpower training and development.

More and more African governments are realizing the importance of non-formal education but only a few of them have made meaningful attempts towards its development. In Upper Volta, rural education centres have been established since 1961 for the training of young citizens. The instruction at the centres emphasizes vocational and agricultural training and offers basic education. Ethiopia has embarked on a major nation-wide literacy campaign aimed at eradicating mass illiteracy within a short period of time. The task when accomplished would make millions of Ethiopians literate and thus become more receptive to new ideas. Tanzania introduced a policy of "Education for self-reliance" in which it firmly committed itself to education for development. This meant "that new, innovative programmes, geared to manpower development and work-oriented education would have to be introduced...". Also, "the masses were reminded that in order for education to contribute to development, it had to be a life-long process, a process that does not begin or end with formal schooling but which is an integral part of every day life". 1/

With this very strong commitment to non-formal education, Tanzania has pursued a vigorous adult functional literacy campaign as a frontal attack on illiteracy and poverty. The four primary objectives of the programme are to keep up with knowledge; to fill the education gap; to facilitate social change; and to mobilize the people for development. The country launched the programme in 1970 with proper

1/ Edmond J. Keller, Non-Formal Education for Development: Report of a Mission to Tanzania, 17 March - 22 March 1977.

planning and vigorous mobilization of human and material resources. The success of the campaign in promoting not only adult literacy but functional literacy has been tremendous. Thus, Tanzania has established itself as the premier nation in Africa as regards its achievements in the area of adult literacy (see Table 1) and has also displayed what can be accomplished by non-formal education programmes in the developing countries with adequate planning.

Tanzania acted as an innovator again in 1976 when it established the Folk Development College (FDC) Programme as a type of non-formal education for rural development. 1/ The programme, adapted from the Swedish Folk High School, 2/ began functioning in 1976 with the main objective of meeting the needs and challenges of post-literacy continuing education in rural areas. The FDCs do not provide skills and knowledge for wage employment but focus on imparting the necessary skills and knowledge essential for social and economic development of rural areas.

Some Latin American countries have developed different types of non-formal education -these include Brazil, industrial training; Cuba, adult literacy campaign; and Peru, distant education. Cuba's important experience dates back to 1961 when a massive and unprecedented attack on illiteracy was mounted. The campaign which was comparable to a national war effort involved thousands of young people and adults who volunteered as teachers. Within a year of intensive effort the illiteracy rate in Cuba dropped sharply 3/ and the country subsequently emerged as having the highest literacy rate in Latin America (Table 2).

Brazil has made significant progress in involving industry not only in industrial and non-formal vocational training but also in the running of formal vocational and technical educational institutions thereby making such training relevant to the requirements of the labour market. Both the Brazilian National Service for Industrial Training (SENAI) and the Brazilian Federation of Industries are involved in the management of most of the formal vocational and technical institutions, providing them with materials and staff. Such staff are involved in both production in industry and teaching in the formal educational institutions which use industry for on-the-job training. The manpower needs of industry are, therefore, conveniently built into the training programmes of the institutions. This effective marriage between industry and formal educational institutions which provide necessary sandwich training in Brazil has considerably limited the lack of relationship between training and the world of work, a manpower problem that plagues African countries.

There is tremendous potential for co-operation between Africa and Latin America in different aspects of non-formal education including adult literacy campaign and industrial training.

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- 1/ See Y.D. Kassam, The Folk Development Colleges Programme in Tanzania: A case Study on Non-Formal Education for Rural Development, Addis Ababa, 1973
 - 2/ I visited some Folk High Schools in Sweden while on an exchange programme in September 1980. The Schools form an important part of Sweden's non-formal education programme, an area where the country has been extremely effective and successful when compared with other advanced countries.
 - 3/ See M. Ahmed and P.H. Combs (Eds.) Education for Rural Development, Praeger Publishers, New York, 1975, p. 71

D. Brain Drain

Like other developing countries, African and Latin American countries have been confronted, since the end of the Second World War, but particularly from the early 1960s, with considerable outflow of high-level manpower -the brain drain phenomenon. It involves mainly scientists, physicians and surgeons, engineers and other skilled manpower in professions for which education and training are of a long-term capital intensive nature and who are usually difficult to replace from within the local labour market. This "reverse transfer of technology" from the developing to the developed countries takes place against the background of serious manpower shortages in the developing countries and has been an area of great concern to these countries.

The brain drain is introduced into the analysis of TCDC for a number of reasons. It is to place the phenomenon as a manpower problem in the developing countries, to highlight its magnitude and directional flow to the advanced countries (i.e., south-north flow) and thereby strengthen the need for TCDC. Furthermore, it is to emphasize that technical co-operation between Africa and Latin America in the area of exchange of students and scholars should have built-in checks to prevent, or at least to discourage south-south brain drain thus ensuring that one form of brain drain is not substituted for another. It might be argued that the effect of South-South manpower flow would not be the same as that of South-North brain drain since in the former case such manpower would still be utilized within the developing world. The danger here, however, is that such brain drain is likely to be towards the more developed countries of the third world which could accentuate the problem of manpower shortages in the least developed countries.

The magnitude of the flow of professional manpower from Africa, Asia and Latin America to the United States and the United Kingdom is shown in Tables 9 and 10. The information contained in these tables is now supplemented. During the period, 1963-72, 1326 Egyptian professionals (doctors, dentists, teachers and engineers), 5925 Indian professionals and 5309 West Indian professionals migrated to Canada. Between 1964 and 1972, 23487 professionals from India, Pakistan and Sri Lanka, 6011 from the West Indies and 2697 from Latin America migrated to the United Kingdom. During the period 1970-74, 10,868 immigrants from 16 Latin American countries were admitted to the United States as professional, technical and related workers.

These do not cover all the flow of professionals from the developing countries to the developed countries as the European countries, except the U.K., have been excluded. Furthermore, the data give an underestimation of the true picture as they refer only to professionals who migrated to the developed countries and exclude professionals who qualified in these countries and did not return to their home countries. For example, the main source of brain drain from Nigeria as in many other African countries is that many qualified people remained abroad after completing their training instead of returning home. The data analysed above are not current but there is no evidence indicating that the brain drain phenomenon has diminished. According to the Brandt Report, well over 400,000 physicians and surgeons, engineers, scientists and other skilled personnel moved from developing countries to the developed ones in the 1960s and 1970s.^{1/}

^{1/} Brandt Report, North-South: A programme for Survival, p. 109

The factors that are responsible for the brain drain include better remunerations and better conditions of work in the advanced countries; discrepancies between the supply of skilled manpower from the developing countries' post-secondary educational system and actual manpower demand of the local economies; lack of optimum utilization of qualified personnel; and the influence of political factors including instability at home. It has been argued that the flow of manpower from the developing to the developed countries helps to minimize the problem of unemployment among highly educated nationals. This may be true of countries like India, Pakistan, Bangladesh and Philippines, but it is definitely not true of African and Latin American countries. A few developing countries particularly Bangladesh, Pakistan and Philippines have actually adopted various policy measures to promote and organize "manpower export" not only to the developed countries but to developing countries (e.g. the oil-rich Middle East countries) to earn foreign exchange. In Bangladesh, for instance, foreign exchange earnings from manpower export ranked second to jute products in 1978.

Although these countries earn foreign exchange from manpower export there are some attendant problems. These include the difficulty of channelling the foreign exchange earnings into productive ventures rather than being used for conspicuous consumption with the resultant negative social impact; the fact that many rural areas in these countries continue to experience manpower shortages when nationals are sent abroad to earn foreign exchange; and the problem of reabsorbing returnees into employment as they often demand salaries that are comparable to the high salaries they earned abroad. The promotion of manpower export should be seen as a short-term measure as the demerits are likely to outweigh the merits in the long-run. Lasting and effective solutions can be found only in sound economic and manpower policies such as restructuring the educational system and effective manpower planning to ensure that education and training are geared towards labour market demands; and diversifying the economy to be able to earn more foreign exchange.

African and Latin American countries are not involved in the deliberate promotion of manpower export to earn foreign exchange and/or to alleviate the problem of unemployment among the highly educated. Instead, they have made efforts to encourage their nationals to return home from the advanced countries. African countries have done this severally while Latin American countries have done so both severally and jointly through the "Return of Talent Programme". The programme, which is pursued by Latin American countries with the co-operation of the Inter-governmental Committee on European Migration (ICEM) in Geneva, is aimed at encouraging and facilitating the return of middle and high-level Latin American manpower to their countries of origin from the developed countries where they reside.^{1/}

Africa and Latin America could co-operate in finding ways of encouraging their nationals to return to their countries of origin from the advanced countries. Furthermore, the pursuit of technical co-operation between the two regions involving the exchange of students and scholars could alleviate the problem of the brain drain in two ways:

^{1/} ILO, Tripartite World Conference on Employment; Background Papers Vol. II, Geneva 1976, pp. 161-167.

- a) economic and political conditions (including remunerations and conditions of work) in the two regions are more alike and are not as favourable as those in the advanced countries to encourage brain drain;
- b) the countries of the two regions are likely to find it more desirable and be more willing to reach agreements to ensure that experts and students return to their countries of origin at the end of their contract and studies respectively.

E. Institutional Facilities for Manpower Planning

Manpower development is not an end in itself but a means to achieving other developmental objectives. Manpower planning and general development planning are, therefore, two inter-related activities as the former can only be undertaken meaningfully in the light of well-defined socio-economic objectives. Since Manpower requirements must be based on societal goals, it follows that such requirements will change with changes in objectives and conditions including structural changes in the economy. Here lies the importance of continuous and effective manpower planning as a strategic component of development planning.

Although national development planning started in Africa long ago, generally pre-dating political independence, manpower planning started much later. With the emergence of school leaver unemployment problems and the acute shortage of skilled manpower, manpower planning became a desideratum in the early 1960s. African countries introduced one form of manpower planning or the other by setting up some machinery and institutional facilities for its execution.

However, not too long after, the momentum for manpower planning rapidly evaporated. One or two examples will demonstrate the trend. Zambia began to give attention to manpower problems in 1965, a year after independence, when a manpower committee was established. A comprehensive manpower report was published in 1966 with manpower projections covering the period up to 1970. The report was based on a survey of manpower utilization and requirements conducted in 1965. Until today that survey remains the only major manpower survey ever conducted in Zambia as a later manpower report was a mere extension of the projections contained in the first report. As expressed in the country's current development Plan, manpower planning thus went into oblivion: "An historical study of manpower planning in Zambia reveals that, though the paramount importance of manpower assessment and planning was realised immediately the country became independent, and appropriate measures initiated, there was lack of continuity"^{1/}. Attempts are now being made to reintroduce the necessary institutional facilities for manpower planning. A new body, the Manpower Planning and Development Committee has just been set up within the framework of the National Commission for Development Planning. Lack of qualified staff has militated against its effective take off.

Nigeria introduced institutional machinery for manpower planning in 1962 when a National Manpower Board and a Secretariat were established. Apart from some promising activities of the Board during 1963-65, it was never effective until it became moribund and was later reconstituted in 1976. Part of the problem was that the Secretariat had inadequate staff both quantitatively and qualitatively, and could not cope with its functions. These Zambian and Nigerian experiences of lack

^{1/} Republic of Zambia, Third National Development Plan, 1979-83, Lusaka, October 1979, p. 49

of continuity in manpower planning apply to other African countries. Thus, even today, only very few of them have effective institutional facilities for manpower planning. Although all African countries prepare varying forms of development plans, manpower planning as a vital aspect of national planning has not been given adequate recognition and support in the planning process.

The ineffectiveness of manpower planning has resulted, inter alia, in the lack of projections of manpower supply and demand; incapacity to evaluate manpower contexts of development projects; lack of effective co-ordination of admissions to educational institutions especially those of higher learning and hence no rationalization or co-ordination of specializations offered by various educational institutions; and lack of co-ordination of various manpower development efforts, various aspects of formal education, industrial training activities, etc. The dearth of statistical information has been a cause and a result of ineffective manpower planning. The data available for planning purposes are usually inaccurate and largely out of date.

African governments cannot be seen to be concerned with national development unless they take more seriously human resources planning since it deals with the most precious and most vital factor of development. Latin American countries such as Brazil, Chile, Mexico, Venezuela and Jamaica have accumulated wealth of experience in manpower planning and in the provision of institutional facilities for manpower planning. They could be of immense assistance to African countries in this strategic aspect of human resources development.

III. PRESENT STATUS OF COOPERATION IN MANPOWER DEVELOPMENT BETWEEN THE TWO REGIONS

Technical cooperation between Africa and Latin America in the area of manpower development and utilization is a recent and insignificant development. Each region has long been involved in vertical cooperation with the advanced countries rather than with horizontal cooperation between themselves, a situation that is characteristic of developing countries in general. The current level of cooperation between the two regions started to emerge mainly in the 1970s although some cooperative overtures were made in the 1960s when most African countries gained political independence.

