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9. ABSTRACT The International Development and Food Assistance Act of 1975 modified the Foreign Assistance Act of 1961. The new mandate demands a strategy for education and human resource development which places emphasis on providing poor people with the conceptual and technical skills to lead more productive lives, both in economic terms and in the sense of self-fulfillment. Such a strategy must analyze the complex problems of human resources development and pose workable methods for their solution. This report: quantifies some of the basic needs of the poor majority and sets some goals toward which programs and projects may be directed; discusses the various learning systems that may be utilized; identifies and evaluates current efforts of African countries and donor communities to address the problem; and presents alternative strategy guidelines for the design of viable education and human resources development programs and projects which are directed toward improving productive skills, increasing mass participation, and inducing self-sustaining economic growth for the countries of Africa. It is suggested that the Bureau for Africa should support programs in the area of education and human resources development which stem from the implications of flexible, self adjusting vector planning. Some of the other suggestions are: capitalizing on indigenous innovations, providing direct assistance to educational activities aimed at groups which currently derive little benefit from the fruits of development, concentrating upon educational direction rather than educational targets, and easing the boundaries between diverse learning opportunities.

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Education and Human Resources Development in Africa:

An Analysis of Current Status and Problems

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I. Introduction

The International Development and Food Assistance Act of 1975 (H.R. 9005) modified the Foreign Assistance Act of 1961 by adding to Sec. 105, Education and Human Resources Development, the following:

- (b) Assistance provided under this section shall be used primarily to expand and strengthen nonformal methods; especially those designed to improve productive skills of rural families and the urban poor and to provide them with useful information; to increase the relevance of formal education systems to the needs of the poor, especially at the primary level, through reform of curricula, teaching materials, and teaching methods, and improved teacher training; and to strengthen the management capabilities of institutions which enable the poor to participate in development.^{1/}

Further, Sec. 102(c) states that:

Assistance...should not be used simply for the purpose of transferring financial resources to developing countries, but to help countries solve development problems in accordance with a strategy that aims to increase substantially the participation of the poor.^{2/}

This new mandate demands a strategy for education and human resource development which places emphasis on providing poor people with the conceptual and technical skills to lead more productive

lives, both in economic terms and in the sense of self-fulfillment. Such a strategy must analyze the complex problems of human resources development and pose workable methods for their solution.

Increasingly, attention has been drawn to the fact that development is a complex problem involving not only economic growth, but also participation by all, including the poor, in the processes of development and in the equitable sharing of the rewards of these efforts.

Mahbub ul Haq, in a paper presented at the Bellagio Conference, states that "the problem of development must be defined as a selective attack on the worst forms of poverty," and that "development goals must be defined in terms of progressive reduction and eventual eradication of malnutrition, disease, illiteracy, squalor, unemployment and inequalities." ^{3/}

Development encompasses the whole spectrum of human effort. In AID, emphasis is given to the most basic areas, including agriculture, health, nutrition, population, transportation and communication, and education. While all of these components can include large elements of education and human resource development, education is the field which can most fully develop the capacity of individuals to participate fully in the development process. One may debate whether education or development comes first, but the fact remains that development cannot take place without education. Developing countries, particularly in Africa, see in education the surest and quickest way to development, and most devote a large portion of their

budgets to it. However, the cost effectiveness of present-day educational structures is questionable, both in terms of relevance to manpower needs and equality of opportunity for the poor.

The following sections will: (1) quantify some of the basic needs of the poor majority and set some goals toward which programs and projects may be directed; (2) discuss the various learning systems that may be utilized; (3) identify and evaluate current efforts of African countries and donor communities to address the problem; and (4) present alternative strategy guidelines for the design of viable education and human resources development programs and projects which are directed toward improving productive skills, increasing mass participation, and inducing self-sustaining economic growth for the countries of Africa.

II. The Poor Majority

Populations at or below the following benchmarks or standards of poverty, set by AID, will be treated as comprising the "poor majority":^{4/}

- (a) per capita income below \$150 per year;
- (b) daily diet of less than 2,160 to 2,670 calories, depending on country; and
- (c) several health indicators: life expectancy at birth of below 55 years, infant mortality over 33 per 1,000 children aged 0 to 1, birthrates over 25 per 1,000 population, or access to broadly defined health services for under 40 percent of the population.

These benchmarks do not include literacy and numeracy. However, if one is to fully participate in the process of development and enjoy its benefits, a functional ability to read with understanding, write legibly and perform simple number functions is necessary.

In applying these benchmarks, consideration must be given to the fact that they are based on educated guesses, at best; there are no accurate data available upon which to build a valid set of assumptions. Further, more precise information about each of the various countries is needed to determine where on the benchmarks a particular country is located. Also, within each country there are people at several levels along the benchmarks, and in all countries large segments of the population are well below the levels established as minimums. Thus, no

country in Africa should be eliminated because the data that are available, when averaged out, place the country above the poverty line.

It should also be noted that there are differences between the rural poor and the urban poor. For example, the rural poor, unlike their counterparts in the urban areas, have access to the land and the forests which produce needed commodities.

The African Scene

Of the twenty African countries shown in Table I, nine exceed the birthrate of 25 per 1,000; eleven have per capita incomes of less than \$150; and nineteen have a life expectancy at birth of less than 55 years. Literacy ranges from 1 to 5 percent of the population in Mauritania, to 59 percent in Lesotho. Only in Zaire, Lesotho, Swaziland, and Zambia are more than 50 percent of the school-age population (5 to 19 years) enrolled in school. Available nutritional intake throughout North, West, Central, and East Africa is less than 2,190 calories. Thus it would appear that most of Africa is at or below the minimum caloric requirements for good health.^{5/}

The vast majority of Africans live in rural areas. In six of the countries shown in Table I, over 90 percent of the people live in rural areas; in nine, at least 80 percent are rural. Since most health centers and schools are located in the larger population centers, great numbers of Africans have neither adequate health care nor educational opportunities.

