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EDUCATIONAL PROVISIONS IN RELATION TO MANPOWER NEEDS

A Report of evaluation visits to selected African countries^{1/}

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INTRODUCTION

The report which follows this introductory statement represents observations and suggestions growing out of visits to ten countries over a period of six weeks, July 28 to September 15, 1969. These visits were made for the purpose of assessing existing and proposed educational provisions in relation to manpower needs. The countries visited were Kenya, Tanzania, Malawi, Zambia, Ethiopia, Uganda, Ghana, Dahomey, Togo and Liberia.

The writers of this report found the experience both pleasant and highly rewarding. Through the good offices of the United Nations Economic Commission for Africa, the United Nations Development Program Officers in each country arranged contacts with officials of the home government concerned with planning, education, and ministries such as agriculture and areas of resource development requiring specialized personnel. A number of conferences were held with university heads and key officers of their administrations. Visits were made to training centers concerned with the development of skilled manpower. Specialized installations such as research centers and laboratories for the production of vaccines were seen when feasible. Visits were also made to commercial and subsistence farming areas (Ethiopia).

Although the writers had visited Africa on other and even recent occasions, progress and change were easy to note. The number of well trained and dedicated public servants observed in major government posts was impressive, as was the limited but high quality of indigenous personnel in specialized agencies of government bureaus.

Also evident was progress in the varying degrees of commercial development in every urban center, from retail businesses to small industrial plants. Improved housing and programs of beautification were noted in every country. All of these gave evidence of vigor and progress. Every country was in some stage of national planning. Several were at the beginning stage of a third five-year plan. Each new plan was an extension and correction of previous plans, with evidence that experience had dictated revision in terms of education and manpower goals, including the time required for their accomplishment.

The official reception given the writers was most cordial. There was, with few exceptions, complete willingness to discuss failures as well as successes in full candor. Understandably, in view of the shortness of time under independence and the inexperience of administrators, some plans and goals appeared ill-advised. Some development plans, though based on the extent of need or demand, were unrealistic when viewed in terms of available money and manpower. A major concern in evaluating existing manpower schemes or projects was that of trying to assess the soundness of present educational provisions in relation to stated plans for development. The emphasis in this report will be thus directed.

The writers are pleased to record in this introductory statement gratitude to staff members of American Embassies, U.S.A.I.D., and the Peace Corps, who, when encountered, were deliberately helpful. A commendable impression was gained of the U. S. presence in the countries visited. Equally noteworthy are the programs of U. S. voluntary agencies such as the African-American Institute, the Institute of International Education, and American foundation efforts. The interest taken in behalf of the peoples of the respective countries by all of these were large and manifested in many constructive ways. The American practical and "down-to-earth" approach to development was frequently, and without solicitation, favorably commented upon. Many African officials and a number of foreign nationals from many countries revealed a high sense of dedication in their attack on diverse and difficult problems. Instances of conflict between short-term and long-term goals were often noted, growing no doubt from efforts to secure tangible gains in the shortest possible time. The welfare of many countries would be better served with the use of a longer period of preparation, though immediate results would be less spectacular. Africa is attempting to move quickly from a rural tribal-dominated way of life to a pattern of development that is Western in many of its characteristics. The lack of capital and trained manpower, together with inadequate experience, may result in repeating in exaggerated form the mistakes of Western economies. This can be avoided only if the greatest realism possible is involved in program planning and execution.

Despite these understandable difficulties, prodigious efforts in great variety are being made in each country visited to identify first priority needs to be met in connection with established goals. From the multiplicity of efforts, which combine the thinking of the nation's leaders with the input of ideas from private agencies and co-operating foreign governments, almost every country has some unique and positive approaches worthy of emulation. Many of these bespeak both resourcefulness and realism when viewed in terms of existing limitations of trained manpower and money. From these independent thrusts can come accomplishments that can serve as positive examples to other countries in Africa, as well as elsewhere.

PURPOSE

The study covered by this report combined the interest of the Phelps-Stokes Fund in continuing its periodic assessment of education in Africa, in terms of human development, and the interest of the Economic Commission for Africa of the United Nations in the current relation between education and manpower needs. It was suggested that specific attention be paid to the preparation needed by individuals selected to assume pioneering roles in the development of Africa's human and natural resources.

The concrete findings of this study in failing to meet fully the purpose as stated above may be disappointing to officials of E.C.A., who encouraged the ten-country tour carried out by the writers. The desire of E.C.A. to have recommendations for specific projects and programs was not carried out, because it became increasingly clear as each country was visited that this would not be a useful course of action.

Although needs and programs encountered were surprisingly similar, the circumstances under which these needs must be met were peculiar to each country. The amount of money required in the form of loans or grants; the manpower available, whether indigenous or expatriate; the

amount, quality, and specific character of raw resources, and even international relationships within Africa in terms of markets and external investments were factors which soundly based projects and programs must take into account. Only the country's leadership, in consultation with private and foreign government agencies productively involved in these countries, should make the final and critical decisions on programs designed to meet specific needs and concerns. The countries themselves should assume the primary responsibility for the detailed planning necessary to the development of viable programs. Outside advice or suggestions should be sought when needed but should not be substituted for the basic responsibility which rests primarily with the home government.

The thinking-through and careful evaluation of the merit of and the obligations entailed in a given plan or proposal must be assumed by responsible officials of the nations themselves. Failing this, ready acceptance of proffered proposals, where the initial cost is assumed by the donor agency, could lead to unfortunate consequences. Officials concerned with planning in more than one country reported that they had learned by unfortunate experience that this careful evaluation of externally proffered programs was absolutely essential to avoid pitfalls and future obligations which the country's resources could not satisfy or which could be better applied elsewhere. It is the hope of the study team that this report will serve the purpose of suggesting guidelines useful in the formulation of new projects or in the institution of corrective measures intended to make present educational programs, or those which may be created, fully serviceable in meeting manpower needs.

The considerations above have led to the conclusion that the observations of the study tour reported herewith, in view of the necessarily limited assessment possible in visiting ten countries in six weeks, should be confined to a consideration of desirable curriculum modifications and the quality of leadership training available to meet specific manpower needs. Successful efforts undertaken in behalf of these important and closely related concerns should result in better preparation of those

attending a school at each level, in a manner essential to meeting the nation's needs for a healthy and productive citizenry among its total population.

PROCEDURE

Observations made in the ten countries visited were for the purpose of gaining an understanding of the relationships between the efforts now in progress seeking national advancement and present educational programs in supplying the scientific and professional indigenous manpower required to successfully achieve development goals. To get the information needed, visits were made in each country to Ministries of Education and Agriculture and to those ministries or organizations concerned with both short- and long-range development planning. Particular attention was paid to the number of young people in school at all levels and the extent to which this education, particularly at the secondary and post-secondary levels, seemed relevant in terms of providing the specific skills required to meet the manpower needs from semi-skilled to top professional. Information was sought about educational efforts and the teaching of techniques useful to agriculture; the extent to which the mechanical trades were being taught, and at what level; the extent to which sub-professionals in engineering and the mechanic arts were being trained, at what level, and the prerequisite entrance requirements for these programs. At the university level, an effort was made to determine the variety of professional offerings; the number of students in the several categories of studies; the extent to which mathematics and the natural sciences were offered; the degree of attrition in these areas as compared with the arts and the social sciences; and, in general, to examine the extent to which present educational offerings and enrolments would suggest a probable timetable for the localization or Africanization of the majority of technical and professional posts in the respective countries.