A. Existing Arrangements on Manpower Development Co-operation

Existing co-operation arrangements between the two regions are principally bilateral in character (an African country entering into agreement with a Latin American country) sometimes on a range of manpower issues. These usually centred on fellowships for study, exchange of students and experts including teachers, and training. There is no record of any multilateral collaborative effort involving a group of African countries and a group of Latin American countries. As discussed below, the two regional Commissions have started some form of collaboration in the area of training. Some of the bilateral collaborative efforts between countries in the two regions are highlighted in Section B.

ECA Co-ordinated Programmes

ECA has initiated a programme for the training of technical experts of African economic organizations. ECLA and other regional Commissions have been involved in the implementation of the programme. ECA offered two types of training under the programme, namely:

(a) An individual fellowship programme of up to three-month attachment for on the job training in specialised functional area of each fellow's responsibility; and

(b) Annual group training programme for up to six fellows for a period of six weeks, providing an organized study tour, seminars, technical briefing and short-term attachments ^{1/}.

With the co-operation of ECLA, the Economic Commission for Europe (ECE) and financial assistance of the United States Agency for International Development (USAID), ECA launched the first programme under the second category of training in May-June 1977. It involved a six-week study tour and group training in Latin America and Europe for experts from African inter-governmental and national organisations responsible for promoting technical and economic co-operation. ECA sponsored another study tour of Latin America and Asia in collaboration with UNCTAD in September-October 1979 for African technical experts concerned with preferential trade and common market arrangements of inter-governmental economic cooperation organisations. On each occasion, the African experts who visited Latin America were able to exchange ideas and experiences with their counterparts in sister organisations and to observe the operations of related economic co-operation organisations.

B. Fields of Manpower Co-operation on Bilateral Basis

The following analysis is based on information collected during the country visits, which was supplemented with library study. One major shortcoming of considerable reliance on the latter source is the inability to assess the degree of implementation of a number of co-operation agreements not to talk of being able to identify obstacles and possible solutions.

ANGOLA

Angola and Cuba

In 1977, Angola and Cuba signed co-operation agreements which were aimed at increasing Cuba's technical assistance to Angola towards the execution of its development plans particularly in the economic, public health and service sectors. Towards the end of 1978, the two countries signed new co-operation agreements under which Cuba was to supply 6,400 experts (including engineers and technicians) to work in Angola. Cuba was also expected to help in the training of Angolan military experts.

Cuba provides Angola with technical aid in its educational development through the supply of teaching personnel. Groups of hundreds of Cuban teachers were sent to Angola in 1979 to serve for a period of two years to teach mainly high school physics, mathematics, chemistry and biology. With the aid of Angolan tutors, the Cuban teachers learnt Portuguese vocabulary mainly related to the subjects they were to teach.

^{1/} See Bernard Mbakileki, Report on the Economic Commission for Africa Study Tour for African Economic Co-operation Officials (4th April - 13th May 1977), November 1977

Angola and Brazil

Arrangements were concluded in early 1979 for the signing of a treaty of friendship and co-operation between Angola and Brazil to open the way to closer links in several areas including the training of Angolan personnel. Also, technical assistance and training have been a component of trade agreements between the two countries. For example, Angola bought 100 rail wagons from Brazil with the latter providing the supervisory staff for the assembly of the wagons in Angola.

Ethiopia and Cuba

In June 1977, an agreement was signed between Ethiopia and Cuba which subsequently led to the supply of about 300 Cuban medical specialists to Ethiopia, thus substantially increasing Cuban medical assistance to Ethiopia. The Cuban medical team consists of various specialists including 23 general physicians, 13 surgeons, 17 paediatricians, several nurses, laboratory technicians and specialists in health administration. The doctors and other medical personnel acquired local vocabulary sufficient for communicating with the natives thereby minimizing the language difficulties which could have created a barrier between the patients and the medical personnel.

In May 1978, 1200 young Ethiopians, whose ages ranged between nine and seventeen and whose educational standards were between grades four and twelve, left for Cuba to study under scholarships awarded by the Cuban Government. Ethiopia and Cuba signed another economic, scientific and technical co-operation agreement, in September 1978, aimed at further Cuban assistance in several areas including development planning and education. Cuban experts were also expected to participate in efforts to expand sugar production in Ethiopia.

MOZAMBIQUE

Mozambique and Cuba

Mozambique and Cuba have been co-operating in the areas of fishery and agriculture. The Mozambique National Directorate of Fisheries announced in 1977 that two separate fishing enterprises were to be set up with the participation of Cuba. The Mozambique-Cuba enterprise would cater for the training of Mozambicans in fishery techniques in addition to the construction of a fishery dock. An agreement was concluded in early 1978 for Cuba to send a group of teachers and technicians in the field of agriculture and livestock breeding to work at the University of Maputo. This would be a technical co-operation between the University and the Higher Institute of Agro-Livestock Sciences in Havana.

A group of 1200 Mozambican secondary school students aged between 12 and 17 left for Cuba in September 1977 to continue their secondary school education on scholarships from the Cuban Government. Another batch of 1200 students left on the same programme in 1979. On each occasion, the students were accompanied by some Mozambican teachers for their classes in Portuguese, history, geography and political education.

Mozambique and Brazil

Mozambique and Brazil have some co-operation agreements. It was expected, for example, that Brazil would assist in the establishment of a school for the training of secretaries in 1978.

NIGERIA

With the exception of Brazil, Nigeria's cooperation with Latin American countries in the area of manpower development and utilization began very recently. Within the last few years, the country has signed cooperation agreements with a number of Latin American countries starting with Jamaica in October 1978. Since then she has signed cooperation agreements with Argentina, Trinidad and Tobago, Uruguay and Brazil.

Nigeria and Argentina

The agreement on economic, scientific and technical co-operation between Nigeria and Argentina provides, *inter alia*, for exchange of advisers, experts and professionals including teachers, award of scholarships, organization of study tours and seminars. The agreement which was signed in 1980 and is still at an initial stage of implementation provides for the establishment of a Joint Commission of both countries to ensure effective implementation.

Nigeria and Uruguay

Nigeria and Uruguay have a co-operation agreement which includes scientific and technical co-operation. There are provisions for exchange of experts and advisers, training of counterparts, provision of consultancy services, award of scholarships, organization of study tours and seminars. With the co-operation agreement signed only recently not much has been done in terms of implementation.

Nigeria and Brazil

As far back as 1965 a Brazilian trade mission sent to Nigeria indicated Brazil's preparedness to train Nigerians in cocoa processing. Although a co-operation agreement was signed by both countries in 1972 not much was achieved in terms of co-operation until they signed another agreement at the end of the first session of their Joint Commission in late March 1981. In the agreement several provisions are made for technical co-operation particularly in the areas of industrial training, education and research.

On industrial training there is a proposal for the Brazilian National Service for Industrial Training (SENAI) to assist the Nigerian Industrial Training Fund (ITF) with pedagogical material and facilities planning, required for the establishment of vocational instructor training centres in Nigeria; assistance in the training of the fellowship attachments for ITF specialists in the key operational areas to enable them understand their Brazilian counterparts.

In the area of education and research, Brazil expressed interest in the Nigerian College of Technology system as the Nigerian experience could be relevant to Brazilian development in this area. The Faculty of Architecture, University of Sao Paulo and the Faculty of Environmental Design of the University of Lagos, and the University of Ife are to co-operate in the exchange of teachers and in research activities. Technical co-operation between the Institute of Technological Research, Sao Paulo and the Project Development Agency (PRODA) Enugu is also envisaged.

Other areas of co-operation agreed upon are Brazilian assistance in the training of personnel of the Nigerian Reinsurance Corporation in Brazil, the supply of Brazilian physical education specialists towards the development of sports in Nigeria and reciprocal exchange of programmes in the field of youth development and leadership training. The two countries agreed that the Brazilian oil company Petrobras and the Nigerian National Petroleum Corporation (NNPC) would co-operate in the training of Nigerian personnel (technicians, engineers, etc.) in the oil and petrochemical industry. The modalities and conditions for some of the co-operation agreements are expected to be worked out by both countries soon.

The above proposals show the potentials for, and the extent to which African and Latin American countries can co-operate in manpower development and utilization. By the time these proposals are implemented Brazil would become strategic to Nigeria's efforts to enhance TCDC.

Nigeria and Brazil are already co-operating in the exchange of scholars and in the provision of fellowships. A professor from the African Studies Centre of the Sao Paulo University was sent to the Department of Modern Languages, University of Ife. About 150 Nigerian students are currently in Brazil on scholarships awarded by the Brazilian Government.

Nigeria and Cuba

Nigeria and Cuba held a meeting in Lagos towards the end of March 1981. Two draft agreements on economic co-operation and cultural relations were expected to be signed at the end of the meeting 1/. Two major areas of co-operation envisaged are health and agriculture. Cuba which is well known for its rural health delivery is expected to assist Nigeria in its basic health service scheme.

SENEGAL

Senegal has economic, scientific and technical co-operation agreements with four Latin American countries -Argentina, Brazil, Mexico and Venezuela. For the past few years, Senegalese students have been studying in Mexico (in various disciplines) Brazil (mainly in architecture), and Venezuela (in petro-chemical science) on scholarships provided by the host countries. During the 1980/81 session there are 22 Senegalese students on fellowships in Mexican universities studying engineering, architecture, hydrology, linguistics, Spanish and hotel management, while there are five in Brazilian universities studying industrial technology and architecture. Within the past few years, one or two scholars from Brazil have always been at the Fundamental Institute of Black Africa, Dakar University -Institut Fondamental d'Afrique Noire (IFAN), as visiting fellows.

Senegal and Venezuela

Senegal and Venezuela signed a technical co-operation agreement on the basis of which Venezuela sent a team of experts to Senegal to prospect for oil. The experts confirmed the discovery of off-shore oil in Senegal. Venezuela is prepared to give Senegal the necessary technical assistance towards the exploration of the oil.

1/ The meeting was in progress by the time the mission to Nigeria was completed at the end of March 1981.

ZAMBIA

Zambia made efforts towards co-operation with Latin American countries almost immediately it attained independence in 1964. Some of the efforts have yielded results whilst some have not.

Zambia and Chile

Zambia and Chile reached an agreement in 1966 on the supply of technical assistance for the exploration of Zambia's copper resources. Chilean experts were to visit Zambia to help in the study of copper legislation similar to Chile's and advise on the drawing up of contracts with companies. The experts were also to advise on how to establish a copper corporation similar to the Chilean Copper Corporation which is a State organisation. In addition Chilean industrial concerns were to provide capital for the establishment of mining industries in Zambia and sponsor training centres for Zambians.

After the signing of the agreement, there was a change of government in Chile. This weakened the will to implement and there was no follow up. Although the agreement has been dormant since then, Zambia is still interested in it and would like to see it implemented.

Zambia and the Caribbean

Co-operation agreements exist between Zambia and some Caribbean countries where it has received technical assistance in the supply of secretarial staff (Secretaries and Stenographers) with a view to lessening its dependence on British secretarial staff. For example, Zambia signed an agreement with Trinidad and Tobago for the supply of stenographers and secretaries and Guyana provided Zambia with seven stenographers in 1974. This technical assistance is still in progress and secretarial staff from the Caribbean are still working in Zambia.

Zambia and Brazil

Zambia and Brazil signed a treaty of co-operation in June 1980 with provision for the setting up of a Joint Commission to oversee its implementation. The two countries agreed that technical assistance and training should be an integral part of each project covered in the treaty. Brazil indicated its willingness to train Zambians in the areas of civil aviation, irrigation and farm mechanisation. As a follow-up to the treaty, a draft agreement on economic co-operation is currently being considered by both countries. The agreement is to cover, inter alia, exchange of students, researchers, experts and consultants especially in the areas of agriculture, industry and mineral resources. Both countries are working towards the implementation of the agreement and when implemented, it would be Zambia's biggest involvement in technical co-operation with any developing country.

Zambia and Peru

Efforts were made in 1976 to initiate co-operation between Zambia and Peru and an agreement was reached for Peru to assist Zambia in the fishing industry partly by providing her with a fishing expert. The agreement has not been implemented.

Zambia and other Latin American countries

Officials in Lusaka informed the mission that Zambia was interested in co-operating with more Latin American countries particularly Argentina and Mexico. Efforts to effect this are in the pipe line as agreements to be signed by Zambia and each of these countries are in draft form. Among other things, Zambia would like to involve Argentina in its agricultural projects.

Zambia sees the present co-operation arrangements with some Latin American countries as a spring board for more effective co-operation with more countries in the region. As much as possible the country wants to reduce its heavy dependence on expatriates from the advanced countries if it could attract experts from other developing countries particularly Latin American countries.

Others African Countries and Cuba

In 1965, Guinea and Cuba negotiated an exchange agreement. Guinea proposed to experiment with the cultivation of sugar cane relying on Cuban technicians to help with production while she would provide Cuba with specialists in the production of palm oil. There is no information as to whether or not this proposal has been implemented. However, it stands out as a unique example of the type of co-operation (in manpower utilization) that African and Latin American countries should pursue - a two-way mutually beneficial co-operative venture.