Table 1
Demographic Data on Twenty African Countries

Country	Population	Annual Growth Rate (Percent)	Population Rural (Percent)	Labor Force in Agriculture (Percent)	Per Capita GNP (Dollars)	Life Expectancy	Literacy (Percent)	Student Ratio of 15-19 Age Group
Ethiopia	29.5	2.6	89	85	90	38	5	9
Ghana	9.9	2.8	67	55	300	44	25	43
Kenya	13.4	3.3	89	80	180	49	20-25	37
Liberia	1.6	3.2	85	74	330	45	10	24
Rwanda	4.4	2.8	96	91	70	41	10	31
Sierra Leone	3.0	2.4	85	75	190	44	10	27
Somalia	3.2	2.4	72	82	90	41	5	7
Tanzania	15.5	3.0	93	86	120	44	15-20	20
Zaire	21.2	2.4	74	78	90	44	20	52
ahel Countries								
Chad	4.0	2.0	86	91	40	38	5-10	14
Mali	5.6	2.3	87	91	70	38	5	12
Mauritania	1.2	2.1	89	85	190	38	1-5	10
Niger	4.6	2.8	91	91	90	38	5	7
Senegal	4.4	2.5	72	76	270	40	5-10	25
Upper Volta	6.0	2.0	92	89	70	29	5-10	7
outhern Africa								
Botswana	0.6	1.8	89	91	240	56	20	37
Lesotho	1.0	2.2	97	89	120	46	59	52
Malawi	5.0	2.3	94	88	110	41	22	23
Swaziland	0.5	3.1	86	82	200	44	36	53
Zambia	4.9	3.1	63	69	390	46	15-20	50

Source: Agency for International Development, Fiscal Year 1977 Submission to the Congress. Africa Program (Washington, D.C., A.I.D., 1976)

While a smaller number of the poor in Africa live in urban areas, they must be of concern also. The proportion of urban poor is unknown, although it is recognized that there is a constant flow into and out of the urban areas. While the problems of the urban poor differ in some respects from those of the rural poor, there are similarities which should be recognized in educational planning.

African countries spend a large share of their national budgets on education (see Table II), and yet only relatively small percentages of school-age children attend school. Dahomey, for instance, spends 30 percent of its national budget to provide schooling for 23 percent of its children ages 6 to 18; Ethiopia, 9.1 percent on 7 percent; and Uganda, 17.8 percent for 29 percent of its 6 to 18 year-old group. One must conclude that a disproportionately small number of children consume a large part of public expenditures for education, and further, that at the same rate of expenditure, increased education is a fiscal improbability.

Though statistics do not exist to help determine the poor/non-poor ratio among the students enrolled, it may safely be assumed that the non-poor make up the great part of the total.

Africa is rich in land and people, however; and her land, forests, minerals, and scenic beauty are all resources which are being developed. Increasingly, Africans are analyzing their problems and assessing the

Expenditures on Education and School Enrollment Ratios

Country	Current Expenditures as Percentage of the National Budget (year shown in parenthesis)	School Enrollment Ratios by Level			
		1st Level (6-11)	2nd Level (12-18)	Total 1st and 2nd Level (6-)	3rd Level (20-24)
Botswana	13.2 (1969)	78	8	27	
Cameroon	19.6 (1970)	108	9		0.55
C.A.R.	15.4 (1969)	76	5	41	0.07
Chad	18.5 (1966)	30	1	16	-
Congo	27.2 (1970)	145	13	79	1.3
Dahomey	30.0 (1970)	40	5	23	0.14
Ethiopia	9.1 (1) (1965)	11	2	7	0.11
Ghana	20.3 (1969)	89	5	43	0.72
Guinea	20.8 (1969)	33	13	24	0.58
Ivory (22.5 (1970)	77	11	54	0.93
Kenya	18.4 (1965)	55	4	35	0.36
Lesotho	19.8 (1969)	72	7	64	0.44
Liberia	13.8 (1967)	48	7	29	0.72
Malawi	15.2 (1969)	37	3	27	
Mali	19.5 (1967)	16	1	12	0.03
Niger	11.8 (1969)	14	0.9	8	-
Senegal	16.1 (1968)	40	7	24	0.90
Sierra Leone	17.9 (1969)	29	4	18	0.34
Swaziland	17.7 (1968)	68	8	47	-
Uganda	17.8 (1970)	46	4	29	0.40
Upper Volta	14.1 (1960)	8	0.5	4	-
Zaire	18.7 (1969)	82	-	-	
Zambia	21.8 (1969)	85	12	58	0.44

Note: Compiled from UNESCO, Statistical Yearbook, 1972 (Paris, UNESCO, 1973)

(1) Does not include expenses

resources available to meet them head on. The Ethiopian education sector report^{6/} is an excellent example. Other countries are marshalling their energies toward development and are making impressive headway.

Africa has many friends working at her side in all aspects of development. Not only are these countries and agencies providing funds and personnel, but they are also working closely with Africans to refine techniques which will make their assistance more efficient and effective, so that the process of development may proceed at a more rapid pace.

III. Learning Systems

Perhaps the most fruitful outcome of recent interest in nonformal education is the recognition by educators that not all learning takes place in schools, but that learning is a lifelong process. In designing institutionalized educational strategies, it is useful to understand the broad categories by which most learning situations can be described. Here we turn to the definitions of informal, formal and nonformal education given in New Paths to Learning, for Rural Children and Youth.^{7/}

By informal education we mean the truly lifelong process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment from family and neighbors, from work and play, from the marketplace, the library and the mass media.

By formal education we refer ... to the hierarchically structured chronologically graded "educational system," running from primary school through the university and including, in addition to general academic studies, a variety of specialized programs and institutions for full time technical and professional training.

...We define nonformal education as any organized educational activity outside the established formal system, whether operating separately or as an important feature of some broader activity, that is intended to serve identifiable learning clientele and learning objectives.

This paper suggests that the most effective use be made of diverse learning situations by devising a strategy which includes the integration of all three educational modes, allowing them to complement and supplement one another, and maximizing each in areas where it has a comparative advantage for its clients.

Informal Learning Processes

A major proportion of what an individual learns in a lifetime is acquired through informal processes from parents, community, peer groups, and experiences with the physical environment. This is influenced by and in turn influences the learning and experiences gained in formal and nonformal systems. The value of such learning processes is commonly underestimated in formulating programs supposedly tailored to meet the needs, constraints, and potentials of local communities. By tapping this source of knowledge, skills, and learning styles, formal and nonformal programs may be made more effective. As pointed out by the participants in the Buea Seminar who were in Washington, one must know the area and the culture, live with the people, and understand the power structure and social strata in order to tap these resources. This, of course, can be most effectively done by a member of the target group. An "outsider" must proceed with care.