In each of the ministries visited, conferences were sought either with the head of the ministry or the Permanent Secretary; and, where possible, those persons responsible for key programs were invited to join in a general discussion explanatory of the workings of the particular ministry, its goals, and its specific manpower needs. In practically every instance, because of the enthusiastic leadership which the study team encountered and the vigorous efforts being made to achieve goals, these conferences proved not only informative and interesting but a comprehensive view of the work being conducted. In practically every ministry or major area of responsibility visited, the question was put as to the most urgent need to be faced by the country in question. One of the exhibits of this report is a compendium of the answers which were given in the ten countries visited.

Where possible, and in the time available, inquiry was made about manpower studies and planning projections. The information received has been helpful in its suggestion of priorities, the extent of available resources, and the nature and amount of input from private agencies and co-operating foreign governments. Rough comparisons were possible between similar activities in other countries. There seemed little direct comparability in statistical analyses between different countries.

Within countries, duplication between agencies or ministries of similar or related concerns, without co-ordination and possibly with competition in terms of money and manpower, was noted and frequently commented upon by officials of government and by the personnel of co-operating agencies.

In all interviews, it was made clear that the persons engaged in the study were not in command of money resources which could offer implementation to the needs which were expressed. It was stated that the resulting report would attempt to evaluate the present educational offerings and to suggest possible modifications which would seem to strengthen the educational programs in relation to manpower objectives. Programs, if any, growing out of evaluations made by the visiting team

will be of those formulated by the appropriate officials of government and associated co-operating agencies, as it is felt that only those persons having the detailed and continuing understanding of the problems, needs and resources are capable of formulating practical and, therefore, achievable programs.

MANPOWER

As leaders of African nations assume the responsibilities of independence, they increasingly recognize that the generation of wealth is of urgent importance to the future of their countries. This is essential if the development programs they have formulated are to be achieved. Wealth generation can only be achieved by manpower competent to convert the raw resources present in varying abundances to the stage necessary for income production. In nearly all of the countries visited, manpower planning was in some stage of development. Some countries were making their first planning efforts, while others were at the initial stage of their third five-year plan.

In every country, manpower assessments reveal acute shortages at every level. This includes scientists, in terms of agriculture and those needed to develop mineral resources; professional skills required for production and human health; and competent teachers for primary, secondary and post-secondary education. The high dropout rate for those who do not go beyond primary school and, who, in most cases, have had only academic studies, suggests the need for well-prepared specialist teachers who can enrich the primary curriculum in terms of nature studies and vocational instruction.

Manpower Planning

The acute shortage of manpower in practically all areas required for resource development and the overall shortage of money suggest that a high priority emphasis should be given to "must" fields, with the concentration of resources at these points.

The tendency to move in many directions at once and substantially ahead of the availability of African nationals with the requisite training to man specific development schemes results in wastefulness and, in some cases, complete failure. The employment of expatriates with short tenure who may return to home countries with no counterpart ready to assume top responsibility is a too frequent occurrence. It is fully recognized that in some countries highly essential services cannot be discontinued and others cannot be delayed until trained African nationals are available. This should not be an excuse for not delaying programs of less urgency until the employment of expatriates can be more effectively correlated with the readiness of trained Africans to take over after serving a limited period as understudies.

Where possible, African nationals who are properly trained should have the opportunity to establish their disciplines in their home countries. Often it takes the full weight of responsibility, especially in the absence of adequate resources, to call forth the resourcefulness and initiative required to pioneer. Such persons, lacking experience, should be supported by short-term on-the-spot consultation given by foreign experts who can diagnose troubles and suggest changes without depriving the responsible African head of the necessity for instituting changes suggested. These experts should remain only long enough to be sure their suggestions are understood and are feasible.

Planning Problems Encountered

I. The lack of clearly established priorities. The great sense of urgency in getting on with development schemes of great diversity in the face of limited manpower and money results in failure to concentrate resources at point of greatest need. In some instances, political rather than practical considerations tend to dominate decisions on development projects to be undertaken.

II. The manpower programs often find the required skills non-existent in the respective countries and difficult to acquire through expatriate employment.

III. The initiation of development schemes using expatriate manpower with short tenure and without African counterparts or understudies results in excessive costs and often project failure from lack of continuity.

IV. Over-emphasis on administration results in a duplication of planning functions and decisions among a number of bureaus and agencies. Under these circumstances, technical personnel at the action level are frequently frustrated by a division of authority and responsibility above them.

V. In some instances, political considerations were stated to result in technical management responsibilities being assumed by or assigned to persons without the required technical background.

VI. The multiplicity of ministries, bureaus and agencies constitutes a financial burden which limits the availability of money needed for wealth-producing undertakings. With each unit of government competing for its place in the sun, the national interest is often ignored through failure to co-ordinate related efforts under different agencies and in the indiscriminate obligation of limited local resources without an adequate assessment of the values to be derived in relation to national needs.

VII. In most African countries, the need exists for greater balance between administrative relationships, which frequently seem excessive, and efforts to overcome the lack of skilled manpower. This balance is required at all levels to support announced development schemes.

Government Administration Over-emphasized

Since the government will largely determine the scope and rate of development in the new nations of Africa, the outcome at any period will importantly reflect the wisdom and efficiency of the government process. It was inevitable, therefore, that an attempt to assess the relationship between education and manpower development would encounter indications of the extent to which these factors were influenced, for good or ill, by government administrative processes.

The comments which follow represent impressions that, while obviously superficial, were observed in practically all of the countries visited. The critical comment involved unfortunately fails to reflect the many constructive and imaginative efforts observed and the capable and dedicated people in charge of or in important supporting roles of government. These were noted earlier.

The great urgency which the leaders of most countries feel to move in many directions at once as they seek balanced development is fully evident and appreciated. The necessity of seeking balanced development with inadequate money resources and frequently with untrained and inexperienced African nationals makes of the task a great and difficult one.

In the absence of a substantial free enterprise system under indigenous control, leadership for development comes from government. The effectiveness of the government's role will depend on the adequacy of planning and the timeliness of projections in relation to the availability of the human talent and money resources. The approach often observed seems to assume the necessity for detailed and extensive organization, which is geared to a timetable too short for realistic accomplishment. Often there is lacking a priority of emphasis which recognizes either the conditions most urgently in need of satisfaction or the availability of the resources required. This results in too many poorly conceived and inadequate efforts, in too many directions, to make sound accomplishment possible.

It appears that an effort has been made to take over and expand the administrative structure employed by the former colonial governments, without recognizing its shortcomings when measured by the purposes and goals of the newly independent nations.