Ten Cuban experts including four marine engineers went to Tanzania in 1979 to train workers in the Tanzania Fisheries Company (TAFICO) to manage a fleet of modern fishing boats. With a view to stepping up Cuba's technical assistance to Tanzania, an agreement was signed between the two countries in March 1980. It provides for Cuba to help Tanzania in economic planning and in the teaching of the Spanish language. Cuban doctors who had been working in Tanzania for a two-year term were to stay on for a second term and Cuban instructors in fishing and agriculture were to be sent to Tanzania.

Cuba has agreed to provide technical assistance to Madagascar's sugar industry as a result of a co-operation agreement signed by both countries in 1979. Also Cuba agreed to provide engineers and experts for Madagascar's Sirama Sugar plantations and to provide scholarships and training courses for Malagasy sugar workers.

Other African Countries and Brazil

Among three agreements signed by Ghana and Brazil in 1972 was one on technical co-operation. The latter covered exchange of lecturers, professors and technicians and the award of scholarships by both countries. The degree of implementation of the agreement is not known.

A report prepared by Mr. Michael Doo Kingue after a visit to Brazil in 1978 has revealed some areas of co-operation between Brazil and a number of African countries. In 1978, Brazil sent two cacao experts and one coffee expert to Sao Tome. The reports of the experts would enable the Brazilian Government to decide on any further action. Two professors from the African Studies centre of the Sao Paulo University went to Ivory Coast in 1978 for a two year assignment to teach Portuguese. Brazil has co-operated with Guinea Bissau in fisheries through the provision of 15 fellowships.

C. International Flow of Students

One salient aspect of technical assistance among nations is the exchange of students on fellowships awarded by host countries. Many other students go abroad to study either on their own governments' scholarships or as private students. Most of the foregoing analysis on student exchange as part of areas of co-operation between Africa and Latin America refers mainly to student exchange as a component of inter-governmental technical co-operation. This may not really reflect the true picture of the extent of the movement of students between the two regions.

Table 11 shows foreign students by country of origin at third level education in 50 countries which host the highest numbers of foreign students. The following observations seem evident from the data. African students who study outside the continent are largely in Western Europe and the United States. The United States has been the main destination of Latin American students who study outside their region. The exchange of students between Africa and Latin America has been insignificant. Among the Latin American countries shown, Cuba had the largest concentration of African students, being 801 or about two-thirds of all its foreign students at the third level education in 1976. Some Latin American students were enrolled in institutions of higher learning in Ivory Coast in that year. Unfortunately, Brazil, where a considerable number of African students in Latin America study is not included in the list for lack of information. For example, in 1977, the Brazilian Centre for Management of Enterprises (CERAE) started training programmes for about seven English-speaking African countries including Nigeria and Zambia. In 1973, 60 African students were enrolled at the São Paulo University and several had graduated from the University before then. Also the Brazilian Food and Technological Institute (ITAL) in Campinas received trainees from Central African Republic, Ivory Coast, Nigeria and Senegal 1/.

As in other economic activities (trade, financial arrangements, etc.) the high dependence of African and Latin American countries on the developed countries mainly on their former colonial masters (particularly in the case of African countries) is clearly displayed in the training of skilled manpower abroad. For instance, France which had the second largest concentration of foreign students in 1977 drew half of them from Africa undoubtedly mainly from French-speaking African countries. The language factor influences students from the developing countries to study mainly in the developed countries from which their countries gained independence or where the language is the same as theirs.

The reasons why foreign students from the developing countries have concentrated principally in the developed countries for their training include the following:

(a) the award of fellowships by advanced countries to nationals of developing countries, in form of technical assistance; (b) the inadequacy of training facilities in the developing countries and the availability of such facilities in the developed countries; (c) the colonial mentality or the inferiority complex which make many nationals of developing countries feel that the best training can only be received in the developed countries -this makes them prefer travelling to the developed countries for their educational pursuit even when facilities are available at home; and (d) the inadequacy of information on training facilities in the developing countries.

1/ See Michel Doo Kingué, My Mission to Brazil, Nov. 1978

Any attempt to increase student exchange between Africa and Latin America will have to take into consideration the above factors which have favoured the advanced countries. Specific measures will need to be adopted to reverse the trend of heavy dependence on these countries for training.

IV. PROGRAMMES FOR CO-OPERATION IN MANPOWER DEVELOPMENT AND UTILIZATION

A. Manpower Development Institutions which could form the Basis of Co-operation

Before assessing various areas of potential co-operation in human resources development and utilization between Africa and Latin America, existing institutional infrastructure which could form the basis of collaborative efforts needs to be examined. The success of such efforts in various fields could be greatly facilitated through the utilization of mechanisms and institutions available at the national level and those for regional and subregional co-operation arrangements.

National Institutions

The numbers of available facilities in institutions of higher learning (universities, polytechnics, technical colleges, etc.) and other specialized institutions for training have increased substantially since the early sixties in both regions. In many countries new universities and technical colleges have been established when existing ones operate much below capacity. The motivation for such multiplicity of institutions, particularly in Africa is often political. Thus, cost-effectiveness has often been sacrificed at the altar of political expediency. Many of the existing education and training facilities are, therefore, in excess of qualified student demand and national requirements. To ensure optimal utilization of such institutions, they could form the basis of co-operation in areas such as staff and student exchange, fellowships, and research activities. If need be these institutions can be expanded to cater for increased demand.

Regional and Subregional Institutions

Over the years, ECA has given priority to multinational institution building through the establishment of, and support for regional and sub-regional institutions for the promotion of self-reliance and technical co-operation among African countries. As a result, several multinational institutions are now in existence with varying degrees of facility availability whilst other are being established or planned for manpower training to meet the needs of African countries. The major institutions which could form the basis of technical co-operation between Africa and Latin America are listed below.

(a) ECA Sponsored Training Institutions

Each of ECA sponsored training institutions receives financial support from one or a combination of the following sources: UNDP, ECA, UNFPA, African Governments and bilateral donors.

(i) Regional Centre for Training in Aerial Survey Ile-Ife, (Nigeria)

The Centre was established in 1972 to serve West Africa, although it extends its student intake to other African countries. It provides training in aerial surveys with a view to meeting Africa's manpower requirements in this field. The Centre offers photogrammetry and photointerpretation courses.

(ii) African Institute for Economic Development and Planning Dakar, (Senegal)

The Institute, was established in 1964 to serve all African States. Its aims are to train experts and senior officials engaged in economic development and planning and undertake social and economic development research in support of training. It organises seminars and nine-month regular training courses.

(iii) Regional Institutes for Population Studies

Three Regional Institutes for Population Studies (RIPS) located in Yaounde, Cameroon; Cairo, Egypt; and Accra, Ghana respectively were established between 1969 and 1971. The aims of RIPS are to provide high-level demographic training and undertake studies and research in support of training programmes which are offered at diploma and post-graduate levels.

(iv) Africa Centre for Technology Dakar, (Senegal)

The Centre established in January 1980 is to promote the development, use and adaptation of technology, disseminate information on same and promote co-operation among African training and research institutions dealing with technology. It may sponsor specific technological research and provide practical or formal training to African technologists and related personnel. The Centre is also to encourage rural development through rural technology programmes.

(v) Other Institutions

Three of the other ECA sponsored training institutions in Africa are: The Institute of Statistics and Applied Economics, University of Makerere, Kampala which trains high-level professional statisticians (at both under-graduate and graduate levels) from Uganda and other English-speaking countries of Africa; the East African Statistical Training Centre (EASTTC), University of Dar-es-Salaam, which provides statistical training facilities at sub-professional (certificate and diploma) level for English-speaking countries particularly those of East Africa; and the Institute of Statistical Social and Economic Research (ISSEP) Legon, Ghana, which provides a programme of teaching and research in statistics and offers middle-level training and professional training at undergraduate and post-graduate levels. These institutions form part of the Statistical Training Programme for Africa (STPA) aimed at providing opportunities for the training of statisticians needed for socio-economic development.

(b) Recent ECA initiated New Institutions

Three of the several ECA planned new institutions are:

(i) Subregional Graduate Schools of Management and Finance

The subregional graduate school system is to involve all African States by subregional groupings with each Graduate School catering for the needs of countries in the subregion. The schools are to provide graduate research and training in various fields of business management and finance, develop short refresher courses and up-dating courses for practising managers at middle and higher levels, and train management educators for colleges and higher institutions.

Four schools which are to be located in each of Africa's four sub-regional divisions are to be established in the short-term, whilst the long-term objective is to establish seven such schools with national universities in host countries playing host 1/.

ECA is making efforts to bring the proposed schools into realization by concentrating on such issues as curricula and course offerings, determining prospective demand for training and the status of the schools within the organisational and administrative set up of host universities. In the meantime ECA has started the fellowship component in two of the proposed schools thus enabling students to participate in the IEA programme of the University of Nairobi, Kenya and the University of Ghana.

(ii) African Institute for Higher Technical Training and Research Nairobi, Kenya

This is being established as a post-secondary inter-governmental institute to serve all African States. It will be concerned with the training of middle and higher level technical manpower, post-experience training of technologists and engineers, and high-level training of technicians and instructors for African polytechnics and colleges of technology. In sum, it will be concerned with training, retraining and upgrading of African technical personnel. The Institute's research activities will centre on technical education development and curriculum design, adaptation and development of technology and the provision of consultancy services to member States and technical training institutions. The core staff of the Institute are being recruited and student intake is expected to commence soon.

(iii) African Regional Centre for Engineering Design and Manufacturing Ibadan, (Nigeria)

This is meant to serve all African States as a "Research and Development" Centre. It will, among other things, assist in the further training and development of skills of technical personnel in African institutions engaged in design and/or manufacture of machines and machine parts in the member States and co-operate with public and private institutions outside Africa and with international institutions which have objectives similar and related to those of the Centre. It will provide on-the-job training for Africans in machine design. Implementation is currently at the stage of staff recruitment and the Centre is expected to start functioning by December 1961.

(c) Fellowship and Training Programmes

(i) Bilateral Scholarship and Fellowship Programme

The Secretariat of ECA started to co-ordinate a bilateral scholarship and fellowship programme for Africans in 1965 as a way of enhancing training opportunities in areas of critical manpower shortages. The Secretariat acts as a clearing house, securing offers from donor governments and organisations and selecting suitably qualified candidates for available offers. It prepares and distributes to ECA member States and interested organisations and training institutions several issues of "Training Information Notice" which deals with select training and fellowship opportunities within and outside Africa. About 1300 fellowships were provided for African nationals who received training both within and outside the region under the programme between 1965 and 1980.

(ii) Expanded Training and Fellowship Programme for Africa

In response to Commission Resolution 318 (XIII) of March 1977 which, inter alia, called for "the mobilization of resources for the operation of a Training and Fellowship Programme for Africa, which should accord priority to the critical manpower requirements of member States", the Secretariat, in May 1978, established the Expanded Training and Fellowship Programme for Africa. This programme, incorporating the former LCA Co-ordinated Bilateral Scholarship and Fellowship Programme, aims at training Africans in a variety of middle- and high-level manpower fields that are critical to the region's socio-economic development. Its target is to train 8000 Africans in five years, 1978-82, both within and outside Africa with at least 3000 being trained in African institutions. Expected African countries' support for the programme include contributing cash grants, scholarships and fellowships. Thus, the programme is designed as an intra-African technical co-operative arrangement based on the principle of self-reliance among African countries in developing the manpower that they require.

Linkages

Most LCA sponsored institutions are meant to operate co-operatively in that a project is expected to reinforce, and itself be reinforced by, other projects. For example, the Expanded Scholarship and Fellowship Programme for Africa provides fellowship support for other projects while the Regional Centre for Engineering Design and Manufacturing will be able to take over for development, machines and tools that in the course of training the African Institute for Higher Technical Training and Research may innovate or invent. Such linkages will undoubtedly enhance the effectiveness of each project.

B. Co-operation within and among African Countries

(a) Bilateral Co-operation

Many of the collaborative arrangements among African countries in the area of manpower development and utilization are multinational in scope, on subregional or regional basis. Existing bilateral co-operation arrangements cover areas such as student exchange, fellowship awards, and exchange of experts.

African countries could strengthen bilateral co-operation among themselves by expanding the scope of existing ones and moving into new areas. For example, Tanzania has glaringly demonstrated how non-formal education can effectively complement formal education in the mobilization of human resources for general development. Lesotho has had considerable planning experience in the area of distant education. African countries could share these experiences by adopting or adapting any of these and other such programmes.

Multinational Co-operation

Some collective attempts have been made to evolve an African TLC in manpower development and utilization within the region. Three areas which form the basis of intra-African co-operation in this direction, that is, those aimed at fostering technical co-operation and self-reliance among African countries are: 1/

1/ See LCA, Intra-African Co-operation in Manpower Development and Utilization, November 1979.