Formal Learning Systems

Every country in Africa has a formal educational system, administered by a cabinet-level officer, which provides a structured program of studies from a national office through various regional, provincial, and local offices and officials. The cabinet officer and his national staff set curricula; provide approved teaching materials; provide or assist in the provision of school facilities; provide supervisory

services; set examination and certification procedures or adopt those of external bodies; and perform other functions pertinent to the operation of the system.

Generally, the ministerial post is political and held by an individual appointed by the head of state. The minister is assisted by staff who in most cases have some expertise in education and can exert major influence on policies and programs.

The educational program developed at the national level is delivered to point of use through a series of offices and officials, first to the individual schools and through them to the students. The delivery system is roughly divided according to primary, secondary, and post-secondary levels.

The content of most formal systems is inherited from colonial regimes or has been patterned after them. At the primary and secondary levels, it may be unrelated to the life of the pupils and is often presented in a way which de-emphasizes new ideas, and creative and innovative thinking. Little is done to link the experience in the classroom with the community.

At the postsecondary level, education becomes specialized and more remote from the home environment of the students. At a time when youths are in a highly active stage, educational programs do little to channel this vital energy into programs which relate to the needs of the communities they serve.

In most African countries, the financing of education is large the responsibility of the central government. A few countries have given much of the financial responsibility for primary schools to local government bodies and are also gradually delegating this responsibility for other levels of the educational system as well. This move should bring about more involvement of the local community in the educational process, an action which it is hoped will bring the educational program more effectively to bear on local problems of living and development.

However, in Kenya, fiscal responsibility for primary schools was shifted from local governments to Nairobi when it became clear that county council officials could not withstand the popular demand for expanded formal school facilities. Moreover, even the national government recently has succumbed to political pressure for "free schooling" and has abolished "fees" for the first four years of primary education.

Where a fee-based primary and secondary education system exists, evidence shows that parents often place high priority on educational expenditures at the cost of lowering investment levels in agriculture, health, and household necessities.^{8/} The impact of the locus of financing upon the nature and direction of growth of school programs is a question that African institutions should research carefully.

African governments spend a large proportion of their budgets for formal education. As will be seen from Table II, the percentage of public expenditure allocated to education ranges from 9.1 percent in Ethiopia to 30.0 percent in Dahomey. The median for the 23 countries shown is 17.8 percent. However, when one looks at the percentage of school-age children and youth enrolled in schools, it becomes evident that the per capita cost of education in Africa is high, especially inasmuch as per capita income is regularly below the poverty level, and distribution is such that income is scarcely life-sustaining for large portions of the population. Furthermore, this expenditure is set against a backdrop of a growing level of unemployment among school completers, which leads policy makers to question the cost-effectiveness of the schools. An investigation of the relative cost-effectiveness of diverse forms of education in African environments should thus be included in the research agendas of African universities and research centers. The building of local expertise for such an analysis should also be encouraged.

It is not only the high cost of present school systems, but also their limited reach that is cause for concern. As Lyman points out in AFR Strategy in Education,^{9/} Mali devotes 24.5 percent of its budget to enroll 19 percent of the school-age population, while Malawi spends only 15 percent of its budget to enroll 37 percent of the comparable age group. Even when it is recognized that this difference is in part accounted for by the

dispersal or concentration of populations, such wide divergence suggests that more cost-effective ways to provide schooling may be available to many countries; but the magnitude of the expenditures and the relatively limited reach of the school programs indicate the need for continuing efforts to find new, efficient and cost-effective ways of providing basic education to the people of Africa.

It is estimated that only 28 percent of school-age children in Africa attend school.^{10/} In Africa, 80 percent to 90 percent of the population is rural, so it might be assumed prima facie that the same percentage of school enrollment consists of children from rural areas. Such an assumption would be quite erroneous. The greatest number of schools are located in major population centers, rather than in the more remote rural areas where poverty is more pronounced.^{11/}

Careful review of statistics on school enrollments reveals a high rate of drop-outs. These drop-outs are generally from the poorer families, and lack the experiences which make them good pupils. Often the school they attend is conducted in a language other than their own.

In some African countries the drop-out rate for boys is 50 percent or more, and for girls, 60 percent to 80 percent. Traditionally, schooling has favored boys. However, as bride-wealth is now widely influenced by a woman's level of educational attainment, and as more employment opportunities have become available in African economies for women, this educational disparity between the sexes is slowly narrowing at the primary level and at an increasing rate in all African countries at the secondary level.

That Africa needs more schools for its children is self-evident. It is equally apparent that present programs cannot be greatly expanded within present resources. Thus new and innovative ways must be developed to provide at least minimum learning opportunities for all African youth. More responsibility must be placed on the local communities to build and operate their own schools with funds generated by the community itself. Examples of this self-help concept are seen in a number of African countries. In one country, a community set aside 20 acres of land on which enough salable products were grown, using community labor, to fully finance the school. Not only did this effort provide the community with a school, but it also set a self-help course which enabled the community to satisfy other needs. Activities such as these provide valuable learning experiences for the children and the adults.

Nonformal Learning Systems

The past decade has seen much attention focused on nonformal educational programs. Frustrated at the inability of formal programs geared toward wage employment in urban areas to meet economic needs in a time of chronic unemployment, various groups have begun to develop activities outside the formal school system. These programs are widespread and varied, with many of the newer programs aimed at assisting low-income people to become more self-sufficient and to depend less on the formal wage sector of the economy. In a study financed by AID, the African American Institute studied 80 such programs in 16 African

countries.¹⁴

Appendix I provides a partial list of nonformal education programs in Africa. As would be expected, they vary greatly in objectives, administration, clientele, curricula, and financing. A majority of the programs studied are sponsored by national governments, although United Nations agencies, bilateral donors, religious groups, foundations, corporations, private and quasi-governmental indigenous organizations, and private individuals have all supported nonformal projects.^{13/}

Some nonformal programs offer not only training, but also supplementary support in terms of marketing skills, loans, or equipment, and they may include counseling and extension services. Nonformal education schemes generally differ from vocational training programs in their lack of preselected curricula, in their no-frills facilities, in their relatively low per-student cost, and in the absence of formal certificates or diplomas.