The size of administrative provisions should be related to the amount and complexity of that which is to be administered. Where substantial development has been achieved as a result of the introduction of foreign capital and expertise, an efficient regulatory function is needed. In

most countries where there must be reliance on agriculture, which is now largely undeveloped, and where the capital required is insufficient, the expenditure of effort should be directed to the institution of sound productive practices as soon as possible, rather than to over-organization for the administration of the limited resources available. For the same reason, extensive planning in the face of limited implementing capability constitutes a diversion of resources needed elsewhere and a buildup to the inevitable disappointment and frustration to be seen when formulated plans remain unaccomplished.

Perhaps, largely for political reasons, a great multiplicity of government bureaus and agencies exist in a number of the countries visited. Each of these agencies or bureaus is headed by an ambitious person who feels compelled to make his organization stand out. Plans of organization often result in a given program having its several aspects become the concern of different agencies or government departments. These departments are frequently parts of different ministries. The outcome of this in some countries is an expensive organization of excessive dimensions. Programs attempting to operate under multiple authority get bogged down in red tape and evolve into complicated and inefficient operations. The financial burdens of administrative costs may cause much too little money to be available for those activities which are primarily wealth producing. This is especially likely to become the case when there is a shortage of specialized indigenous talent in areas where development of raw resources of soil and minerals should become the basis of new wealth.

A careful examination of administrative relationships might reveal the possibility of consolidating areas of concern at a substantial savings in operational costs, with greater efficiency resulting from a more simplified administration. It is recognized that political considerations may handicap the achievement of this goal.

If a country's aim is to have balanced relations between public or government effort and private service or productive enterprise, government should conduct functions of regulation and undertake efforts which

facilitate production rather than assume primary responsibility for the detailed management of productive processes. The political considerations frequently involved in government direction and control are either extraneous or harmful to the processes concerned with sound efficient management.

An overly burdensome administrative cost of government may deny to productive industry the capital that should be available if growth possibilities are to be realized.

Understandably, this situation, for a variety of reasons, may not be corrected overnight. If the problem is fully recognized, it would seem desirable, from analysis of existing procedures, to institute measures which will in time produce greater efficiency and free, for wealth-producing purposes, the monies urgently needed.

Attracting wise administrative support for development goals is a great problem in most developing countries. Sound administrative action requires the careful screening of development offers to be sure, first, that an offer is directed to meeting a high priority need; that the obligations involved for continued financing can be met when monies from external sources are discontinued; and, second, that the offer is not merely a concession to the desire of all departments of government to expand their areas of concern.

Africanization Highly Desirable at Professional Level

Africanization is comparatively rapid in general administration but slow in areas requiring technical or professional training. However, the need is equally urgent for the nations' long-term good to competently Africanize the leadership of the technical areas of production. Although this is expensive and time-consuming, prompt and persistent effort in this regard should be instituted without delay.

The need for expatriate talent in great variety and substantial quality is fully evident, if the present level of activity in government

and industry is to be carried on efficiently and at its present level. Caution needs to be followed in being sure that the availability of such talent, sometimes at small cost to the recipient country, does not result in remaining too long through failure to develop adequate African counterparts to assume leadership at the earliest possible date. Also to be considered is that expatriate talent usually has the limitation of shortness of tenure. Unless the tenure coincides with the presence of fully prepared, though inexperienced, nationals, the development accomplishment in a particular area will be of short duration and may come to naught if an expatriate is replaced by another expatriate whose emphasis is different. More than this, sound development requires the continuity of effort that only a properly trained and experienced African national is likely to give. In such persons, where the skill exists, there will also be the commitment to home country, and the desire for long tenure in a career opportunity which makes for sound and stable development. This type of relationship should not be sacrificed for the inadequate and, in all likelihood, temporary gains which come from a poorly articulated relationship between specialized expatriate services and the availability of counterpart nationals to take over.

EDUCATION

Secondary Schools

Since the primary grades in most countries are lacking in vocational subjects and students are usually too young to be employed except on their home farms, as most belong to rural families, secondary schools represent the pivotal and career critical grades. It is from the secondary schools that students are admitted to teacher training, training in technical vocations, and to the university. Accordingly, it would seem that education at this level should have the scope and flexibility to provide either the skills, pre-skill subjects, or balanced pre-university preparation in terms of the university's diverse offerings.

Generally, from 3 to 10 per cent of youth attending primary school enter secondary school. Secondary schools have programmes consisting of four, five and six forms. Secondary schools offer largely the standard academic curriculum with emphasis upon history (often European), the arts, and social studies. Most high school curricula are weak in science and mathematics. Few high schools are vocational in character or offer vocational subjects.

In most of the countries visited, a major problem involving the secondary school seems to be that most graduates and those who do not complete their studies encounter difficulties finding suitable employment. For those entering the university, there is high attrition among science and mathematics majors. Each of these problems may be attributed in part to the single-stream secondary programmes, which emphasize subjects preparatory for university work in the humanities and social sciences. In practically every country visited, where manpower training was in progress, the need for emphasis on the natural sciences, mathematics, and productive vocations was repeatedly stressed. The following quotation from a paper given by a distinguished Ethiopian scientist, Dr. A. Tekle,^{1/} reflects a concern which is almost uniform for developing African countries:

"Much has been said on the problem of the shortage of scientific and technical personnel in Ethiopia. Practically everyone of us, whether on a public platform or in an informal gathering, cries out for physicians, scientists, engineers, pharmacists, and agriculturists, but few of us talk on what should be done about it.

^{1/} Director, Imperial Central Laboratory and Microbiology Research Institute.

"One of Ethiopia's greatest resources is its intelligent and receptive people; and yet one of its greatest limitations is the dearth of trained manpower to initiate the action programmes necessary for sound economic and social progress and to shoulder the multitude of responsibilities that such progress implies.

"Economic development requires the prospecting and appraisal of resources: water resources, vegetation, rainfall, soil, minerals, marine life, insects, plants, animal diseases, public health, transport, irrigation. In all of these a country which aspires to economic development must know where it stands, what it can count on, and what it must reckon with."

Dr. Takle states further that the solution to the above problem must begin in the provision of science at elementary and secondary school levels. Students so prepared will be able, with further training, to fill the important need for middle-level, science-trained persons and technical manpower — or to successfully continue their studies in the natural sciences or the professions at the university.

There is needed in almost every African country of a thorough reorganization of the secondary school. The present single-stream academic high school supports the white collar bias, which leads every student to seek employment in a government bureau — and, preferably, at a desk job. There are not enough jobs to go around; and if there were, they would add to the already burdensome cost of administration, while the skilled manpower required to staff wealth-producing activity goes unsatisfied.

Africa is plagued by the stereotyped concept of both the content of the curriculum and the amount of time required for its completion. The circumstances presented in most African countries, where productive skills are acutely needed and the money available to education is highly inadequate, suggest that all secondary schools should have a vocational bias. There is reason to believe students who acquire a vocational skill may, without handicap, pursue higher studies if they are sufficiently well taught. This assumes that the quality of instruction at the secondary level is fully adequate. High standards of performance can and should be maintained. This is possible while giving an applied quality to subject matter content which is relevant to student and national needs.