- (i) The Expanded Training and Fellowship Programme for Africa
- (ii) Training and Research Institutions Building and Strengthening
- (iii) Sharing of African expertise through technical co-operation among African countries.

Reference has already been made to the first two programmes which are being promoted and co-ordinated by LCA. The third programme, sharing of African expertise through technical co-operation among African countries, is aimed at evolving an African TCDC for employment and short-term use of experienced Africans in the public and private sectors including training institutions. Towards this end, LCA has been engaged in the identification, registration and publishing of a directory of African experts and consultancy organisations so as to facilitate their employment where and when required. The second aspect of the programme is the operation of a placement service and making the services of African experts available on short-term basis to African governments, organisations and institutions interested in hiring their services or using their experience under technical co-operation arrangements.

Constraints

Financial constraint has hindered the effective execution of the various TCDC programmes in Africa. For example, the progress report on the Expanded Training and Fellowship Programme for Africa shows that achievement has been modest in relation to needs and demands due mainly to lack of support funds and limited offers of fellowship from African countries. The Netherlands Government has been the principal cash contributor to the programme. Also the operationalization of LCA planned institutions has been delayed due to lack of funds as many African countries have failed to contribute to the respective funds.

What is needed to enhance human resources development possibilities, therefore, is for African countries to provide financial support for, and make full use of the facilities of regional and subregional training and research institutions. Only through such meaningful co-operation could self-reliance in manpower development and utilization be enhanced. The effectiveness of intra-African co-operation is crucial to the implementation of inter-regional TCDC projects.

C. Areas of Possible Co-operation Between Africa and Latin America

In Chapter II, this Report highlighted the major characteristics and shortcomings of the manpower situation in Africa and Latin America. These include rapidly growing populations and the resultant youthfulness of the populations; shortages of skilled manpower most especially scientific and technical personnel, resulting in heavy dependence on expatriate personnel; surpluses of unskilled labour which create labour under-utilization, defects of formal education such as emphasis on non-science-based disciplines; the relative neglect of non-formal education; high rates of illiteracy (especially in Africa); lack of continuous and systematic manpower planning (mainly in Africa); and the brain drain. The very insignificant exchange of students and the mainly embryonic technical co-operation arrangements between the two regions were highlighted in Chapter III.

To supplement national, subregional and regional efforts already being made to solve the above problems and face the ever growing challenges of human resources development, African and Latin American countries could plan together by pooling and sharing resources towards the improvement of the standards of living of their peoples. That bilateral co-operation in this area is gradually emerging is a pointer to the attainability of a more effective TCDC if concerted and collective efforts are made a number of TCDC programmes which both regions could pursue on manpower development and utilization are now outlined.

(a) Population Policy

As stressed earlier, the growth and structure of population have far-reaching educational and employment implications. The disturbing population growth rates of the past in many African and Latin American countries are not expected to decline in the 1980s. Although changes and general improvements in socio-economic conditions such as improved education, increased participation of women in the labour force and increased urbanisation can increase incentives to limit family size, the situation in the two regions is such that these factors cannot make any appreciable impact in the foreseeable future. Yet many countries in both regions have no population policies. Although population problems are usually recognised in the development plans of many African countries, they offer no solutions. Family planning programmes have played a significant role in the areas of the world such as East Asian countries and a few Latin American countries where much has been achieved in terms of declines in crude birth rates.

Unless deliberate measures are adopted by African and Latin American countries (currently with high population growth rates) in the 1980s to ward off the pressure of excessive population increases, the majority of the people in the two regions might continue to live in squalor and abject poverty while unemployment might become a more chronic problem which might accentuate other social problems. There is need therefore, for those countries without population policy to adopt family planning programmes. Both regions could co-operate in the formulation and implementation of population policies making use of the experiences of the few Latin American countries that have systematic family planning policies.

(b) Exchange of Students

The flow of students between Africa and Latin America has been insignificant and what exists now is primarily an outcome of recent TCDC ventures. There are some factors that could now enhance the exchange of students between the two regions, in particular and among developing countries in general.

First is the high and rapidly increasing cost of training in the advanced countries where large numbers of students from both regions usually study. For example, the recent staggering increases of school fees for overseas students in Britain has resulted in prohibitively high fees that are bound to reduce the flow of African students to that country. Secondly, the problem of securing placements in the advanced countries will become more difficult in the years ahead with huge spending cuts in advanced countries such as Britain and the United States. Consequently, the numbers of available places in institutions of higher learning are to remain constant or decline in some disciplines particularly in Britain. Thirdly, unlike the 1950s and 1960s many African and Latin American

countries have expanded, quite considerably, educational facilities at the third level to the extent that some now have excess capacity for training in certain areas. Added to these factors are the negative effects of overseas studies for students from the two regions: brain drain and irrelevance in curricula and course contents in several disciplines.

Given these factors, both regions could take concrete steps to increase the exchange of students. Student exchange has some spill-over effect as students from one region will learn about the other region and subsequently become "transmitters" of data, information, culture and language.

(c) Fellowship Programmes

The award of fellowships to African students to study in Latin America, and vice versa, could considerably increase the extent of student exchange between the two regions. Such awards have enhanced the concentration of students from both regions in the advanced countries as the latter have long been awarding fellowships to such students in form of technical assistance to their governments. What is needed now is for African and Latin American countries to co-operate meaningfully in promoting fellowship programmes to supplement the current narrow area of bilateral fellowship awards which have so far covered only few countries.

(d) Exchange of Experts

Although both regions have shortages of skilled manpower, especially technical and scientific skills, there is need to co-operate in the exchange of experts. This could cover all categories of skilled personnel including technical and professional personnel, university professors, lecturers and researchers, and consultants. The degree of manpower shortages are not the same and some countries may have surpluses of certain categories of manpower which could be used elsewhere. However, exchange of experts should not be based on surpluses because even with shortages exchange can still be beneficial. With African and Latin American countries having many common conditions, experiences, problems and aspirations, exchange of experts between them is likely to be more rewarding than between them and the advanced countries.

(e) Research

African and Latin American countries have a lot to gain through co-operation in research activities because of certain similarities of conditions (climatic, environmental, economic, etc.) in many countries in the two regions. Research findings in certain countries in one region may be quite relevant to a particular situation in countries in the other region.

Universities, national research institutions and subregional and regional institutions could co-operate in carrying out joint research projects and exchanging information on completed research. This will be pertinent to the objectives of ECA sponsored regional institutions which have "research in support of training" as one of their objectives.

(f) Non-formal Education

With the various defects of formal education such as irrelevance and high illiteracy rates; and the concentration of populations in rural areas, the urgent need to accord higher priority to non-formal education in the two regions is clearly evident. In the case of Africa, it has been projected in UNESCO studies that with the current high rate of population increase and the level of school enrolment ratios at primary and secondary levels, the region may by the end of the century have greater number of illiterate adults than it currently has.

African and Latin American countries could co-operate in pursuing policies that would achieve greater balance and complementarity between formal and non-formal education. Special emphasis should be laid on industrial training as a component of non-formal education. The two regions could co-operate in this area, sharing industrial training experiences and facilities. Elsewhere in this report, I identified some of the countries and programmes which could serve as models for other countries to emulate. They include Brazil's vocational and industrial training arrangements, Cuba's adult literacy campaign and Tanzania's package of non-formal education programmes particularly adult literacy campaign and the Folk Development College Programme (FDC). The FDC programme which Tanzania has adapted from Sweden, that is, with necessary modifications to suit a developing country's needs and peculiarities could be adopted by interested countries as a way of developing the rural areas.

(g) Brain Drain

As a result of the brain drain, large numbers of African and Latin American trained personnel have remained in the advanced countries contributing towards those countries' development instead of returning to their own countries to help in national development. Latin American countries have pursued the "Return of Talent Programme" as a way of encouraging and facilitating the return of their skilled nationals residing in the advanced countries back to their countries of origin. Many Latin American nationals have returned to their countries as a result of the programme which is being executed in collaboration with the Inter-governmental Committee for European Migration (ICEM) in Geneva. 1/

With the co-operation of Latin American countries, African countries could jointly adopt a similar programme designed to encourage and facilitate the return of African skilled nationals from the advanced countries. Secondly, although the economic conditions in the two regions are not likely to encourage inter-regional "brain drain", yet both regions could co-operate to ensure that students and experts from the other region return to their countries of origin on completion of their studies and contracts respectively. It is necessary for these people to return to their countries so that the "multiplier effect" derivable from the exchange of students and experts could materialize.

(h) Study Tours

Collaboration between Africa and Latin America could be fostered through study tours which might include seminars or workshops for specialists.

1/ ILO, Tripartite World Conference on Employment, Background Papers, Vol. II, Geneva 1976, pp. 161-167.

People on study tours can obtain first hand information through personal contact and exchange of ideas, and they can see how others tackle their own development problems. Interaction through study tours can enhance co-operation in other areas including trade and transfer of technology. Another good thing about study tours is that participants do not have to learn the language of the host country before visiting relevant places and projects as interpreters can guide them. Thus, participants can visit during a study tour, several countries where people speak different languages.

(i) Employment Generation

The phenomenon of labour under-utilization (unemployment and underemployment) which is a common problem in Africa and Latin America calls for appropriate remedies. The two regions could co-operate in the formulation and implementation of measures which could enhance employment generation particularly in the informal sector including rural areas. Such measures might include rural development through rural technology programmes such as the adoption of intermediate technology and the establishment of cottage and agro-based industries.

(j) Manpower Planning

The seriousness of manpower shortages as a major constraint to all development efforts has been stressed in different parts of this Report. Several manpower problems have emerged due to lack of continuity and effectiveness of manpower planning while manpower planning itself has been constrained due to lack of trained people. National efforts, not only in manpower development and utilization but also within the whole gamut of socio-economic development, will continue to be handicapped until there is a continuous and systematic assessment of the manpower situation.

While many countries in both regions lack effective manpower planning machineries some particularly in Latin America have built up meaningful and systematic manpower planning machineries which could form the basis of co-operation. Thus, countries of both regions could co-operate in the development of effective manpower planning machineries and strengthening of planning personnel in manpower units to ensure continuity of manpower planning.

Possible Constraints

The foregoing analysis shows that there are several possibilities for co-operation between Africa and Latin America in human resources development and utilization. However, implementation of co-operation arrangements might be constrained by some factors, some of which were highlighted in the Chapter dealing with country visits.

Both Africa and Latin America face the problem of shortages of skills required to cope with manpower development efforts and other development objectives. The aspect of the TDC Project which is on "manpower development and utilization" might itself be constrained by inadequacy of skilled manpower. Also, the general shortage of development finance which results in lack of adequate financial resources to pursue educational and manpower development projects in many countries in the two regions might impair project implementation.

There is the problem of fostering co-operation among heterogeneous people with different political, social and cultural background. This should however, not create much problem. As a matter of fact certain African countries including Benin, Togo, Nigeria and Senegal have historical and cultural links with some Latin American countries. Unlike before the mid-1970s, the political atmosphere is quite conducive to co-operation between the two regions. For example, in 1977 when Brazil sent a delegation to about ten African countries to explore areas of possible co-operation, some sections of the news media in the host countries criticised not only Brazil but also other Latin American countries. They were called upon to make a choice between Black Africa and Portugal that was executing objectionable colonial practices in Angola and Mozambique. In particular, the close relationship between Brazil and Portugal was called to question 1/. The political situation has since changed for the better with the attainment of independence by Angola, Guinea Bissau and Mozambique. Brazil has also made impressive efforts to bridge the gap to the extent that in 1980 the Brazilian Foreign Minister visited Angola and Mozambique, among other African countries, and described 1980 as "an African year" for Brazil 2/.

Language problem may prove to be a real constraint and might make the task difficult but definitely not impossible.

The distance between the two regions is not really a problem; what is crucial is the availability of transport and communication links between them. At present these are not strong when compared with those which link both regions with the developed countries. There is an element of cause and effect here. Transport links, are weak partly because traffic of people and goods is light. One reinforces the other. The situation needs to be improved so as to enhance co-operation not only in the area of manpower but in other areas most especially trade.

In sum, none of these constraints is serious enough to render inter-regional co-operation impossible. Solving them would only necessitate further co-operation between the two regions.

V. STRATEGIES AND MECHANISMS FOR ACHIEVING CO-OPERATION IN MANPOWER DEVELOPMENT AND UTILIZATION

The ultimate objective of the joint ICA/CEPAL/TCDC Project is to promote inter-regional co-operation between Africa and Latin America as a way of reducing the vertical relations between them and the developed countries. The manpower component of the Project is, therefore, aimed at devising appropriate programmes of action for horizontal co-operation between both regions with a view to lessening their dependence on the advanced countries and making them self-reliant in the area of manpower development and utilization. The strategies of co-operation should be based on certain elements which could facilitate the achievement of projects objectives and promote the spirit of self-reliance.