Probably the most successful nonformal programs are those which are at least partially self-supporting, and provide needed goods and services to the community they serve. Generally these programs grow out of the felt needs of the people in the constituent area. Governments may participate effectively in projects, as in the case of the Brigade program in Botswana, provided adequate provision is made for full participation of the community being served. The Vocational

Improvement Centers in Nigeria, the Village Polytechnics in Kenya and the Work Oriented Literacy project in Tanzania are other examples of government-sponsored programs. They demonstrate that such programs can be successful if they are sensitive to the needs of the people and seek to involve them in the process of planning and implementation. Often these are the result of the efforts of a highly motivated individual.

Donor groups sponsor a variety of nonformal programs. One of the largest, the Swedish-sponsored Chilalo Agricultural Development Unit in Ethiopia, is designed to assist poor farmers using the package approach to development. This program has tried with some success to involve the local farmer in the planning process. However, the preponderance of leadership and financial support is from outside the community and so is the ultimate control. In spite of these problems, the lot of the poor farmer is being significantly improved, and it is anticipated that the project will be self-perpetuating by the time it ends in 1981.

Nonformal programs which have the greatest potential for long-range success offer knowledge and skills which allow people to respond to changing employment opportunities in the economy. Extraneous material, other than basic literacy and numeracy, is not included in these often short and intensive programs. Instructors are frequently local people who have either attended a previous program or have knowledge or skills needed in the community.

Existing nonformal programs are financed in a number of ways, depending on the resources of the sponsor. Those programs which are locally conceived, operated, and sponsored are necessarily more self sufficient than those which receive outside funds.

When training is designed to upgrade skills of those already employed, it is usual for the employer to bear a portion of the cost. One regional nonformal program, the Pan African Institute for Development in Cameroon, provides management training for middle-level government employees. Financial assistance is provided by donors who attach no preconditions and by the sponsor of the participant. Students who come from countries other than Cameroon must have a high school diploma or its equivalent and a written guarantee of a job upon completion of training. The two-year course is a mix of academic and practical training, with an emphasis on practical work in the area of specialization. The program, which costs considerably less than regular university programs, awards a certificate equivalent to the B.A., and provides training which can be immediately useful when the graduate enters his preguaranteed job.

The Village Polytechnic Program in Kenya is another nonformal education project for which there is guarded optimism. These low-cost training courses, which prepare school leavers for rural self-employment, are based upon local identification of entrepreneurial opportunities and local responsibility for program financing and implementation. However, considerable assistance is rendered by the

national government and the National Christian Council of Kenya. A recent evaluation of the Village Polytechnic Program shows that 65 percent of male leavers and 54 percent of female leavers were known to be in some kind of remunerative employment or further training at the time of the survey.^{14/}

A significant feature of nonformal programs is that they are most often specifically designed for a particular clientele. Through a variety of programs, a wide segment of the rural population may be served. For example, there are programs for primary school graduates, for primary and secondary school drop-outs, for groups with no formal schooling, and for employed adults, whether they are engaged in a job related to agriculture or not. There are also specialized programs for girls and women.

Nonformal programs are usually less tradition-bound than formal programs and thus are more likely to be need-oriented in their approach and innovative in their methodology. Also, their limited focus usually produces faster results. This is an important factor in both student and sponsor motivation.

Nonformal education is not the panacea for reducing poverty, nor can its use alone solve the problems of the rural poor; but it is a valuable technique. While the results of past efforts justify its continued utilization in the development process, further investigation is required of its strengths and weaknesses, as well as of the in which it might be made more cost-effective. A growing number of

social scientists argue that educators are naive to expect that vocational or agricultural training programs can alter attitudes toward manual occupations so long as society directs its economic rewards towards activities which require academic credentials.^{15/}

Many policy-makers in developing countries are reluctant to support nonformal education, due to its lack of political currency and its vulnerability to accusations of second rate education "adapted" to the needs of the poor. Indeed, it is true that despite their potential for being flexible, low-cost, innovative, and alert to the demands of the local labor market, many nonformal education projects are patterned after formal programs. As a result, they are often poorly staffed and equipped, and act as "holding operations" which lead the users back into the formal system.

From his study of nonformal programs in sixteen Commonwealth countries, Wood concluded that while much national and voluntary effort has in recent years been devoted to the provision of supplementary education and training outside the school system, the efforts that have been made and the considerable sums of money which have in certain circumstances been spent, have in fact made little real impression on the swelling numbers of young people outside the school system.^{16/}

Coombs and Ahmed point out that the "objectives and clientele, the skills they teach and how they teach them, the nature of their

facilities, and the duration of their courses all differ greatly. As a consequence, so do their costs and benefits."^{17/} In the Rural Training Centers in Senegal, the cost per trainee per year or per course is \$648 to \$828; in Kenya's Farm Training Center, \$30; and in Nigeria's Village Improvement Centers, \$104. This wide variation in costs indicates that careful cost benefit analyses of nonformal programs should be made; and where the cost is found excessive, attempts should be made to either reduce costs or increase effectiveness.

Nonformal education programs are especially useful in helping the rural and urban poor to acquire knowledge, skills, and attitudes which will enable them to participate more fully in the development process and to share in the benefits of development. Those responsible for developing viable education and training programs should constantly seek innovative programs which use the nonformal approach.

IV. Donor Assistance to African Education
and Human Resources Development

Outside donors have assisted education and human resources development in Africa for at least a century and a half. Missionaries were the first to provide African communities with programs and facilities in education and literacy training, as well as in health and agriculture. Colonial regimes also provided similar programs on a small and highly selective basis.

Beginning in the 1950s, foreign donors, both private and governmental, began assisting African countries in their struggle for economic development and for an improved way of life for their people. The United States Government was among the first of these, followed closely by other countries, including Sweden, France, England, Germany, Canada, Russia, Japan, and China. UNESCO, UNICEF, IDA, World Bank, FAO, and WHO have also assisted in a variety of programs. The Ford Foundation, the Carnegie Corporation of New York, the Rockefeller Foundation, other private foundations and agencies, and a number of religious groups contribute money and manpower to assist Africa in its development.