Those students enrolled in high schools with six forms would receive a trade-level certificate for vocational work at the end of four years. Those wishing to become middle-level technicians would do an additional two or three years (depending on the programme requirements in a technical institute or community college) and receive a diploma. Other students would qualify for university or professional training, upon graduation from the fifth or sixth form of the secondary school. The plan now frequently followed is to require students to complete secondary school before training for a vocation. Such a plan is both expensive and impractical, in view of the generally serious need for skilled manpower and the limited monies available. If secondary school students pursuing vocational or technical courses are provided on-the-job training to gain practical experience in terms of their vocational choice, they will be capable of adequate performance when employed after graduation. Beginning vocational training at the post-secondary level substantially reduces the number of students that will learn a vocational skill. Secondary school graduates and non-graduates without skills have little chance for meaningful employment.

The plan being instituted in some countries is the assignment of one or more vocations to each secondary school. Such schools need not attempt a large number of vocations. By distributing the most frequently needed vocations among a number of secondary schools and permitting students to select the school offering their choice of vocation, skills to meet manpower requirements can be learned at minimum cost.

Secondary school curricula should offer subjects that will be useful to those who wish, or could be guided, to enter business as a vocation. The wholesale participation of Africans, particularly women, in the sale of articles of low cost and small quantities stands in contrast to the very few men and women found operating retail outlets of significant size. Efforts in many countries to encourage retailing by their nationals is largely thwarted by the lack of skill, experience, and capital among the indigenous population. Of these, the lack of skill and experience is the most serious. Secondary schools offering business subjects should seek experience training in local retail outlets. Should the offerings of this "on-the-job" training prove financially burdensome to owners or operators, a suitable form of subsidy to the co-operating business should be considered.

The provision of on-the-job training at the secondary level would be economical, since it would not be necessary to purchase expensive equipment for classroom training purposes. Much of such equipment soon becomes outdated. On-the-job training would acquaint trainees with the methods and equipment currently in use in establishments where they may be employed later.

The need for the reorganization of secondary education in most African countries is extremely acute. However, it can be done, while achieving economy and a more relevant education at the same time. The willingness to experiment and explore possibilities in this area should yield abundant rewards.

✓ Vocational Instruction at Secondary Level

The vocations listed below can be taught at the secondary level. They represent areas of present and expanding opportunity for employment and for the establishment of small businesses.

Beauty Culture
Barbering
Shoemaking
Dressmaking and Millinery
Retailing: Groceries, General Merchandise,
Restaurants
Auto Sales and Services
Building Trades: Contracting, Construction
Carpentry, Masonry, Electrical Work, Plumbing
Secretarial Science

On-the-job experience could and should be an aspect of training in each of the vocations listed above. Teachers should also be encouraged to work at their specialities during vacations or on a time-release basis. This would ensure that classroom instruction is effectively related to job requirements.

Post-Secondary Education

Post-secondary education is found in a variety of forms in most African countries. In addition to the technical institutes, which are increasing in number as the need for middle-level manpower is recognized, agriculture, engineering - mechanical, electrical, civil, surveying - and other

vocations on a sub-professional level are offered in technical institutes. Depending on the country and the particular discipline, the programme length is usually from two to three years, the successful completion of which leads to a diploma. In addition to the technical institutes, a number of government bureaus conduct training schools of their own. There are also to be found trade schools for the building trades and other skills generally regarded as below the level of the technical institutes. Usually these trade schools may be entered from the fourth form, whereas technical institutes usually require fifth or sixth form graduation as a prerequisite.

Each technical school requires a separate plant, administrative staff and specialist teachers. Other appurtenances of instruction, such as laboratories, exist to greater or lesser degree.

Given the limited money resources available, the duplication at the administrative level, the fractionation of common core interests and subject-matter, the likely lack of expertise in teaching methodology and the scarcity of technical competence, there is reason to doubt that the expense entailed in training schemes at these levels is sufficiently justified by the results. This is particularly true where quite limited numbers of students are enrolled in specialized courses of instruction. There seems too often the imposing of irrelevant standards adopted rather than adapted from those existing in other countries. The more appropriate effort should be a careful assessment of the amount of relevant subject-matter required by those who will graduate from a specific programme in terms of the work they are expected to do. Placing vocational work at the secondary level and combining specialized vocations at the sub-professional level in units sufficiently large to justify adequate financial outlays and staffing in both teaching and administration by truly competent people seems highly desirable.

Eliminating departmental or ministry-conducted schools wherever possible and the bringing of such schools together under competent and unified professional leadership will result in better and more economical instruction.

This procedure would remove institutional responsibilities for instruction from departments of government, thereby freeing government officials to give more attention to planning, policy development and programme administration in the areas of their concern. Ample provision can be made in the organizational structure to permit government departments and areas of related instruction to confer on course content to ensure adequate attention to the process of providing appropriate and useful instruction.

Many of the subjects involved in educating for basic competence are common to several vocations. Special skills such as typing can be taught at the secondary level. The ministries should be asked to co-operate in providing experience training. Where requirements are such as to require one or two years of post-secondary education to achieve the skills involved, experience training in appropriate agencies should be required.

Universities

The number of universities in African countries has greatly increased in the decade since most of the new nations gained independence. These universities seem in excess of the qualified student demand and national requirements at the present time. The existence of or desire for universities in some of the smaller countries can be explained only on the basis of national pride. This unfortunate trend seems destined to continue if monies can be made available from any source.

Most of the universities have inadequate teaching personnel. Only a beginning has been made to fill staff positions with African nationals. Because of the difficulty in recruiting competent expatriate personnel in a number of advanced or specialized subject-matter fields, many university posts remain unfilled.

Most universities in Africa are new. While all universities observed are suffering from the shortage of high-level teaching personnel, the shortage is most acute in the younger institutions.

The announced plan to Africanize the teaching faculty is largely an unrealized goal because, at the moment, too little is being accomplished in the selection and training of African staff in the best world universities to ensure that Africanization of the majority of faculties in most African universities is likely to take place in the early decades ahead.

It is equally clear that because of shortness of tenure of expatriate personnel, the continuity of effort essential to development of genuine strength in a subject matter field is generally lacking.

The eventual attainment of the desired quality in the universities requires that emphasis equal to that given to present and immediate staffing with foreign nationals should be given to a concerted effort to identify, encourage, and underwrite -- perhaps with foreign assistance -- the thorough education of nationals to take over as soon as possible the leadership posts in the university. Given the present level of quality of most universities and regional institutions in the natural sciences, those expected to give leadership in these fields later should seek education at the undergraduate and graduate levels outside Africa in leading appropriate institutions.

Africa's urgent need for manpower capable and willing to undertake development of natural resources suggests that education in scientific disciplines similar to that available in the land-grant colleges of the United States will provide the content of subject-matter and the philosophy of approach which is highly desirable and too often lacking in most African countries at the present time. The failure to give equal emphasis to the immediate and thorough training of African nationals to assume leadership posts generally is a serious shortcoming of resource development efforts in most African countries. The short-term and seemingly less costly approach of expatriate staffing for early results, while understandable, should always be viewed in terms of its largely temporary and expedient nature.

Prior to the study tour covered by this report, E.C.A. circulated among leaders a paper entitled "Education for African Development". This paper, in a general assessment of the large technical manpower needs and the extent and quality of facilities available in different African countries,

suggested a co-operative leadership training scheme that might involve interested countries, American universities (particularly the land-grant college type), and the US Government. The plan was merely suggestive and could be undertaken only if the proposed constituent agencies agreed. Under such a scheme, it was felt that each participating African country would determine the number, fields of interest, level of study, i.e., whether graduate or undergraduate. Emphasis was placed on undergraduate study to ensure the high quality of preparation needed for the comparatively small number that would man posts of key leadership in each country.