1/ Africa Research Bulletin, March 15 - April 14, 1979

2/ Africa Diary, August 5-11, 1980.

A. Elements of Co-operation

The main elements are as follows:

(i) Mutuality

Co-operation between Africa and Latin America should be mutual, being a two-way rather than a one-way affair. This point needs emphasizing because of the thinking of some government officials that the TCDC Project would serve as an "aid programme" with Latin American countries being donors and African countries recipients. It needs to be stressed that the most important condition for cooperation is the element of reciprocity and collective self-reliance which are strategic to the tenets of TCDC.

However, the conception of some African Government officials seems to reflect reality. First, it is well known that Latin American countries are generally more advanced industrially than their African counterparts; and as is evident from the analysis in the preceding chapters of this Report, they are also more developed educationally. Secondly, most of the existing bilateral co-operation arrangements between African and Latin American countries are mainly in the form of technical assistance provided by Latin American countries: award of fellowships, exchange of experts, and provision of training facilities.

These facts notwithstanding, African countries should, within the limits of their resources, be prepared to offer whatever they could to ensure that co-operation between the two regions is mutual, as mutuality breeds trust, engenders a sense of self-reliance, and promotes more lasting relations. In any TCDC project, African countries should not substitute dependence on their former colonial masters or the advanced countries in general for dependence on other groups of developing countries.

(ii) Information

The generation and dissemination of adequate information should be the cornerstone of all co-operative arrangements between the two regions. This is very crucial because unless countries and nationals know what exists and where, the operationalization of collaborative ventures could be handicapped and restricted in scope. Thus, the degree of project implementation would hinge considerably on the amount and range of information generated and circulated by the countries and regions to each other.

(iii) Operational Responsibility

The element of operational responsibility stresses the important role which all African and Latin American countries should play in the implementation of interregional TCDC projects. The capacity of each region to generate and circulate information depends very much on the performance and co-operation of each government. The use of national institutional facilities for training, the exchange of experts, consultants, students, etc. could be promoted or handicapped by government policies. Commission co-ordinated multinational subregional or regional institutions which are to be involved in the operationalization of TCDC projects, need to be supported by member countries through financial contributions and resource utilization. The list is endless. The point being made here is

that governments of both regions carry the operational responsibilities for TCDC projects whether bilateral or multilateral in scope, as they alone can mobilize resources, promote the participation of public and private organizations, national institutions, etc., all within the framework of policies laid down by governments.

(iv) The Institutional Framework

The provision of institutional framework or machinery for the implementation of TCDC projects is another important element of co-operation. In this case, the institutional framework could be on national, subregional, regional or interregional levels. As will become evident from most of the recommendations, project implementation should be within the framework of existing national, subregional and regional institutions, particularly in the case of Africa. This is desirable so as to use available excess capacity thereby optimizing resource utilization. Only in cases where it becomes necessary should new ones be created. Another reason is that many of the existing institutions do not function effectively due to financial and manpower constraints while the operationalization of some planned training and research institutions have been delayed for the same reasons.

B. Conclusions and Recommendations

The report has tried to assess the characteristics of the manpower situation in Africa and Latin America with emphasis on the former. The assessment, inter alia, has highlighted various manpower problems, current status of co-operation and possible areas of further co-operation between the two regions. This concluding part of the Report will highlight recommendations based on areas already identified as having potentials for co-operation or that are likely to hinder such co-operation. Before doing that there is need to reemphasize a few points.

Already, a number of bilateral co-operation arrangements between African and Latin American countries are being implemented while some are planned for future implementation. These efforts, as limited as they are in terms of country and project coverage, should be seen as the foundation on which to build more comprehensive and mutually beneficial TCDC projects. Thus the current effort is meant to complement what exists, by involving all countries in both regions and covering all possible areas of co-operation so as to substantially increase the level of interregional co-operation in the area of manpower development and utilization.

TCDC is motivated mainly by the fact that the long period of technical assistance from the developed countries has merely aggravated some of the problems of development in the developing countries; and because of the reluctance of the former to grant worthwhile concessions in areas such as the transfer of technology towards the realization of a new international economic order. The need for and the attractiveness of TCDC is, therefore, to ensure a reordering of economic relations that perpetuate the servitude of the developing countries to the developed ones rather than promoting equitable distribution of the benefits of their mutual economic and technical co-operation. In pursuing interregional multilateral co-operation arrangements, developing countries should learn from the past and realize that perpetual reliance on foreign aid may never solve their problems. Whatever may be the stage of their development, they should co-operate with a genuine sense of responsibility and be willing to sacrifice towards enhancing not only national development but also the general advancement of the third world.

African and Latin American countries should give moral, political and financial support to attempts to promote interregional technical co-operation between them. Effective support would be a practical manifestation of commitment to the various resolutions adopted at regional and international fora since the mid-seventies. Through the opportunities offered by the ICA/CLPAL/TCDC Project, African countries should be ready to learn not only from what their Latin American counterparts have achieved in various areas of human resources development and utilization but also from their past mistakes to ensure non-repetition. On the other hand, and bearing in mind the element of mutuality, Latin American countries should explore all possible opportunities to see what they could gain from African countries. In this way, both regions would be forging ahead in partnership, in mutual co-operation, trust and respect, to develop and utilize human resources as an agent of change and as a vital input in their common and continuous struggle towards the achievement of a new international economic order.

The Report concludes with the following specific recommendations (generally the justification for each recommendation is briefly outlined):

(a) Exchange of Students

To pool educational and training facilities and enhance their maximum utilization, increase the relevance of education and training, and minimize the concentration of their nationals in the advanced countries for training and thereby also reduce the brain drain, it is recommended that African and Latin American countries take concrete steps to increase exchange of students.

To facilitate the process:

(i) Each regional Commission should prepare a very comprehensive directory of existing institutions of higher learning and any other training institutions that may be appropriate for the training of students from the other region. The directory should be revised periodically and should, inter alia, indicate capacity, courses offered, admission requirements, medium of instruction, and the various fees;

(ii) The two Commissions should exchange the directories and be given wide circulation to governments and appropriate educational institutions. African universities should also exchange calendars with their Latin American counterparts;

(iii) Individual African Governments should make some of their national fellowships tenable in Latin American educational institutions, and vice versa, by reducing the numbers of such awards tenable in the advanced countries;

(iv) African Governments should reserve a number of places in their educational institutions for students from Latin America (with each concentrating more in areas where it has considerable facilities), and vice versa. For example, Senegal government officials indicated that the country could provide assistance for Latin American students to study French in the country's educational institutions particularly at the university level where considerable infrastructural facilities are available to cater for non-French-speaking students;

(v) Latin American Governments should make special efforts to encourage their post-graduate students (say through fellowship awards) to study in African universities where there are substantial facilities (e.g. Algeria, Egypt and Nigeria), and vice versa.

(b) Fellowship Programmes

With a view to training nationals in critical areas of manpower needs and enhancing the exchange of students between the two regions, it is recommended that African and Latin American countries should co-operate in promoting fellowship programmes.

To achieve these objectives:

(i) Each region should establish a "Regional Fellowship Programme" if one does not exist and if it exists it should be expanded adequately to cater for both regional and interregional fellowship programmes;

(ii) Each Commission should co-ordinate the regional fellowship programme, acting as clearing house for fellowship awards;

(iii) The two Commissions should collate and exchange information on fellowship opportunities in each region. Thus each Commission would have information on fellowship opportunities in both regions for dissemination. Already ECA coordinates Africa's Expanded Training and Fellowship Programme. With the Commission's experience in coordinating bilateral scholarships and fellowships for Africa since 1965, and managing the expanded training and fellowship programme since 1970, it has built up the administrative capability to be able to cope with the proposed additional responsibility (although facilities will have to be expanded considerably);

(iv) To promote self-reliance, the major source of financial support for each regional fellowship programme (cash grants, scholarships and fellowships) should come from member States' contributions. Supplementary funds or awards could come from bilateral and multilateral donors including the UNDP;

(v) After making its own contribution to its regional fellowship programme, an African country that could afford it should still offer fellowships towards the Latin American regional fellowship programme, and vice versa. This would ensure the continuance of the type of award which Chile made in 1979 when it offered two fellowships to be used within the framework of the Expanded Scholarship and Fellowship Programme for Africa, thus becoming the first and only Latin American country to be so involved;

(vi) Some of the awards available through the African fellowship programme should be offered to Latin American nationals to study in Africa, and vice versa;

(vii) Some of the fellowships awarded to Africans through the African fellowship programme should be tenable in Latin American training institutions, and vice versa;

(viii) In these awards, special emphasis should be laid on scientific and technical disciplines and awards should be related to the manpower needs and training priorities of individual countries.

(ix) The emerging practice of Latin American Governments to make bilateral fellowship awards to African nationals through their Governments should be strengthened both in terms of quantity and country coverage. At present, bilateral awards seem to be a one-way relationship. Undoubtedly, there are some African Governments that have adequate financial and training facilities to reciprocate; they should endeavour to do so.

(c) Language Training

If student exchange and fellowship programmes are not to be handicapped in increasing exchange of students between the two regions, there is need to tackle the language problem by organising intensive language-training for students.

It is, therefore, recommended that each Commission should set up a study group to assess existing language-training facilities for foreign students in each region and make recommendations on how member countries could evolve a systematic approach to language teaching to foreign students (English, French or Spanish).

(d) Exchange of Experts

To make maximum use of available expertise; minimize some of the manpower problems of African and Latin American countries, broaden the experiences of skilled personnel and thus enhance their productivity and resourcefulness, and to lessen the heavy dependence of both regions on high-level manpower from the advanced countries, it is recommended that efforts should be made at national and regional levels to facilitate the exchange of experts. This is an area where every country in both regions could and should get involved.

This should be pursued at various levels.

(i) Each Commission should establish a Roster of experts and consultancy organisations that could be involved in short-term or long-term exchange programmes. Already ECA has been engaged in the identification, registration, and publication of a directory of African experts and consultancy organisations so as to facilitate their employment within Africa;

(ii) The rosters should be comprehensive and updated periodically and, should be exchanged between the two regions for circulation to governments, educational and training institutions, employers associations, etc.;

(iii) With available information (directory of educational institutions, rosters of experts, etc.), governmental and non-governmental institutions should exchange specialists on bilateral basis:

- Universities and other institutions of higher learning in the two regions should make bilateral arrangements for exchange of professors, lecturers and researchers. Such exchanges could be short-term for staff on study or sabbatical leave or long-term through the provision of visiting professors or fellows in various specialities. Twinning arrangements for the training of faculty members and exchange of staff, etc which many African institutions have had with institutions in Europe, the United States and Canada over the years should now be extended to those in Latin America;

- Inter-regional exchange of staff between subregional and regional training and research institutions should be encouraged. African regional institutions such as RIPS and those to become operational soon (e.g., Sub-regional Graduate Schools of Management and Finance and African Institute for Higher Technical Training and Research) should each develop special relationship with appropriate institutions in Latin America to cover, among other things, staff exchange. The planned institutions should also make efforts to recruit qualified experts from Latin America;

- At governmental level, bilateral co-operation should emphasis areas of need. For example, exchange of experts could take place between countries having similar natural resources (oil, copper, etc) and/or producing the same types of agricultural products (e.g. cocoa, coffee, sugar) to promote co-operation in exploration, production, formulation and implementation of policies and other development programmes.

(a) Research

With similarities of climate, environmental and economic conditions there are great potentials for the promotion of joint research activities between African and Latin American training and research institutions. It is through training and research that the development, transfer and adaptation of technology could be jointly pursued.

It is recommended that African countries and their Latin American counterparts should co-operate through their various training institutions, in the execution of joint research in areas of common interest: agriculture, food technology, building technology, environment, health problems, etc.

Implementation could be:

(i) on bilateral basis between an African university or a national training and research institution and a similar institution in Latin America;

(ii) on multilateral basis between two or more institutions in two or more African countries and such institutions in two or more Latin American countries;

(iii) between an African multinational subregional or regional training and research institution and a similar institution in Latin America. For example, national and subregional Graduate Schools of Management in the two regions could co-operate in conducting research into management problems and exchange case studies for teaching purposes. This way, such institutions would lessen their dependence on case studies prepared in the advanced countries where conditions are very much unlike those in the developing countries;

(iv) Conferences and seminars should be organised by different institutions in both regions on specific issues to compare experiences and to discuss results of joint research.

(f) Population Policy

With the alarming rates of population growth in the third world, slowing down growth rates through family planning policies is a positive way of improving the well-being of the people. As observed in this Report, some Latin American countries particularly Chile, Colombia, Costa Rica, Panama and Uruguay have significantly reduced population growth rates through systematic family planning policies. Interested African countries should enter into bilateral agreements with these countries to share their experiences in the formulation and implementation of population policies.

(g) Brain Drain

(i) One way by which Africa and Latin America could reduce the problem of manpower shortages is to encourage and facilitate the return of their nationals from the advanced countries. Latin American countries have attempted this through the "Return of Talent Programme". It is recommended that African countries in co-operation with their Latin American counterparts should adapt and implement such a policy.