U.S. Assistance to Africa

The U.S. Government, through the Agency for International Development, programmed \$159.6 million for development projects in Africa for FY 1975. Projected for FY 76 and 77 are \$215.3 and \$200.1 million, respectively.^{18/} These funds are devoted to programs in three major areas: food and nutrition; population planning and health; and

education and human resources development. From inception in 1949 through FY 73, AID and predecessor agencies have provided \$2,866,555,000 to development programs in Africa, of which \$1,002,839,000 were loan funds and \$1,863,716,000 were grant funds.^{19/}

At present, assistance is being provided to nine individual countries and to eleven others as parts of regional efforts. There are education and human resources development components in projects in only four of the individual countries and in five of the countries assisted through regional programs. However, many of the projects funded under food and nutrition and population planning and health are intended to improve the welfare of the people and stimulate economic development.

Special emphasis should be given to bringing the education components of Mission projects in the above countries more firmly to bear on efforts aimed at improving the lives of the rural poor. One method of accomplishing this is to ensure full cooperation between the various programs in each Mission. For instance, since the AID program in Ethiopia is focused on projects in food and nutrition, pulse diversification and improvement, and agricultural planning, any assistance to the university should be in direct or indirect support of these programs.

In Ghana, the Danfa Rural Health and Family Planning Project, the Economic Rural Development Management Project, and the Women in Ghanaian Development Project should be closely coordinated. Where

training of personnel is involved, and where project implementation takes place, steps should be taken to ensure greater participation of the recipients in the planning, implementation, and evaluation of the projects.

Similarly, the Rural Road System, Family Planning, and Management Development Projects in Kenya, the Agricultural Cooperatives Development Project of Liberia, the Agricultural Research Project of Sierra Leone, and the Seed Multiplication Project of Tanzania all have significant implications for education and human resources development.

Most of the regional programs in the Sahel will ultimately require higher levels of literacy, numeracy, and maieutic skills on the part of the participants of the programs. These abilities may be developed in improved and expanded formal schools or in nonformal programs, but they will at some point become critical to successful project implementation. In Ethiopia, Somalia, Niger, Mali, and in most other Africa countries, low levels of literacy and numeracy will require similar efforts to provide the educational base necessary for full participation in the process of development. Chapter V suggests specific approaches which might be effective in this regard.

One AID project in Africa which deserves special mention is the Accelerated Rural Learning (ARL) Project,^{20/} which provides assistance for small-scale, short-term efforts of the "poorest majority" to improve their incomes and well-being. It is designed to support African institutions or groups working on innovative indigenous

responses to education/learning needs. The project enables USAID to respond to modest LDC requests in a timely manner and thus capitalize on existing momentum in project implementation. Activities are country specific and may be incorporated into existing program documents, thus bypassing the cumbersome project review and approval process. When activities prove successful, new follow-on projects may be developed in cooperation with the host government and possibly other donors.

The scope of this project is broadly conceived and defines learning as the acquisition of knowledge, skills and information on a formal or nonformal basis.

Inherent in the ARL project is the involvement of the recipients in all aspects of project development. Results of such efforts should be closely observed and carefully studied in order to develop methodologies which may be applied in other projects. The Buea Workshop on Human Resources Development and Nonformal Education in Rural Africa demonstrated one method of assembling a group from different countries with different backgrounds to work together on common problems. The ARL project could be used to sponsor similar groups within countries or villages, whose purposes are to plan and implement activities aimed at improving the well-being of the villagers and facilitating development. Problems of improved seed and/or cultivation practices; improved storing and marketing procedures; double cropping; improved livestock feeding, breeding, and care; production credit and farm cooperatives:

improved nutrition; potable water; improved sanitation; improved maternal and child health care; family planning information; and basic reading and mathematics skills are all suggested as types of activities which might be programmed under this umbrella project. A possible way of beginning such programs might well be "brainstorming" sessions with the target group.

The past quarter-century has seen much experimentation with ways of involving people in activities which contribute to their own well-being and to their nation's overall development. For too long these efforts have been planned largely in terms of the economic output which a specific input would produce. With the current mandate to focus AID programs on the poor, new areas of experimentation have been opened up. AID is challenged now to broaden its scope and expand its programs into the more exciting venture of helping people improve the knowledges and skills required to master the rapid changes occurring in their physical, social, and economic environments.

International Bank for Reconstruction and Development (World Bank)

As of June 30 1974, the World Bank had approved loans designed to strengthen the educational programs of twenty-six African nations. Forty-two loans totalling \$569.4 million had been approved from 1963 until 1974, ranging in size from \$0.9 million to Chad to complete a program in progress, to \$107.4 million to Nigeria. Although the majority of these loans were for secondary education and teacher training, support was given to activities at all levels, from primary

to postsecondary. Twenty-one of the loans had a technical assistance component, usually provided by UNESCO (see Appendix II).

These projects represent only a few of the vast number of donor-assisted activities that have been undertaken in Africa over the past twenty-five years; they serve largely to show that while many of them were designed to improve the lot of the poor, few of them did so. This is not to say that these projects were not successful, nor that they did not make significant impacts on the countries in which they were implemented. Indeed, they went a long way toward helping the host countries develop the infrastructure necessary for development, including roads, medical services, communication systems, agricultural research and development, management development, education, and other components determined by the needs and interests of the host countries. In the field of education, great strides were made, due in large part to these programs. Universities were developed and assisted in identifying manpower needs for which programs were created. Teacher-training institutions were developed so that an increasingly large supply of trained teachers was available to first replace the expatriate staffs held over from the colonial period, and secondly to meet the needs of rapidly expanding elementary and secondary schools.

This infrastructure is available for supporting programs which, now that the more pressing middle and upper level manpower needs are

being met, may engage themselves in efforts to reduce and eventually eradicate poverty. The following section will discuss alternative approaches which may be useful in achieving this goal.