This plan was put forward not so much as a specific proposal but as a type of programme considered useful as a pioneering venture to establish a sound level of quality in resource development.

Such a scheme, if adopted with desired modifications, would have its best chance of success if initiated by officials of interested African governments. While it is not possible to predict the degree of willingness on the part of the American universities and the US Government to co-operate in such an undertaking, it is felt, based on past contributions from these sources, that such a proposal would receive a favourable response.

If the scheme is adopted, the number of trainees involved would be decided by each country. The training or education of this select group should be given in terms of highest educational standards and under conditions conducive to gaining practical experience in individual areas of specialization. The suggestion that a larger share of the cost be assumed by each country for its nationals was based on the belief that those agencies, government or private, asked to co-operate would be favourably impressed by the willingness of the respective countries to make a sacrificial financial effort, if necessary, to ensure the adequate preparation of its leadership. This contribution from the countries would encourage their selection of trainees in line with areas given priority for development and would encourage the development of relationships designed to ensure the return of trainees on completion of their overseas education and their assumption of responsible employment.

The claim often expressed that the cost of such a programme of participating countries is too great, while understandable, seems to fail to give the urgent need for high-level indigenous manpower the top-ranking priority position it deserves.

Africans of adequate training, even when lacking experience, should be given the top responsibilities in their disciplines, on the assumption that able people grow under the weight of responsibility. The use of competent specialists as short-term consultants, while leaving the continuing responsibility in African hands, is better than long tenure of Africans as assistants to foreign nationals. The consultant method seems especially useful when there is a co-operative relationship between the local institution, university or technical college, and a foreign university committed to educating personnel for and in consultation with the local institution.

There is a limited but sufficient number of examples of the influence of thorough-going technical and scientific education in lending foreign universities to fully justify the time and money expenditures involved. Such persons, though few in number, are to be found in universities, manning research stations and laboratories for the production of human and animal vaccines. A few are successfully engaged in different phases of productive pursuits in agriculture and industry. In most cases these persons were trained at the undergraduate and graduate levels in leading universities of foreign countries. Or they have received several years of graduate study and gained practical experience abroad after graduating from an African university. As persons thus educated take over major teaching posts, African universities will achieve the quality which will assure to the youth of Africa educational opportunities in African universities fully adequate for their needs.

It is neither necessary nor desirable to seek complete Africanization of university faculties. The opportunity should and likely will always exist for the employment of competent and committed persons, regardless of their country or origin, on the faculties of African universities, as is true elsewhere. These should be a minority, as is also true in other countries.

The present slow pace of localization, both at the university and in the secondary schools, relates in part to the fact that teachers and financial subsidy are partially or completely available from foreign governments. It is easy, under the circumstances, for this temporary expedient to become of long duration, thus avoiding the costs of an immediate and significantly large programme to provide adequate training for indigenous personnel. This is false economy, achieved at the expense of the qualitative development of university education. This failure symbolizes the over dependence too often observed by developing countries for the conduct of those continuing programmes which should as soon as possible become the responsibility of the home government.

Foreign Assistance in Staffing

Because African governments lack adequate money and trained indigenous personnel to discharge for themselves all nation-building programmes, assistance in these regards is being sought and received from a number of foreign government sources. The necessity for receiving this aid should not obscure the fact that it is of uncertain duration and will be terminated in the course of time. Recipient countries will be best able to face this uncertainty in the future if the external assistance received has been employed for purposes that can be effectuated by support of limited duration. Those processes requiring continuing support, such as university operating costs, including faculty salaries, should as soon as possible be carried by the home government. Failure in this regard will inevitably limit freedom of action and affect negatively the challenge to develop competent and responsible indigenous personnel. In a number of instances, this consideration seems not have been taken into account. Caution in this regard seems particularly relevant to staffing at the university and teacher training levels, if the achievement of enduring educational quality is to be attained in the reasonable future.

Scholarships

Scholarships for second-level training abroad seem questionable except on a limited and urgent basis. Second-level technical and vocational training represent a need of such magnitude that it should be provided within the countries themselves -- or, in rare instances, on a regional or multi-country

basis on the African continent. The great need is for teachers of technical level subjects. These should be degree people, and they should fully justify foreign training, because the quality of training is paramount. On obtaining post-graduate degrees, such teachers should function at the university level and serve as teacher-trainers. The university in turn should train first-degree people who will teach their speciality in secondary schools or technical institutes. These must have teaching methodology as well as competence in technical subject matter. Such teachers should have the competence and willingness to keep their teaching equipment in good repair. They should be able to improvise simple equipment when necessary. More careful selection and clear co-ordination is desirable to ensure maximum benefit from college training.

Regional Education

Sound administrative practices will, in a like manner, discourage the proliferation of educational offerings of a specialized or professional nature where the cost is high and the demand limited. The consequences of providing offerings under such circumstances are the stunting of needed development elsewhere — and, quite likely, the creation of specialized courses of study of poor quality. An important part of the problem involved in the unnecessary duplication of highly specialized offerings is the worldwide scarcity of specialized talent. Under these circumstances, high remuneration will be required by inferior talent.

Most new countries at this stage of development need a small number of specialists distributed over a wide spectrum of occupations. The best method of satisfying this need at the earliest possible date, and at the least cost consistent with high quality preparation, is to resort to regional offerings and, if these are not available, to scholarships for foreign study.

Groupings of countries using a regional programme should reflect a similarity of need. The simplest approach at this stage will probably be direct subsidy by their home countries rather than through inter-country compacts, which seem more difficult to arrange.

Agencies wishing to help strengthen regional education in Africa should, as many are now doing, strengthen subject-matter areas in chosen institutions which now have basic strengths. Countries that wish to offer speciality programmes, such as medicine, without either the money resources or the demand to justify the outlay, should not be supported in unrealistic ventures. Many countries require or can absorb only a few specialists in a specific area. In such cases, recourse should be had to regional centres of quality in Africa. If these are non-existent, scholarships for foreign study should be resorted to.

Staffing of National and Regional Institutions

The announced goal of training as many of the country's nationals at home as possible is sound. The cost of doing this otherwise, in terms of numbers, would be prohibitive and would not provide the growth opportunity which local institutions need to improve the quality of their efforts.

Where this is not possible, because of the non-existence of a particular offering, recourse should be made to nearby regional offerings if they exist.

These procedures, if they are to achieve a quality of education reasonably comparable to that available elsewhere, must be staffed by teachers -- expatriate or local -- who have had the best education available. Expatriates should have tenure of sufficient length to achieve education of quality. This requires continuity of effort, pending replacement by African nationals of like training. Such is rarely possible within newly independent countries or in recently established regional programmes. Therefore, those on whom the quality of local and regional institutions must eventually depend must acquire their training in foreign countries offering the chosen discipline on a matured and high quality basis. These persons who become the seed corn of their disciplines will largely determine the quality of effort to be attained locally. Nothing should be spared to ensure that they are fully equal to the task. The training of this top level manpower is a poor place to economize. They are exceptions to the general rule and must be treated as such. The best work being done in Africa by Africans is by those who have had such training. The undergraduate years are the formative years in terms of basic

competence, attitudes toward work, and a complete feeling for the several aspects of study fields. The best training, received under conditions in which there is a thorough grounding in basic principles in exemplary performance, will more than compensate for students in an environment different from their home countries. The absence of such thorough training cannot be overcome merely by receiving mediocre education in a familiar environment.