(ii) To maximize the benefits of the exchange of students and experts, governments of the two regions should discourage permanent or semi-permanent stay abroad by those involved in such exchanges. It is, therefore, recommended that governments of both regions should have built-in checks as part of bilateral agreements to ensure that students and experts return to their countries of origin at the end of their studies and contacts respectively.

(h) Study Tours

One way of developing mutual understanding, gaining practical experience and finding out potential areas of specific collaborative activities is to organize study tours and seminars. Some Latin American and African countries have done this to achieve some or all of these aims. However, the scope is still very limited. It is, therefore, recommended that more countries in the two regions should exchange study tours.

(i) This could be pursued on bilateral or multilateral basis:

- an African country organising a study tour to a Latin American country, or to a group of Latin American countries, and vice versa;

- a group of African countries organizing a study tour to a group of Latin American countries, and vice versa;

(ii) At the regional level, the two Commissions should strengthen their co-operation in the organisation of study tours.

(i) Non-formal Education

In recognition of the various limitations of formal education, and the great potential which non-formal education has for reaching the majority of the people, countries of the two regions should co-operate in the promotion of non-formal education as a lever for manpower development, skills acquisition and general enlightenment.

(i) They should co-operate in the planning and execution of programmes such as functional literacy and rural development-oriented programmes. Co-operation could also cover the training of non-formal education personnel in both formal and non-formal institutions;

(ii) Industrial training: Many Latin American countries have developed various programmes in industrial training. African countries should make bilateral arrangements with such countries to develop effective industrial training programmes. The various areas where Latin American countries could be of assistance include short-term industrial attachments, training of trainers, and designing mechanisms for co-operation between formal vocational/technical institutions and industry.

(j) Employment Generation

African countries should make deliberate attempts towards employment generation rather than expecting it as a by-product of the development process. They should co-operate with Latin American countries to evolve employment generating/development strategies through rural technology programmes, adoption of intermediate technology and the establishment of agro- and allied industries that could exploit local raw materials.

Specific areas of possible co-operation are expected to be highlighted in the report on Science and Technology.

(k) Manpower Planning

To ensure that manpower planning becomes a more effective and systematic input in the overall planning process, African countries should strengthen their manpower planning machineries. A number of Latin American countries notably Brazil, Chile, Jamaica, Mexico and Venezuela have worthwhile experiences in systematic manpower planning and in the provision of institutional facilities for manpower planning.

It is recommended that interested African countries should enter into bilateral agreements with any of these countries with a view to strengthening their manpower planning machineries. Assistance could be on the establishment of manpower planning units, formulation of manpower plans, and/or training of manpower planners.

(l) Collection and Dissemination of Information

Many of the foregoing recommendations have touched on one vital element -information. It is, therefore, recommended that the collection and dissemination of information should be institutionalised, with each Commission providing the necessary information base.

(i) As a first step towards this end, each Commission should establish a regional information bank to deal specifically with inter-regional TCDC, that is, it could later take care of TCDC arrangements with other regions;

(ii) Existing machineries for the collection and dissemination of information in each region should be strengthened so as to cope with the envisaged additional responsibilities. As already observed, areas where information should be exchanged between the two regions include:

- registers of existing educational and training institutions;
- rosters of experts and consultancy organisations;
- fellowship opportunities.

(iii) Both Commissions should co-operate in establishing a publication (like the TCDC News: Bridges Across the South) which could carry news on different aspects of African-Latin American TCDC activities.

(m) Transport and Communication

Since the terms of reference allow for the coverage of "other pertinent issues", transport and communication facilities constitute a pertinent issue.

If interregional TCDC, not only in the area of manpower development and utilization but also in other areas is to be substantially increased between the two regions, transport and communication links need to be strengthened. Hence the two regions should regard the strengthening of such links as a necessary condition for facilitating the prospective expansion of interregional co-operation.

Of particular importance to manpower development and utilization is the need to strengthen air links. It is, therefore, recommended that countries of both regions should co-operate in strengthening air services between them.

TABLE I
AFRICA; ECONOMIC AND DEMOGRAPHIC INDICATORS

country	Population (000) Mid-1978	Per Capita GNP 1978 US\$	Average Annual Population Growth (percent)		Life Expectancy at birth (year) 1978	% of Population of working age (15-64 years)		% of Labour force in agricult- ure		Adult Literacy Rate (percent) 1975
			1960-70	1970-78		1960	1978	1960	1978	
Algeria	17,625	1,260	2.4	3.2	56	52	49	67	30	37
Angola	6,300	300	1.5	2.3	41	55	53	69	60	-
Benin	3,323	230	2.6	2.8	46	53	51	54	46	11
Botswana	747	620	-	-	-	-	-	-	-	-
Burundi	4,463	140	2.4	2.0	45	55	53	90	85	25
Cameroon	8,056	460	1.8	2.2	46	57	55	87	82	-
Central African Republic	1,909	250	2.2	2.2	46	58	56	94	89	-
Chad	4,314	140	1.8	2.2	43	57	54	95	86	15
Comoros	385	180	-	-	-	-	-	-	-	-
Congo	1,459	540	2.1	2.5	46	56	54	52	35	50
Egypt	39,855	390	2.5	2.2	54	55	56	58	51	44
Ethiopia	30,982	120	2.4	2.5	39	54	52	88	81	10
Gambia	571	230	-	-	-	-	-	-	-	-
Ghana	10,969	390	2.4	3.0	48	53	51	64	54	30
Guinea	5,133	210	2.8	2.9	43	55	54	88	82	-
Guinea-Bissau	553	290	-	-	-	-	-	-	-	-
Ivory Coast	7,836	840	3.7	5.6	46	54	54	89	81	20
Kenya	14,720	330	3.4	3.3	53	50	48	86	79	40
Lesotho	1,279	280	2.0	2.3	50	57	55	93	87	55
Liberia	1,742	460	3.1	3.3	48	52	50	80	71	30
Libya	2,700	6,910	3.8	4.1	55	53	51	53	21	50
Madagascar	8,289	250	2.2	2.5	51	55	53	93	86	50
Malawi	5,670	180	2.8	2.9	46	52	50	92	86	25
Mali	6,290	120	2.4	2.5	42	54	52	94	88	10
Mauritania	1,544	270	2.5	2.7	42	53	52	91	85	17
Mauritius	918	830	-	-	-	-	-	-	-	-
Morocco	18,914	670	2.5	2.9	55	53	50	62	53	28
Mozambique	9,900	140	2.2	2.5	46	56	53	81	67	-
Niger	5,001	220	3.3	2.8	42	53	51	95	91	8

Table 1 (continued)

Country	Population (000) Mid-1978	Per Capita GNP 1978 US\$	Average Annual Population Growth (percent)		Life Expectancy at birth (years) 1978	% of Population of working age (15-64 years)		% of Labour force in agricult- ure		Adult Literacy Rate (percent) 1975
			1960-70	1970-78		1960	1978	1960	1978	
Nigeria	80,563	560	2.5	2.5	48	52	54	71	56	-
Rwanda	4,508	180	2.6	2.9	46	53	51	95	91	23
Senegal	5,380	340	2.4	2.6	42	54	53	84	77	10
Sierra Leone	3,292	210	2.2	2.5	46	55	53	78	67	15
Somalia	3,743	130	2.4	2.3	43	54	54	86	82	60
Sudan	17,376	320	2.2	2.6	46	53	53	86	79	20
Swaziland	525	590	-	-	-	-	-	-	-	-
Tanzania	16,854	230	2.7	3.0	51	54	51	89	83	66
Togo	2,418	320	2.7	2.7	46	53	51	80	69	18
Tunisia	6,039	950	1.9	2.0	57	53	54	56	45	53
Uganda	12,406	280	3.7	2.9	53	54	52	89	83	-
Upper Volta	5,553	160	1.6	1.6	42	54	53	92	83	5
Zaire	26,770	210	2.0	2.7	46	53	53	83	76	15
Zambia	5,291	480	2.8	3.0	48	53	51	79	68	39
Zimbabwe	6,900	480	3.9	3.3	54	52	50	69	60	-

Sources: World Bank, Annual Report 1980, Washington 1980

World Bank, World Development Report 1980, Oxford University Press,
New York 1980

TABLE 2

LATIN AMERICA: ECONOMIC AND DEMOGRAPHIC INDICATORS

Country	Population (000) Mid-1978	Per Capita GNP 1978 US\$	Average Annual Population Growth (percent)		Life Expectancy at birth (years) 1978	% of Population of working age (15-64 years)		% of Labour force in agricult- ure		Adult Literacy Rate (percent)
			1960-70	1970-78		1960	1978	1960	1978	
Argentina	26,386	1,910	1.4	1.3	71	64	63	20	14	94
Barbados	250	1,960	-	-	-	-	-	-	-	-
Bolivia	5,291	510	2.5	2.6	52	55	53	61	51	63
Brazil	119,461	1,570	2.9	2.8	62	54	55	52	41	76
Chile	10,734	1,410	2.1	1.7	67	57	61	30	20	88
Colombia	25,573	850	3.0	2.3	62	50	56	52	30	81
Costa Rica	2,111	1,540	3.4	2.5	70	50	57	51	29	90
Cuba	9,700	810	2.0	1.6	70	61	59	39	25	96
Dominican Republic	5,128	910	2.9	2.9	60	49	51	67	57	67
Ecuador	7,814	880	3.1	3.3	60	52	52	58	46	74
El Salvador	4,283	660	2.9	2.9	63	52	51	62	52	62
Guatemala	6,621	910	2.8	2.9	57	51	54	67	57	47
Guyana	823	560	-	-	-	-	-	-	-	-
Haiti	4,831	260	1.5	1.7	46	55	53	80	70	23
Honduras	3,440	480	3.1	3.3	57	52	49	70	64	57
Jamaica	2,133	1,110	1.4	1.7	70	51	54	39	28	86
Mexico	65,442	1,290	3.3	3.3	65	51	51	55	39	76
Nicaragua	2,499	840	2.9	3.3	55	50	49	62	44	57
Panama	1,809	1,290	2.9	2.6	70	52	55	51	35	78
Paraguay	2,893	850	2.6	2.8	63	51	52	56	50	81
Peru	16,820	740	2.8	2.7	56	52	53	53	39	72
Trinidad & Tobago	1,132	2,910	2.0	1.2	70	53	60	22	16	95
Uruguay	2,885	1,610	1.9	0.3	71	64	63	21	12	94
Venezuela	14,000	2,910	3.4	3.3	66	51	54	35	20	82

Sources: World Bank, Annual Report 1980, Washington 1980World Bank, World Development Report 1980, Oxford University Press,
New York, 1980

TABLE 3
ENROLMENT RATIOS FOR FIRST, SECOND AND THIRD LEVELS OF EDUCATION

Country	First Level		Second Level		1st & 2nd Levels		Third Level	
	1970	1976/1978	1970	1976/1978	1970	1976/1978	1970	1976/1978
<u>Africa</u>								
Algeria	79	99	12	29	48	64	2.07	4.02
Benin	40	59	5	11	23	36	0.14	1.16
Egypt	70	74	33	47	58	61	8.05	14.47
Ivory Coast	63	71	9	15	36	44	0.87	1.79
Mozambique	47	-	5	-	28	-	0.29	-
Nigeria	32	62	6	13	23	44	0.46	1.04
Senegal	38	41	9	-	24	-	1.34	2.10
Tanzania	39	-	3	-	24	-	0.18	0.19
Upper Volta	12	17	1	2	7	10	0.4	0.23
Zambia	91	98	13	16	62	61	0.41	2.09
<u>Latin America</u>								
Argentina	106	110	32	41	70	76	14.23	28.60
Brazil	125	88	26	-	65	-	5.26	12.62
Chile	107	118	39	52	87	95	5.0	14.30
Cuba	121	122	22	51	76	87	3.66	17.41
Guyana	98	99	55	60	79	80	1.94	3.76
Mexico	104	122	22	42	68	86	6.07	11.43
Peru	103	113	30	54	70	89	11.05	15.97
Puerto Rico	117	105	71	70	94	87	27.10	31.43
Uruguay	112	105	59	64	86	84	10.0	17.81
Venezuela	94	106	34	38	70	74	11.64	20.74
<u>Advanced Countries</u>								
Canada	101	101	65	89	86	94	34.59	37.66
France	117	112	74	83	92	95	19.50	25.73
Germany F.R.	-	-	-	-	78	77	13.41	24.70
Japan	99	98	86	93	92	96	17.01	32.48
Sweden	94	99	73	73	82	85	21.34	34.82
United Kingdom	105	106	73	83	88	93	14.07	18.90
United States	-	-	-	-	101	100	49.43	56.03
U.S.S.R.	101	99	65	69	92	90	25.18	21.58