V. Optional Approaches to Education and Human Resource Development

The design of an education and human resources development strategy to meet the needs of the urban and rural populations, both poor and non-poor, requires the concentrated efforts of the government, private and semi-private agencies and institutions, and the people. In such an undertaking, efforts are often focused where results are most readily apparent. Magnitude is frequently emphasized, since quantity is often equated with progress; more roads, more schools, more hospitals. It is much more difficult to focus on the contribution these facilities and services make to a more productive and satisfying life for the people whom they serve. In developing programs directed toward providing the poor with the skills, knowledge, and attitudes that will enable them to function effectively in their local environments, it may be necessary to begin with projects which are smaller in scope and which give attention to the needs, desires, and interests of the people for whom the programs are designed, as well as to the behavioral modifications that these programs seek to achieve. And while it may still be necessary to set up quantifiable targets, it is also important to set goals which are more qualitative than quantitative.

To give direction to the qualitative aspects of education and human resources development, we suggest the use of vectors, or lines along which movement toward the qualities sought are channeled. We agree with Platt that, 21/

Much of educational planning in the 1960s could be characterized as target planning -- that is, the programming of educational activities within projected resource constraints. Target planning, while still necessary in guiding the allocation of scarce resources in education, may need to be subordinated to what I shall call vector planning. By this term I mean the designing, programming, and diffusing of educational innovations, giving particular attention to the direction of movement likely to result and making provision for the use of feedback for self-correction...Education is not that much of a science. But it is a quest.

Vector Planning Implications (VPI)

While there may continue to be need for programs which are planned using the target approach, we believe that increasing emphasis should be placed on projects which seek to improve the quality of educational programs as they relate to the everyday life of the people they serve and to their role in development. For such programs we believe that the implications for vector planning are paramount. Keeping in mind that vectors as used here denote a direction of movement which is constantly evaluated and self-corrected, using feedback from the activity.

The following vectors identified by Platt are applicable to planning for education and human resources development in Africa.

- diversification of learning opportunities
- mobility of learners from one educational experience to another
- education as an integral part of other development effort
- relating the world of work to education
- equality of educational opportunity
- a scientific point of view
- teaching by inquiry and problem-solving methods
- higher education responsibility for leadership in national and community development.^{22/}

In addition to those suggested by Platt, other appropriate vectors are those which lead toward:

- closer links between the school and community
- participation by all concerned in analysis, evaluation, redesign and redirection of program activities.

It is consistent with both the AID mandate and vector planning to de-emphasize building programs, especially at the primary level. Present facilities at the secondary, teacher-training, and university levels can most likely provide the middle and upper level manpower required in the foreseeable future. While additional primary schools (especially those for grades 1 to 4) are needed, they should be located in rural areas and should be constructed and largely financed through local initiative. It would be quite appropriate for AID to take whatever action it can to facilitate such an expansion, keeping in mind the financial limitations of both AID and the host government.

Vector planning requires additional attention to methodology and content, and thus focuses directly on behavioral changes which are designed to provide the learner with the skills, knowledge, and attitudes necessary to take full advantage of the opportunities inherent in a developing economy. The vectors listed above provide direction to educational planning.

In the discussion of optional approaches below, no attempt has been made to indicate an order of priority. However, areas not discussed should not be assigned priorities equal to or higher than those listed. A major thrust of this paper is that program planning must be done either by the target group alone or by them in cooperation with host country and donor agencies. It is out of this process that priorities will be established.

A. Formal Education

1. Primary Education

Primary education, the level . . . majority, is an obvious approach. The high value placed upon primary education by populations in African countries suggests receptivity and support of this educational level, although the extent to which primary education can contribute to development depends in large part on the elements of time and place. What may be educationally possible in a country such as Tanzania, with a developed, egalitarian ideology and a tight political structure designed to carry and interpret this ideology to each rural community, may be impossible in a country

lacking one or both of these ingredients.^{23/} The enormity of the problem of expanding and improving primary education when compared with the stringent limits of AID resources requires great care in selecting entry points for assistance to primary education. Intervention at the following points gives promise of the greatest benefit.

a. Because of the formative value of early education, assistance should be given to the early grades of primary schools (grades 1 to 3 or 4). These early years are the only point at which the majority of children, especially poor children, are reached, because the highest drop-out rates occur during this time and because many schools only contain three or four grades. 54 percent of rural schools and 79 percent of urban schools fall into this category.^{24/}

Assistance to these schools should be concentrated on projects which: (a) develop functional literacy and numeracy; (b) involve the school, its teachers and pupils, in activities which clearly relate to the problems and needs of the community; (c) utilize the human, cultural, physical, and economic resources of the community to give breadth and depth to the learning process; and (d) are closely associated with other development efforts in the community.

b. The primary school offers the first opportunity for rural children to develop a scientific point of view. Such a point of view is essential in order to enhance their understanding of their community and its problems. The development of such a viewpoint is more a matter of methodology than of content. Programs which encourage

children to analyze the problems of community health, nutrition, housing, population, agricultural production, marketing, etc., give them an early opportunity to turn to advantage the changes in their environment and develop the tendency to test alternatives and make enlightened decisions. Such projects should be encouraged and, if necessary, assisted.

c. Through the formal primary school system, information and advice on employment and on nonformal education opportunities can be provided. Only a small portion of the primary students in rural areas will complete primary school and still fewer will proceed to secondary school. For those who drop out or only complete the primary grades, the need for counseling and guidance from teachers is great, particularly as it relates to opportunities for jobs and continuing education in both the local area and the wider community. Very little has been done in this area and creative and innovative pilot projects could point the way to a better life for large numbers of poor youth. The most likely locus of such services is the primary school, although it could be provided as a part of other projects, both formal and nonformal

2. Primary Teacher Training

In the area of primary teacher training, interventions may be made either in pre-service or in-service programs or both. Because of the urgency of the need for addressing the problems of the poor, it is anticipated that large-scale projects in in-service training might

bring most rapid results. Regardless of which approach is used, emphasis should be placed on methodologies which are designed to involve the teacher in the development process of the community.

a. Pre-Service training programs.

Assistance should be given to innovative/experimental teacher training programs which: (a) emphasize practical experiences, both in the school and in the community; (b) develop competence in the use of the maieutic approach to problem identification and problem solving; (c) encourage full use of the local environment, including the development of locally focused teaching materials; and (d) have a follow-up service to graduates through seminars, in-service programs, and continuous feedback to the program so that desirable modifications may be made.

b. In-Service training programs.

Assistance should be given to in-service teacher training programs which are designed to give short, intensive training in methodologies, much the same as those suggested for pre-service programs. The advantage of in-service programs is that they may relate more directly to problems which concern teachers in their daily teaching duties. Also, the results of such training are more quickly introduced into the classroom and the communities they serve.