Those who wish for Africa educational achievement of full parity with education of sound quality elsewhere must insist that Africa's top leadership get the best education extent wherever it exists.

RECOMMENDATIONS

- I. All secondary schools should be comprehensive or multi-stream, with two or more vocational programmes.
- II. All secondary schools should include emphasis on the natural sciences and mathematics.
- III. Agriculture should be taught in all secondary schools, except those in the largest urban areas.
- IV. Agriculture should be taught as a vocational subject in the upper primary grades to provide the preponderant number of primary school-leavers, who do not go to secondary school, the skills needed for simple farming. Where children are from 14 to 16 years or older when completing primary school, vocational skills other than agriculture should also be taught.
- V. Independent countries should stress maximum involvement of their people with emphasis upon self help. Some suggested self-help projects are: housing, and school and community buildings, including markets.
- VI. An Africa foundation, functioning along the lines of the Asia Foundation, should be established. Such a foundation could provide stimulation and guidance in the undertaking of projects and programmes with the greatest multiplier value, consistent with national needs. In addition, modest sums should be expended to encourage unusual and highly creative talent.
- VII. The meeting of manpower demands requires the giving of highest priority to the selection of persons of greatest potential and giving them the best possible training as preparation for key posts in education and those requiring highest technical and scientific skills. For these key personnel, training at the

undergraduate and graduate levels should be provided in the leading appropriate institutions in developed countries. Those to be responsible for training in agriculture and technical subjects on post-secondary levels should be regarded as key personnel. Unless those who provide top leadership in these areas are of the highest caliber, all levels of performance will be depressed.

- VIII. Educational standards based at all levels on foreign requirements should be studied and challenged in terms of applicability to national needs. Those which are inappropriate or meaningless should be abandoned and relevant standards established.
- IX. The tendency to measure the effort to secure educational opportunity in terms of the percentage of national income devoted to education fails to take into account the high priority that should be given at this point in time to education that is relevant to resource development.
- X. The extent to which money for education is being spent at unproductive levels on unrealistic goals, or is involved in expensive programmes that could be best satisfied on a regional or scholarship arrangement, should be carefully examined.
- XI. The United Nations Economic Commission for Africa has an important and indispensable role to play in the economic and social development of affiliated countries. This role would seem to be that of a catalyzer, giving fullest encouragement to government responsibility in the member countries; offering guidance in putting together projects with the requisite potential for meeting specific needs; identifying the skilled manpower required for the execution of these projects; and assisting in determining the cost and continuing obligations to be assumed. The writers of this report believe the Economic Commission for Africa should co-operate with, but not assume operational responsibility for, projects undertaken by a single country or a group of countries. Operational relationships should at all times be vested in the countries themselves or in a single agency created by them in the case of regional or multi-country projects. Failing this, ECA would assume responsibility with, at best, limited authority -- thus creating an ineffective situation in which to function. Of equal importance is the fact that because of the number of countries in which the varied needs and possibilities are so large, this role as catalyzer will make the fullest demand on the personnel and money resources at ECA's disposal.

- XII. Adult education in most African countries should have a vocational emphasis. Since African populations are largely rural, and there is a shortage of trained talent and money resources, expenditures on literacy education for adults should be combined with and related to vocational instruction. A competent Agricultural Extension Service staff with well trained men and women could best conduct meaningful education programmes for adults.

F.D. Patterson

E.B. Evans

EXHIBIT I

QUOTES AND COMMENTS

I. Education Related

- A. Malawi's trade training under the Department of Transportation seems practical, not overly expensive, and well conducted.
- B. African countries are searching on a worldwide basis for university trained nationals and requesting their return for service in their home countries. Many are said to be responding to high-level opportunities and the potential for advancement. Better use of well educated African refugees seems possible.
- C. Practically all countries support emphasis on agriculture and rural life with extension services. Need exists for greater competence at "doing" level in direct contact with farmers.
- D. A beginning involvement of women as professionals in rural life development should be greatly expanded.
- E. "The economy of our country is built around agriculture, but we are developing a second economy program around industry."
- F. "Our School of Administration is being slanted toward business administration."
- G. "We have established a policy of not accepting gifts and grants until we find a need for them and can continue the program at expiration of the grant."

II. Exemplary Productive Enterprises

A. Poultry Production in Ghana

This program is reputed to be the leading poultry enterprise in Africa south of the Sahara. Its outstanding features and accomplishments:

1. A stock of 40,000 laying hens;
2. Chickens hatched on the property from breeding stock developed for disease resistance as a phase of the local operation;
3. Importation of poultry products to Ghana discontinued;
4. Day-old chicks being sold to neighbouring countries;
5. A combination restaurant and retail outlet on the premises;
6. Because of premium demand for breeding stock, emphasis being switched from retail egg and meat production to sale of breeding stock.

The head of this establishment was U.S. trained at the undergraduate and graduate levels. He is now ready and willing to have his establishment serve as an on-the-job centre in poultry husbandry.

B. Truck Farming

The primary source of locally grown vegetables and fruit for the whole of Liberia is the farming enterprise developed by the current Secretary of the Ministry of Agriculture, Mr. James T. Phillips. Phillips operates two truck farms of 40 and 70 acres respectively. In addition to supplying retail outlets throughout Liberia for pineapples and egg plants, these products are being exported to Europe and the United States.

C. Fishing Industry

This industry is being conducted in Liberia and supplies fish to nearby countries as well. The person who founded the business and heads the Mesurado Fishing Company is Mr. Stephen Tolbert, a Liberian graduate of the University of Michigan. This is a multi-million dollar enterprise which is expanding to other types of food production.

D. Research

The Imperial Central Laboratory, the Research Institute, and the Imperial Veterinary Laboratories in Ethiopia are excellent examples of the value of top-level manpower in programs training pioneers. The directors of these facilities are highly trained, experienced, brilliant and dedicated men who have received their technical education in outstanding institutions in the world - all of which is reflected in the performance of their staffs and the efficiency of their operations.