Source: UNESCO, Statistical Yearbook, 1980 Table 3.2

Note: 1976/1978 i.e: One of the three years 1976, 1977 or 1978

TABLE 4

THIRD LEVEL EDUCATION ENROLMENT PER 100,000 INHABITANTS

Country	1970	1973	1974	1975	1976	1977
<u>Africa</u>						
Algeria	147	206	237	267	323	368
Benin	12	66	64	70	75	87
Egypt	711	997	1,132	1,233	1,302	1,368
Ivory Coast	83	100	103	107	125	133
Mozambique	24	9	9	10	10	10
Nigeria	39	50	62	68	87	98
Senegal	116	142	155	166	174	180
Tanzania	15	21	23	25	20	15
Upper Volta	3	8	13	18	22	19
Zambia	35	87	100	175	177	179
<u>Latin America</u>						
Argentina	1,157	1,715	1,987	2,351	2,339	2,381
Brazil	452	757	895	993	1,166	1,329
Chile	837	1,482	1,444	1,467	1,293	1,249
Cuba	157	304	336	361	383	404
Guyana	307	613	740	885	1,128	1,275
Mexico	492	736	869	940	930	1,034
Peru	935	1,096	1,199	1,262	1,346	1,425
Puerto Rico	2,320	2,868	2,963	3,132	3,168	3,692
Uruguay	751	881	925	1,148	1,262	1,372
Venezuela	942	1,359	1,532	1,688	1,891	1,963
<u>Advanced Countries</u>						
Canada	2,999	3,107	3,128	3,100	3,583	3,548
France	1,581	1,805	1,892	1,970	1,971	2,050
Germany F.R.	830	1,192	1,279	1,684	1,707	1,745
Japan	1,744	1,899	1,955	2,017	2,045	2,150
Sweden	1,756	1,615	1,577	1,985	2,083	2,311
United Kingdom	1,084	1,141	1,161	1,308	1,426	1,546
United States	4,148	4,559	4,819	5,238	5,111	5,197
U.S.S.R	1,878	1,873	1,886	1,908	1,934	1,952

Source: UNESCO, Statistical Yearbook, 1980 Table 3.10

TABLE 5
EDUCATION AT THE THIRD LEVEL: ENROLMENT BY ISCED LEVELS AND FIELDS

Field of Study	Algeria 1977				Egypt 1976			Mozam- bique 1976	Nige- ria	Senegal 1977				Zambia 1977
	Total	5	6	7	Total	6	7	6	Total	Total	5	6	7	6
Educator and Teacher Training	1490	-	1469	21	55269	35843	2426	20	8955	159	15	15	129	1918
Humanities, Religion and Theology	5541	-	5002	539	55265	50194	5071	104	6252	2459	1119	666	673	730
Fine and Applied Arts	-	-	-	-	7757	7391	366	-	435	26	9	17	-	173
Law	12896	4160	8567	169	45479	41226	359	198	1781	1507	863	478	166	221
Social and Behav- iorial Science	11967	-	11366	601	7935	6520	1415	3	4805	153	24	129	-	20
Commerce and Business Adm.	426	-	426	-	102851	99266	3585	126	7026	1130	629	352	149	1158
Mass Communication and Documentation	294	-	294	-	4626	3397	1229	-	-	259	132	127	-	10
Home Economics and Domestic Science	-	-	-	-	2025	1986	39	-	-	-	-	-	-	-
Service Trades	-	-	-	-	356	356	-	-	502	432	93	232	107	-
Natural Science	14659	2970	11530	159	16687	14577	2110	29	5088	1000	647	138	215	565
Mathematics and Computer Science	1206	-	1206	-	650	-	650	14	-	-	-	-	-	-
Medical and Health Related Science	7958	-	6848	1110	52193	47805	5108	209	5377	1532	453	505	574	609
Engineering	2727	-	2727	-	58293	54305	3988	144	9130	253	50	90	113	1430
Architecture and Town Planning	1073	-	1073	-	-	-	-	-	-	-	-	-	-	-
Trade, Craft and Ind. Programme	-	-	-	-	-	-	-	-	-	425	250	175	-	1803
Transport and Communications	654	-	654	-	-	-	-	-	-	-	-	-	-	160
Agriculture, Fores- try and Fishing	876	-	821	55	46596	42513	4083	59	3040	105	55	50	-	59
Others	-	-	-	-	6346	372	-	-	6525	15	-	15	-	336
Total	61767	7130	51983	2654	462328	410633	34695	906	58593	9454	2989	2989	2126	9152

Table 5 (continued)

Field of Study	Brazil 1975 Total	Cuba 1976 5 & 6	Mexico 1977 6	Total	Peru 1977 5	6	Uruguay 1978 6
Education and Teacher Training	69901	37630	4975	32544	194	32350	404
Humanities, Religion and Theology	88599	4183	10722	2513	26	2487	354
Fine and Applied Arts	17061	234	2440	544	101	443	311
Law	90702	4137	53161	11869	-	11869	3208
Social and Behavioral Science	101248	1116	46403	34413	-	34413	633
Commerce and Business Administration	111429	10496	114307	46033	18113	27920	2365
Mass Communication and Documentation	2358	2032	7521	3564	1215	2349	116
Home Economics and Domestic Science	655	-	737	1112	1035	77	35
Service Trades	4691	-	3937	395	195	200	-
Natural Science	60006	4190	34035	3328	-	3328	938
Mathematics and Computer Science	31213	676	5592	1583	216	1367	674
Medical and Health Related Science	80601	8006	122612	20833	2084	18749	1915
Engineering	89319	6848	112049	50205	6895	43310	1593
Architecture and Town Planning	12708	4683	21254	5669	-	5669	1190
Trade, Craft and Ind. Programme	-	9539	32216	1083	1083	-	-
Transport and Communications	-	1539	1231	143	143	-	-
Agriculture, Forestry and Fishing	18885	11463	48327	10371	1010	9361	1108
Others	301432	80	553	7218	1110	6108	5968
Total	1089808	106850	622072	233420	33420	200000	20812

Source: (see following page)

Table 5 (continued)

Source: UNESCO, Statistical Yearbook, 1980 Table 3.12

Notes: Level 5 - Programmes Leading to an Award not equivalent to a First Degree

Level 6 - Programmes Leading to a First University Degree or Equivalent Qualification

Level 7 - Programmes Leading to a Post-Graduate University Degree or Equivalent Qualification

Cuba - Total for Level 6 includes 640 and 169 for level 5 in education and teaching training and engineering respectively.

Peru - Under "Others" 6108 for level 6 includes 1021 postgraduate awards.

Zambia - Certain of the Social Sciences are included with Humanities, Religion and Theology.

TABLE 6

EDUCATION AT THIRD LEVEL: GRADUATES BY ISCED LEVELS AND FIELDS OF STUDY

Field of Study	Algeria 1977 (6)		Egypt 1976				Mozam- bique 1976 (6)		Senegal 1977				Zambia 1976 (6)	
	No.	%	Total No.	%	6	7	No	%	No	%	5	6	No.	%
Education and Teacher Training	73	1.2	6115	10.2	6074	41	-	-	180	6.5	146	34	135	28.1
Humanities, Religion and Theology	377	6.4	7786	13.0	7509	277	15	20.0	941	30.2	724	117	130	27.0
Fine and Applied Arts	-	-	1354	2.3	1306	48	-	-	4	-	4	-	-	-
Law	1308	22.1	5004	8.4	4693	311	25	33.3	376	13.5	266	110	50	10.4
Social and Behavioral Sc.	1532	25.8	1029	1.7	997	32	8	10.7	75	2.7	75	-	-	-
Commerce and Business Adm.	149	2.5	12156	20.3	12057	99	-	-	422	15.1	336	86	-	-
Mass Communication and Document	43	0.7	664	1.1	653	11	-	-	89	3.2	-	-	-	-
Home Economics and Domestic Science	-	-	167	0.8	447	20	-	-	-	-	-	-	-	-
Service Trades	-	-	69	0.1	69	-	-	-	42	1.5	36	6	-	-
Natural Science	353	6.0	2516	4.2	2171	345	9	12.0	190	6.8	139	51	41	8.5
Mathematics and Computer Science	152	2.6	-	-	-	-	-	-	-	-	-	-	-	-
Medical and Health Related Science	1072	18.1	6022	10.1	5738	284	2	2.7	100	3.6	-	100	62	12.9
Engineering	502	8.5	7311	12.2	7078	233	15	20.0	15	0.5	15	-	38	7.9
Architecture and Town Planning	115	1.9	-	-	-	-	-	-	-	-	-	-	-	-
Trade, Craft and Ind. Programme	-	-	-	-	-	-	-	-	154	5.5	86	60	-	-
Transport and Communications	181	3.0	-	-	-	-	-	-	-	-	-	-	-	-
Agriculture, Forestry and Fishing	71	1.2	7850	13.1	7392	478	1	1.3	50	1.8	50	-	25	5.2
Others	-	-	1469	2.5	1348	85	-	-	250	9.0	165	85	-	-
Total	5928	100.0	59832	100.0	57568	2264	75	100.0	2788	100.0	2131	657	481	100.0

Table 6 (continued)

Field of Study	Chile 1977				Cuba 1976		Mexico 1977 (6)		Uruguay 1975				Venezuela 1977 (6)	
	No.	%	6	7	No.	%	No.	%	No.	%	5	6	No.	%
Education and Teacher Training	5921	40.9	5815	106	2464	26.7	336	0.6	-	-	-	-	1956	13.9
Humanities, Religion and Theology	98	0.7	87	11	519	5.6	416	0.7	58	2.0	-	58	830	5.9
Fine and Applied Arts	92	0.6	78	-	-	-	128	0.2	48	2.3	-	48	45	0.3
Law	328	2.3	312	-	906	9.8	5273	9.5	580	28.3	304	276	1050	7.5
Social and Behavioral Sc.	865	6.0	624	18	118	1.3	3799	6.8	130	6.4	-	130	1071	7.6
Commerce and Business Adm.	953	6.6	953	-	582	6.3	11731	21.0	-	-	-	-	1860	13.3
Mass Communications and Document	357	2.5	357	-	455	4.9	694	1.3	-	-	-	-	233	1.7
Home Economics and Domestic Science	147	2.0	106	-	-	-	45	0.1	-	-	-	-	153	1.1
Service Trades	16	0.1	16	-	-	-	276	0.5	-	-	-	-	133	0.9
Natural Science	279	1.9	153	82	362	3.9	2086	3.7	47	2.3	23	24	937	6.7
Mathematics and Computer Science	70	0.5	59	11	45	0.5	301	0.5	-	-	-	-	317	2.3
Medical and Health Related Science	2070	14.3	2032	19	1515	16.4	12416	22.2	631	30.8	10	621	1588	11.3
Engineering	1507	10.4	1495	10	394	4.3	8933	16.0	18	2.8	-	58	2308	16.5
Architecture and Town Planning	312	2.2	309	-	374	4.1	1603	2.9	-	-	-	-	354	2.5
Trade, Craft and Ind. Programme	760	5.2	760	-	540	5.8	3936	7.1	-	-	-	-	62	0.5
Transport and Communications	-	-	-	-	57	0.6	185	0.3	-	-	-	-	-	-
Agriculture, Forestry and Fishing	699	4.8	688	10	902	9.8	3683	6.6	262	12.8	-	262	596	4.2
Others	-	-	-	-	-	-	17	-	235	11.5	-	235	537	3.8
Total	14474	100.0	13824	267	9233	100.0	55858	100.0	2049	100.0	337	1712	14030	100.0

Source: (see following page)

Table 6 (continued)

Source: UNESCO, Statistical Yearbook, 1980, Table 3.13

Notes: Level 5 - Diplomas and Certificates not equivalent to First Degree.
Level 6 - First University Degrees or equivalent qualifications.
Level 7 - Post-Graduate University Degrees or equivalent qualifications.

Egypt - Natural Sciences include Mathematics and Computer Science.

Senegal - 100 graduates in medical and related health sciences consist of 59 with first degrees and 41 with post-graduate degrees.

Senegal - Humanities, Religion and Theology include social and behavioral sciences.

Chile - Total 1447 includes 383 diplomas and certificates mainly in social and behavioral science, hence levels 6 and 7 may not always add up to total.

Uruguay - 621 graduates in medical and related health sciences include 22 with post-graduate degrees.