These programs do not require additional facilities. They may utilize existing structures, preferably those in areas similar to the localities of the teachers themselves.

The Teacher Corps program of the National Education Association has conducted successful in-service programs in a number of African countries. This program is staffed by volunteer teachers who donate the time, thus making the program less costly. These volunteers bring with them fresh experiences from their own classrooms. They could be easily oriented to the vectors which are being used to give direction to the programs in which they work. An additional bonus of this program is that the experience of the American teachers in Africa will be immediately utilized by them in their own classrooms, thus enriching the American children's learning experiences.

Other institutions, both African and American, could provide staff for these in-service programs.

c. Assistance should be given to regional groups in Africa who sponsor experimental projects in teacher training; publish journals on topics relating to education and human resources development; sponsor seminars and conferences; serve as clearinghouses for ideas and information; and otherwise actively support efforts to enhance the contribution of education to the development needs of the people and nations of Africa

3. Secondary Education

Support is warranted for general and specialized secondary programs which: (a) are designed to facilitate mobility of the learner from one educational experience to another (b) are experimenting with revised admission requirements which encourage multipl

entry and re-entry into educational activity; (c) build bridges, ladders, and linkages from non-formal education to formal education and from school to work; and (d) provide educational opportunities for drop-outs and adults who have left the system.^{25/} Such programs might include work/study or cooperative learning programs; part-time secondary school sessions for those who are employed or otherwise unable to attend school on a full-time basis; compensatory programs capitalizing upon the commercial experience of potential students; or programs to provide academic skills and knowledge for entrepreneurs and managers.

During the last fifteen years the basic infrastructure for providing secondary education facilities and staffing has been built, thus allowing relatively less attention to secondary education than in the past. Furthermore, it is becoming increasingly difficult for secondary graduates to find employment. For these reasons, "many countries in Africa are restraining the growth of secondary schools."^{26/} At the same time, if African countries are to achieve and maintain acceptable rates of economic development, the requirements for youths able to deal effectively with the elementary processes of development will be enormous. The development of middle-level manpower and initial training for higher level manpower are the major responsibilities of the secondary schools. In situations where commercial, agricultural, or vocational training provides adequate preparation for employment, secondary programs may combine this training with a basic academic curriculum.

4. Postsecondary Education

The ability of a nation to plan, implement, manage, and evaluate programs designed to improve its own way of life is of great importance. This is particularly true in Africa, where the major aspects of modern life have been determined or significantly influenced by outside powers. Increasingly, these countries are looking to their postsecondary institutions for the training of planners, managers, economists, engineers, educators, medical personnel, and other manpower with the skills and motivation required for national development. Thus, the role of higher education cannot be relegated to a minor position. Intervention in the proper areas at the right time and place can help Africa to move more rapidly toward basic self-sufficiency. Again, since many of the countries in Africa share common problems, regional efforts to develop high-level manpower would be more effective and possibly less expensive. The Pan African Institute for Development is one such regional group. At the Buea Workshop on Human Resources Development and Nonformal Education in Africa, which was sponsored by the Pan African Institute, it was demonstrated that given the right setting, Africans from different countries, with different languages, can work effectively toward the identification and solution of common problems. ^{27/}

Some areas of postsecondary education that should be given assistance are:

a. Study/Service programs.

One of the most promising VPIs at the postsecondary level in Africa has been the development of study/service programs; the Ethiopian University Service Program is one example. Here students spend a full year, between the third and fourth years of study, working in rural areas in a variety of activities. The effectiveness of this already meaningful program could be increased if provisions were made to involve the students in gathering and analyzing data and developing possible solutions to problems identified by the analysis. Similar programs could contribute substantially to development in a number of other African countries.

b. Continuing education programs.

A further VPI appropriate to postsecondary education leads to extending the services of the universities to the rural population and others who have been deprived of them in the past. Traditionally, extramural departments have offered mostly academic programs to a largely academic audience. But a new approach, based on the concept of life-long education and directed toward serving the needs of a larger clientele, including local-level leaders, farmers, and small traders, not only has more potential to aid the poor, but also offers the opportunity to enrich university curricula and transform teaching by focusing attention on practical problems and developing relevant instructional materials. Appropriate entry points

stimulate change include assisting universities to reach previously neglected or deprived groups and to revise inherited curricula which are now outmoded.

c. Development Oriented research.

Another way in which universities can contribute to development is through research, which is needed in all areas of social and economic development in Africa. Lyman^{28/} points out that "55 percent of persons engaged in research and development in Africa are at the universities, whereas government employs only 9 percent." Still, the research capabilities of most universities are inadequate. It is essential to increase the proficiency of these institutions, and of the research institutes often affiliated with them, in the collection and analysis of data related to development objectives. Further, the universities should assume a major role in providing the research required by the government in all phases of its planning and development activities. It may be carried out by the faculties and departments or by specialized institutes affiliated with the university, so that research findings can be quickly incorporated into the teaching programs of the university.

Pratt suggests a vector planning implication leading to the direct involvement of postsecondary institutions in activities related to solving the problems of development. In addition to

undertaking research, these institutions should be linked with the reform of the other educational levels and with nonformal education programs.

Several African universities have capabilities which would make them effective delivery systems for other programs supported by AID. Wherever appropriate resources exist, they should be utilized. If necessary, they may be strengthened through the use of short-term technicians from other countries. The utilization of these institutions not only provides a delivery system, but also enriches the institution's programs and develops in the staff an awareness of and concern about the more pressing development problems facing the nation.

B. Nonformal Education Programs

One of the major implications of flexible, sensitized, self-adjusting vector planning in educational development is increased reliance upon learning situations outside the formal system.