EXHIBIT II

In each country visited the question What do you regard as your country's greatest need ? was put to one or more individuals. A listing of some of the many answers received are as follows:

1. Education of middle-and high-level manpower.
2. There is a gap between the university training and the needs of the country. Drastic curriculum modification at secondary level is necessary to close this gap.
3. Establish villages where people can live and work together. Also more education.
4. Greatest need is trained manpower.
5. Need more food commodities. We are feeding 450,000 children in the country one meal a day in the hot lunch program. This is the only balanced meal they get.
6. Jobs for the unemployed.
7. More extensive Extension Service. Large amount of tillable land not in use.
8. Agriculture should have first priority; 90 per cent of population is rural.
9. We are short of everything. We are short of machinery in the apprenticeship training program.
10. More skilled manpower. Lack of skill is the lack of opportunity.
11. Everybody should come out of school with some kind of skill.
12. Economically, the country will have to depend on agriculture. Must change from subsistence economy to a cash economy.
13. Greatest need is education geared to meet the needs of the people.
14. All ills are not training skills. The country is new and lacks experience.
15. Need to create a credit or loan system for small farms.
16. Too much overlapping and duplication of agencies. Needs to co-ordinate and put under one head.
17. Needs more entrepreneur training to improve rural life.
18. Greatest need of my country is manpower training to take over the skills that we are now paying for to expatriates who are sending the money out of the country.
19. What we need is for more people to go into farming.
20. What we need is a change of attitude away from the colonial attitude and a direction toward technical needs and training.
21. Tremendous need for low cost housing and sanitary out houses.

22. Greatest needs are trained staff members and agricultural leaders in the villages.
23. Our priorities are education and rural area development.
24. We are short of skilled workers at all levels.
25. When independence came, the nations were caught "flat-footed," with relatively no skilled manpower to meet the demands of the country. It is going to take time, money, planning and patience to solve our problems.
26. Our public service need has reached saturation. We have a serious shortage of scientists.
27. The economy of our country is built around agriculture, but we are developing a second economy program around industry.
28. Our greatest need is to develop middle level Extension Agents. About 200.
29. Our greatest need is money to develop agriculture to raise more cotton, cattle, rice and cocoa.
30. Most important need is to have a plan to keep people in rural areas. Too many going to the city.
31. Salary parity for technical teaching.
32. Since agriculture is the main industry, there is need for better preparation of teachers of agriculture.
33. We need massive infusions of self-help projects to begin to develop small village projects, with the government furnishing materials up to a certain point.
34. The top need of my country is to develop human resources.

EXHIBIT III

The following is a list of the countries visited and the contacts made in each country:

Dahomey

President
Emile Zinsou

Independent Since
1 August 1960

Dahomey is located in West Africa, has an area of 44,700 square miles and a population of 2,500,000 people. The economy of the country is built around agriculture (palm products, cotton, coffee, cocoa, corn, casava, tobacco, peanuts, yams).

Enrolments: Primary, 125, 231 (28 per cent of primary age in school); secondary, 10,355; university, 200 in Dahomey, 1,000 overseas.

The following contacts were made:

Charles Gomez (vet.), Acting Director, Ministry of Agriculture
Jean Blanche-Toler, Resident Representative, UNDP
August Francis daSilveira, chg. du Protocol, Ministry of
Education
Henry Dogo, Director, Planning
Vole Fritz Darcel, Planning and Education

Ethiopia

Emperor
His Majesty Haile Selassie I

Independent State

The country is located in Northeast Africa, covers an area of 457,000 square miles and has a population of 23,000,000 (2 per cent yearly increase). The economy of the country is built around agriculture (coffee, skins, pulse, oil seeds, cattle) and tourism.

Enrolments: Primary, 500,000; junior secondary, 48,000; senior secondary, 32,000; university, 6,000 (3,000 full-time, 3,000 part-time).

The following contacts were made:

Frank E. Pinder, Special Adviser to the Executive Secretary
on Agriculture, UN Economic Commission for Africa

The Honourable William Hall, U.S. Ambassador to Ethiopia

W.E. Reed, Deputy Director, USAID

H.E. Ato Ketema Yifru (NP), Minister of Foreign Affairs
(saw his assistant)

H.E. Ato Belai Abbai, Minister of State and Minister of
Economic Development and Planning

Ethiopia (continued)

H.E. Ato Mamo Tadesse (NP), Minister of Finance
(saw his assistant)

Teshome G. Wagaw, Assistant Professor and Dean of Students,
Haile Selassie I University (served as our guide)

Assefa Wolde Ghiorgis, Director-General of the Veterinary
Department, Ministry of Agriculture

S.I. Edokpayi, Head, Manpower and Training Section, UN
Economic Commission for Africa

H.E. Ato Abebbe Retta, Minister of Agriculture

H.E. Ato Akalework Habte-Wold, Minister of Education and
Fine Arts

H.E. Ato Million Neknik and advisers

Aklilu Habte, President, Haile Selassie I University

Tsegga-Amlak, Ministry of Agriculture

Fikrie Yosef, Veterinary Laboratory

Samuel Atrafu, Associate Director, Veterinary School

Peter T. Daniels, USAID

A Moonu

Assefa Tekle, Director, Imperial Central Laboratory and
Research Institute

A visit was made to the Haile Selassie I University. The institution has an enrolment of approximately 6,000 students.

Ghana

Prime Minister
K.A. Busia

Independent Since
6 March 1957

It borders Upper Volta on the north, the Ivory Coast on the west, Togo on the east and the Atlantic Ocean on the south. It has an area of 91,843 square miles and a population of 3,000,000 people. The economy of the country is built around agriculture (cocoa, rubber, cattle, fishing) and minerals (copper and gold). Accra is a port city which should generate additional income for the country.

Enrolments: Primary, 1,500,000 (92 per cent of school age); secondary, 30,000 (13 per cent of school age); and post secondary, 6,000.

Ghana(continued)

The following contacts were made:

G.B. Boahene, Principal, Higher Secondary Education Division,
Ministry of Education
B.K. Mensah, Principal, Secondary, Ministry of Economic Affairs
Bak Edzii, Registrar, University of Ghana, Legon
Amory Nikori, Principal, Sec. Budget Bureau, Ministry of
Finance
Manet Latour, Resident Representative, UNDP
Edward W. Bouchard, Deputy Resident Representative, UNDP
Robert Johnson, Acting Administrative Officer, UNDP
Andrew Taylor, Senior Administrative Assistant
Alex Kwapong, Vice Chancellor, University of Ghana
E.A.K. Edzil, Registrar, University of Ghana

Kenya

President
Jomo Kenyatta

Independent Since
12 December 1960

The country is located in East Africa, covers an area of 225,000 square miles and has a population of 9,365,000 people. The economy of the country is built around agriculture (tea, coffee, hides, and livestock such as cattle, sheep, and hogs). Tourism is being emphasized and is an important source of income.

Enrolments: Primary, 1,133,179 (1967); secondary, 97,114; college or university, 1,520.

The following contacts were made:

Cecile I. G. Davis, Assistant Resident Representative, UNDP,
Nairobi
H.J. Nyamu, Assistant Director, Personnel and Training -
KG
C.N. Kebuchi, Under-Secretary, Ministry of Economic Planning
D.G. Davies (an American of The Ford Foundation), Economic
Adviser, Ministry of Economic Planning
Mr. M'Mwirichia, Deputy Secretary, Ministry of Education

Liberia

President

William V. S. Tubman ,

Independent State

The country extends along the South Atlantic for a distance of 350 miles, the Ivory Coast in the east, and the northern frontier running along the border of Guinea and Sierra Leone. It has an area of 43,000 square miles and a population of 1,200,000 people. The economy of the country is built around agriculture (rubber, tobacco, oil, palms, coffee, casava, cocoa, palm kernels, and fishing) and minerals (iron ore, diamonds, and gold).