TABLE 7

ESTIMATED MANPOWER REQUIREMENTS OF NIGERIA'S FOURTH
NATIONAL DEVELOPMENT PLAN, 1981-85

Category of Manpower	Estimates of Current Stock	Requirements for Meeting Existing Shortage	Estimated Total Requirement 1981-85	Require- ment for meeting wastage	Additional Requirement 1981-85
(1)	(2)	(3)	(4)	(5)	(6)
				(3) - (4)	(5) - (2)
Architects	850	570	3,000	60	2,780
Accountants	5,000	2,140	7,700	350	5,200
Civil and Structural Engineers	6,900	5,560	10,100	490	9,350
Electrical/Electronic Engineers	3,500	1,500	5,500	250	3,750
Land Surveyors	1,200	510	1,900	90	1,300
Quantity Surveyors	700	300	1,400	50	1,050
Medical Doctors	8,700	4,160	13,300	710	9,470
Pharmacists	4,000	1,710	5,400	290	3,400
Dentists	350	230	500	30	410
Nurses and Midwives	58,500	25,070	66,100	4,260	56,930
Arch. Technicians	1,030	1,030	1,700	90	1,730
Civil Eng. Techs.	12,800	6,800	20,400	900	15,390
Statisticians	350	230	500	30	410
Admin. Officers	4,500	1,130	6,700	330	3,660
Executive Officers	6,800	1,700	10,000	500	5,400
Librarians	750	500	1,100	50	900

Source: Federal Republic of Nigeria, Outline of the Fourth National Development Plan, 1981-85, Federal Ministry of Planning, Lagos, 1981, P.80

TABLE 8

KENYA: PUBLIC SECTOR MANPOWER PROJECTIONS 1979-83

	Currently Employed 1978/79	Additional require- ments 1979/83	Additional supply 1979/83	Surplus (+) or Deficit (-) 1979/83
Medical Doctors	542	724	426	(-) 296
Dentists	22	132	110	(-) 28
Pharmacists	30	140	82	(-) 56
Clinical Officers	1,002	835	552	(-) 283
Registered Nurses	1,223	1,037	620	(-) 347
Enrolled Nurses	4,000	3,881	2,236	(-) 1,655
Public Health Officers	250	140	107	33
Public Health Technicians	642	2,020	497	(-) 1,602
Pharmaceutical Technologists	221	669	136	(-) 531
Laboratory Technologists	180	540	77	(-) 463
Laboratory Technicians	234	1,400	264	(-) 1,136
Radiographers	217	833	122	(-) 811
Physiotherapists	116	544	101	(-) 423
Occupational Therapists	45	555	68	(-) 487
Dental Technologists	15	115	13	(-) 102
Orthopaedic Technologists	12	132	35	(-) 103
Family Health Field Educators	430	230	1,012	(+) 82
Nutrition Field Workers	210	250	240	(-) 32
Jurists	217	527	250	(-) 277
Engineers	421	980	325	(-) 674
Professional Agronomists/ Veterinarians (Graduates)	241	1,470	900	(-) 578
Physical Scientists	107	287	300	(+) 3
Graduate Level Teachers	2,264	3,529	3,700	(-) 129
Semi-prof. Agronomists/ Veterinarians (Diplomates)	1,389	1,684	1,500	(-) 184
Other qualified workers in agric./Veterinary (Certificated)	4,389	6,104	2,250	(-) 6,154
Engineering Technicians	1,760	3,365	3,600	(+) 235
Printing Technicians	123	325	300	(-) 125
Scientific Technicians	428	577	540	(-) 137
Other Technicians/artisans	523	1,325	900	(-) 325

Sources: D. Ghai, M. Godfrey and F. Lisk, Planning for Basic Needs in Kenya, International Labour Organisation, Geneva, 1979, p.144.

TABLE 9

MIGRATION OF PROFESSIONAL MANPOWER FROM AFRICA TO THE
UNITED NATION AND THE UNITED KINGDOM, 1962-1972

Recipients	Scientists and Engineers	Physicians and Surgeons	Teachers	Total
United States	2,334	912	n.a.	3,246
United Kingdom	1,034	3,845	5,296	10,176

Source: ILO, Employment Growth and Basic Needs - A One-World Problem,
Geneva 1976, p. 130

TABLE 10

MIGRATION OF PROFESSIONAL MANPOWER FROM ASIA AND LATIN AMERICA
TO THE UNITED STATES, 1962-1969

Source	Physicians, dentists and surgeons	Natural Scientists	Social Scientists	Engineers	Total
Asia	5,739	4,151	945	13,004	23,839
Latin America	6,635	2,036	653	5,459	14,783

Source: J.M. Bhagwati and M. Partington (Eds.), Taxing Brain Drain:
A Proposal, North-Holland Publishing Co. Amsterdam 1976, P.38

TABLE 11

THIRD LEVEL EDUCATION: FOREIGN STUDENTS BY COUNTRY OF ORIGIN, 1977

Host Country	COUNTRY OF ORIGIN											
	Total	Africa No.	%	Algeria	Angola	Benin	Guinee	Mozam- bique	Nigeria	Senegal	Tanzania	Zambia
United States	235544	29560	12.5	1680	15	11	11	3	13510	24	360	150
France	104317	52096	49.9	8549	6	1333	314	1	164	2067	10	17
United Kingdom	58563	12624	21.6	940	1	2	-	13	4312	19	411	575
Germany F.R.	54062	4084	7.6	535	-	16	12	1	448	44	35	7
Italy	27136	1224	4.5	-	-	-	-	-	51	-	-	-
Egypt (1974)	19655	1201	6.1	-	-	-	-	-	-	-	-	-
Belgium	16720	4997	29.9	373	20	33	9	-	51	75	3	1
Argentina (1974)	16615	12	0.7	2	-	-	-	-	-	-	-	-
Japan (1976)	14737	51	0.3	-	-	-	-	-	10	-	-	-
Switzerland	12464	719	5.8	127	10	4	2	-	11	8	2	1
Austria	10461	308	2.9	22	1	-	-	-	53	3	5	-
Greece	9354	634	6.8	4	-	-	-	-	55	-	14	-
India (1975)	8880	2201	27.8	-	7	-	-	9	69	-	364	87
Australia	8258	299	3.6	1	-	-	-	-	50	-	28	9
Spain (1976)	7418	260	3.3	9	1	-	-	2	7	2	-	1
Holy See	7515	444	5.9	9	11	4	-	7	112	3	25	1
Philippines	7383	152	2.1	-	-	-	-	-	138	-	4	-
Syria Arab Republic (1975)	7032	429	6.1	91	-	-	-	-	-	1	-	-
Turkey (1976)	6246	18	0.3	-	-	-	-	-	-	-	-	-
Germany D.R.	5736	994	17.3	-	-	-	-	-	-	-	-	-
Saudi Arabia	5548	1342	24.2	16	-	-	1	-	40	1	-	-
Iraq	5151	1019	19.8	22	-	-	-	-	2	1	-	-
Kuwait	4280	632	14.8	1	-	8	-	-	11	5	9	1
Denmark	4106	145	3.5	11	-	-	-	-	15	-	6	-
Romania (1974)	3833	1162	30.3	28	10	7	9	3	83	5	98	8
Sweden (1976)	3748	107	2.9	8	-	-	-	-	-	-	-	-
Czechoslovakia	3383	336	9.9	56	-	1	15	1	48	1	5	1
Yugoslavia	2822	521	18.5	5	9	-	30	3	23	9	10	9
Hungary	2610	452	17.3	30	-	6	16	-	85	1	43	2
Bulgaria (1976)	2526	145	5.7	53	-	-	27	-	-	-	-	-
Poland	2492	330	13.2	67	-	2	20	-	41	11	20	1

Table 11 (continued)

Host Country	COUNTRY OF ORIGIN											
	Total	Africa No.	%	Algeria	Angola	Benin	Guinee	Mozam- bique	Nigeria	Senegal	Tanzania	Zambia
Senegal	2224	1679	75.5	3	1	166	61	-	30	-	-	-
Ireland	1991	336	16.9	1	-	-	-	-	98	-	6	7
Morocco (1976)	1778	633	35.6	81	-	1	5	-	5	33	-	-
Pakistan (1976)	1690	176	10.4	2	-	-	-	-	1	-	23	-
Netherlands (1974)	1652	80	4.8	1	-	-	-	-	7	-	3	-
Ivory Coast (1976)	1527	980	64.2	-	1	266	73	-	58	48	-	-
Algeria	1343	530	39.5	-	-	16	30	-	-	21	-	-
Singapore	1310	-	-	-	-	-	-	-	-	-	-	-
Guatemala (1976)	1228	6	0.5	-	17	-	-	-	-	-	-	-
Cuba (1976)	1190	801	67.3	-	-	-	417	-	2	5	67	-
Sudan	948	861	90.8	-	-	-	-	-	2	1	2	-
Libya	890	568	63.8	3	-	-	-	-	1	2	-	-
Portugal	857	253	29.5	30	-	1	17	-	-	-	-	1
Mexico	852	4	0.5	-	-	-	-	-	-	-	-	-
Chile	703	-	-	-	-	-	-	-	-	-	-	-
Iran (1976)	683	101	14.8	4	-	-	-	-	-	1	47	5
Togo (1976)	686	654	95.3	1	3	108	20	-	49	5	-	-
Finland	571	86	15.1	3	-	-	-	-	32	-	6	-
Panama	486	33	6.8	-	-	-	-	-	-	-	-	-
Total	701639	126279	18.0	12738	143	1984	1073	60	19674	2403	1606	879

Source: UNESCO, Statistical Yearbook, 1980, Table 3.15

Note: Data provided in this table are to be considered as indicative. Foreign students enrolled in these 50 countries represent approximately 90 percent of the known total. The following countries whilst lost to many foreign students have not been listed in the 50 selected countries either because the distribution by country of origin was not indicated or more recent data were not available. Canada (26,400 students in 1977), Brazil (25,642 students in 1974), USSR (30,563 students in 1971), and Lebanon (22,184 students in 1970).

Table 11 (continued)

Host Country	COUNTRY OF ORIGIN							
	Argentina	Brazil	Cuba	Guyana	Mexico	Peru	Uruguay	Venezuela
United States	740	2830	3520	832	5170	1950	200	7420
France	674	1520	18	7	578	503	249	821
United Kingdom	11	397	1	225	343	64	21	692
Germany F.R.	175	392	4	5	147	212	31	154
Italy	215	118	-	-	-	57	-	506
Egypt (1974)	-	-	-	-	-	-	-	-
Belgium	43	71	6	-	47	80	21	18
Argentina (1974)	-	563	20	-	15	2991	754	190
Japan (1976)	20	120	-	-	26	20	-	5
Switzerland	41	76	1	2	27	31	20	27
Austria	20	37	1	-	14	20	3	31
Greece	1	11	-	-	5	-	-	6
India (1976)	-	-	-	29	-	-	-	-
Australia	2	2	-	-	3	-	2	-
Spain (1976)	215	54	278	-	175	290	43	661
Holy See	72	175	3	-	278	20	11	29
Philippines	-	-	-	-	-	-	-	-
Syria Arab Republic (1975)	3	-	-	-	-	-	-	-
Turkey (1976)	-	-	-	-	-	-	-	-
Germany D.R.	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-
Iraq	12	12	-	-	-	-	-	-
Kuwait	2	1	-	-	-	-	-	-
Denmark	10	12	-	1	4	3	-	1
Romania (1974)	-	1	141	-	4	58	-	38
Sweden (1976)	10	12	-	-	3	-	-	-
Czechoslovakia	4	1	31	1	2	5	3	3
Yugoslavia	-	1	-	-	3	-	1	5
Hungary	4	2	37	1	-	24	2	5
Bulgaria (1976)	-	-	127	-	-	-	-	-
Poland	-	35	31	-	3	36	1	7
Senegal	-	1	-	-	-	-	-	-
Ireland	-	-	-	3	2	-	-	1
Morocco (1976)	-	-	-	-	-	-	-	-

Table 11 (continued)

Host Country	COUNTRY OF ORIGIN							
	Argentina	Brazil	Cuba	Guyana	Mexico	Peru	Uruguay	Venezuela
Pakistan (1976)	-	-	-	-	-	-	-	-
Netherlands (1974)	2	10	-	-	-	2	2	1
Ivory Coast (1976)	1	1	43	-	81	7	-	11
Algeria	-	-	-	-	-	-	-	-
Singapore	-	-	-	-	-	-	-	-
Guatemala (1976)	11	1	43	-	81	7	-	11
Cuba (1976)	4	7	-	4	10	-	2	2
Sudan	-	-	-	-	-	-	-	-
Libya	-	-	-	-	-	-	-	-
Portugal	5	350	1	-	-	-	1	93
Mexico	-	-	9	-	-	-	-	-
Chile	59	12	1	-	3	81	16	14
Iran (1976)	-	-	-	-	-	-	-	-
Togo (1976)	-	-	-	-	-	-	-	-
Finland	2	3	-	-	1	-	1	1
Panama	7	8	17	-	10	13	-	-
Total	2430	6823	4308	1110	6954	6479	1364	10732

Source: UNESCO, Statistical Yearbook, 1980, Table 3.15

Note: Data provided in this table are to be considered as indicative. Foreign students enrolled in these 50 countries represent approximately 90 percent of the known total. The following countries whilst lost to many foreign students have not been listed in the 50 selected countries either because the distribution by country of origin was not indicated or more recent data were not available. Canada (26,400 students in 1977), Brazil (25,642 students in 1974), USSR (30,563 students in 1971), and Lebanon (22,194 students in 1970).