Monrovia is a port city which should generate additional income for the country.

Enrolments: Primary, 108,000; secondary, 8,065; college, 1,000.

The following contacts were made:

The Hon. William V. S. Tubman, President, Republic of Liberia

Rochefforte Weeks, President, University of Liberia

Moses Weefur, Principal, Booker Washington Institute

Charles Tunbar Sherman, Director, Business Corporation

James Phillips, Secretary, Ministry of Agriculture

David F. Neal, Under-secretary, Planning, Development of Planning
and Economic Affairs

Mrs. DeShied and Charlotte Phelps, UNDP

A visit to the University of Liberia and a conference with President Tubman were most useful in the study of the economic planning of the country.

At the conclusion of the visit, a trip to Booker Washington Institute at Kakata was made. Splendid progress was noted. The newest improvement is a building which will house the library and the administration. This building is a gift from the business interest of the country in tribute to President William V. S. Tubman on his birthday.

Malawi

President

Dr. Hastings Kamuzu Banda

Independent Since

20 June 1960

The country is bound on the north by Tanzania, south and east by Mozambique, and west by Zambia. It has an area of 47, 747 square miles and a population of 4,042,412 people. The economy of the country is built around agriculture (tea, tobacco, rice, groundnuts, cotton, maize, fishing), minerals (bauxite) and tourism.

Malawi (continued)

Enrolments: Primary, 360,000; secondary, 9,686 (53 schools); post-secondary, 1,000; university, 300.

Chief source of income, agriculture; per capita income, \$40 per year; rate of growth, 3 per cent per annum; percentage of government revenue spent on education, 35 per cent - 17 per cent; percentage of population rural, 95 per cent.

The following contacts were made:

A.R. Menzies, Resident Representative, UNDP
Lillian Price, Assistant Resident Representative, UNDP
H.R.G. Hurst, Labour Adviser, Ministry of Labour
A.N. Beatty, Adviser, Economic Planning Manpower Economist
Ivan Freeman, Registrar, University of Malawi
A.G. Terendale, Training Officer, Ministry of Works & Supplies
H.W. Ord, Chief Economist, Economic Planning Division
R.M.K. M'Bale, Senior Assistant Secretary, Ministry of Agriculture
M. Ugelisi, Senior Administrative Officer, Personnel Division
L.J. Anthony, Acting Chief Education Officer

Tanzania

President
Julius K. Nyerere

Independent since
9 December 1961

The country is located in East Africa and is bound by the Congo, Uganda, Kenya, Mozambique, Zambia, and Malawi. It has an area of 365,000 square miles and a population of 12,500,000. Mt. Kilimanjaro is located in Tanzania. The economy of the country is built around agriculture (cotton, coffee, sisal, tea, cashew, tobacco, and pyrethrum) and minerals (diamonds and gold).

Dar-es-Salaam is a port city which should generate additional income for the country.

Enrolments: Number of school children, 2,000,000; primary, 850,000; secondary, 35,000; university, 1,500 (one-third African).

The following contacts were made:

Donald W. Wyatt, Vice-President, African-American Institute,
Dar-es-Salaam
Abdulla A. A. Riyami, Director, Information Services, Ministry
of Information and Tourism
W.K. Cagula, Principal, University College

Tanzania (continued)

Charles D. Nelson, Director, USAID, Luther House
R.L. Thomas (an American of The Ford Foundation), Adviser,
Economic Planning
A.J. Kitonka, Planning and Statistics
Cradock Turnbull, Senior Agricultural Officer
E. Meena, Assistant Director, National Education
(teacher education)
P.M. Wombela, Assistant Director, National Education
(curriculum development)
H. Westman, UNDP, Dar-es-Salaam
J.D. Ganga, Director for National Education
Pickering, Chargé D'Affaires, U.S. Embassy

Togo

President
Etyenne G. R. A. Eyadema

Independent since
27 April 1960

Formerly French West Africa, the country is located in West Africa, bound on the east by Dahomey, west by the Ivory Coast, north by Upper Volta, and south by the Atlantic Ocean. It has an area of 21,800 square miles.

Population, 1,700,000 people. The economy is built around agriculture (palm oil, cocoa, coffee, cotton, yams, and manioc meal), fisheries, and some minerals (phosphates).

Lomé is a port city which should generate additional income for the country.

Enrolments: Primary, 157,548 (1966); secondary, 13,949; college, 200.

The following contacts were made:

Visited USAID-sponsored Heavy Duty Road Machine Repair School (80 enrolment); and National Vocational Centre. Both were well equipped and efficiently operated.

Also visited a rural school constructed by the community.

Augustus GunuBu, Program Assistant, UNDP

Jean Agbokou, Div. Scholarships

Karege Theodore, J.P.A., Div. Adjoint

Hajor Laish Zvi, Technical Adviser, Israeli

Ruben Adzomada, Manager, Soteyim Automobile

Victoria Quacoe, Professor of Home Economics

Togo (continued)

Gartner, Otto, Div. de l'enseignement technique

Chas. Brenner, Div. nat. centre - prof. tr.

Mr. Evans, Div., Tractor School

Robert E. Wilson, Director, Peace Corps

Uganda

President
Milton OBote

Independent since
20 March 1962

The country lies astride the Equator on the Central African Plateau. In size it consists of 91,134 square miles and has a population of approximately 7,500,000 people. Lake Victoria is located in Uganda and is the source of the Nile River. The economy of the country is built around agriculture (coffee, cotton, and cattle). Also some minerals (copper), and tourism.

The following contacts were made:

Mr. Senabula, Assistant Registrar, Planning, Makerere College,
and Acting Director of Agriculture

John B. Mukalazi, Economist, Manpower Planning, Ministry of
Planning and Development

Gotham A. Ukeeh, Assistant Secretary, Ministry of Planning and
Development

John Hope III, Director of the Peace Corps, Uganda

Francis D. R. Gureme, Under-Secretary, Ministry of Agriculture

A visit to Makerere University proved to be most profitable.

Zambia

President
Kenneth D. Kaunda

Independent since
24 October 1964

The country is bound by the Congo, Angola, Malawi, and Rhodesia; it covers an area of 290,587 square miles and has a population of more than 4,000,000 people.

The economy of the country is built around mining (copper, coal, lead, zinc, cobalt, manganese. Agriculture produces tobacco, cotton, groundnuts, casava, soybeans, cattle, and poultry).

The following contacts were made:

Ivan Mackinson, Director, Nat. Inst. Pub. Adm.

F.A.Y. Jaisey, Regional Director, UNDP

Zambia (continued)

Lameck H. Goma, Professor and Vice Chancellor, University of Zambia

Lindsay Young, Registrar, University of Zambia

A.M. Phiri, Per. Sec. Etab.

N.J. Kalinda, Principal-Directorate, Civil Service Training

J.D. Mitchell, Assistant Secretary, Commission for Technical Education and Vocational Training

E.B. Tuboz, Developing and Planning

D.H. Luzongo, Director of Agriculture

D.C. Mulaisho, Per. Sec., Ministry of Education

G.G. Hiddleston, Planning

C.N. Lihusha, Under-secretary, Finance, Financial Division, Office of Vice-President