Section 105(b) of the International Development and Food Assistance Act of 1975 calls for the expansion and strengthening of nonformal education methods, "especially those designed to improve productive skills of rural families and the urban poor and to provide them with useful information."^{29/} Appendix I illustrates the variety and scope that nonformal education activities may take. They "serve several needs: (1) as an alternative for those who lack the opportunity to acquire formal schooling; (2) as an extension

of formal schooling for those who need additional training to get them into productive employment (or to become self-employed); and (3) as a means of upgrading the skills of those already employed."^{30/} Further, Sheffield and Diemojaoh conclude "that successful nonformal education projects are effective in designing and teaching relevant curricula...they often make arrangements to ensure that their trainees will be productively absorbed in the economy, and that their new skills will be employed to increase productivity on the job."^{31/}

Coombs and Ahmed investigated the cost/benefit ratio of nonformal education and concluded that generally, nonformal programs have a sufficiently positive cost-benefit ratio over formal programs to make them a viable adjunct to the educational process."^{32/}

Thus it would appear that AID should carefully examine opportunities to assist viable nonformal programs in a variety of areas. The agency is on record to "support new approaches...(and) experimentation...on all fronts in human development."^{33/} Approval has also been given for support of "African institutions or groups working on indigenous responses to education/learning needs" through the Accelerated Rural Learning Project,^{34/} which provides an opportunity for USAID Missions to respond rapidly to appropriate LDC requests. It encourages the development of rural outreach programs by existing governmental and institutional agencies where relevant expertise already exists. The project is directed mainly to out-of-school youth and adults, who comprise the clientele of most nonformal

programs. Missions may use the ARL format, or they may develop similar projects when nonformal programs in education and human resources development are indicated. Should such projects be envisioned, it is suggested that the VPI approach to project identification, planning, implementation, and evaluation be used, and that wherever possible, African agencies and institutions be called upon to provide the required expertise.

As learning is considered to be a life-long process, formal and nonformal education are the two sides of the same coin, and the knowledge and skills acquired in one should be acknowledged and built upon in the other. However, all too often no recognition is given to work done in nonformal programs by the formal system. This problem requires more research and the subsequent development of a more realistic policy which encourages movement from one system to the other. By utilizing vector planning techniques in program design, the boundaries between formal and nonformal programs become less distinct and a common ground for learning can be developed more effectively.

The identification of nonformal activities to receive assistance is a crucial task. Ideally, recipient groups would identify major areas of need and present well-developed requests for assistance through appropriate channels. Unfortunately, this ideal rarely becomes a reality. Governments and donor groups must be highly sensitive, therefore, to expressions of concern and interest among the

people, especially the poor, for indigenous efforts to improve aspects of life; and they must be prepared to nurture such efforts into programs. Governments and donors may elicit interest in and concern for activities related to development in areas where the need is greatest. This is most easily done in areas where other development activities are already underway, and where nonformal education programs may be developed as natural consequences of the larger programs. A minimum package agricultural project is an example of such large scale effort.

Unfortunately, the knowledge base upon which to plan nontormal education programs remains inadequate. Strengthening this base, especially through the use of local research personnel, appears to be a promising entry point for stimulating movement in the direction of diversifying learning activities. As Brembeck has pointed out:

...years of research have gone into the shaping of formal education. On the other hand, research history on nonformal education is all too brief and inadequate to give much guidance. Investments now in nonformal education research are urgently needed.^{35/}

Sheffield and Diemojaoh suggest that "useful means of spreading the little...information available on nonformal education would be to arrange workshops and seminars so that Africans could learn about programs in other countries."^{36/} Such workshops and seminars, using the maieutic approach,^{37/} could be held at the local level where people could "brainstorm" their problems and develop ways to deal with them: or, at higher levels, to develop more comprehensive progr

on a broader scale. The Buea conference demonstrated that an international group using the maieutic approach can formulate creative directions for the development of education and human resources. The important aspect of this method of problem identification and planning is that all those who will be influenced by the program participate in its planning, implementation, and evaluation. As pointed out by Kjell Eide, Director General, Department of Research and Planning, Norwegian Ministry of Education, it is not always possible for all of the people affected by a program to share individually in its formulation; but they must at least be represented in such a way that they feel that they have participated to some extent.^{38/}

At the risk of restating the obvious, it should be pointed out that the VPI approach to project identification and development represents a radical departure from those methods usually employed by governments and donors, and it calls for major reappraisal of present methods. It also demands more experimentation with a variety of approaches to development and more attention to feedback in the process of evaluating and modifying programs underway.

C. Curriculum and Materials Development Centers with Rural Emphasis

Learning is defined as the acquisition of knowledge and skills, and presupposes that the elements of the knowledge and skills to be learned are readily available in usable forms. While sufficient knowledge and skills exist to relieve much of the poverty in Africa, they are not readily available in usable form.

An implication of vectors leading toward a scientific point of view, and teaching by inquiry and problem-solving methods, is the development of curricular materials related to local environments and experiences. This approach would heighten interest and possibly make learning any subject a more exciting and challenging experience.

Too often the results of research are written in a technical, scholarly manner which is difficult for the layman to comprehend; therefore, these results remain largely obscured from those who might improve their lot if the results were applied to their daily lives. A program to translate relevant research findings into simple, easily understood language would facilitate the delivery of vital information to students and their parents.

Information and ideas are communicated in many ways. An emphasis on experiments designed to discover more effective ways to communicate, especially with the poorly educated, might result in an increased flow of information to the vast majority of people. Investigation of the effectiveness of various print and nonprint media, including pamphlets, brochures, posters, charts, newspapers, magazines, books, radio, audiovisual materials, television, dramatizations, etc., used alone or in combination with one another, might well deserve AID support.

D. Implications for Program Planning

Any strategy for the development of education and human resources designed to assist the Bureau for Africa channel its resources

most effectively toward improving human welfare and augmenting development in all economic sectors must consider the framework within which the strategy will be implemented.

It is necessary to determine the degree of impact on the African scene of those funds which can reasonably be expected to be available, over both the long and short terms.^{39/} There are several African nations whose current needs might justify the expenditure of the major portion of the AFR allocation for education and human resources development projects specifically designed to improve the lot of their individual populations of rural poor. Financial reality dictates, however, that priorities must be determined and choices carefully made on the basis of needs and the relative effectiveness of programs to meet them.

While available assistance should not be concentrated to the extent that it reduces local initiative, neither should it be spread so thinly that it becomes ineffective. The impact of the assistance can be significantly increased by coordinating AID strategy guidelines with host country priorities and thus ensure that programs receiving aid are consistent with those priorities.

Projects should have a high degree of demonstrated commitment by all parties and levels concerned before implementation begins. This is essential to the success of any program. Criteria for

gauging the degree of commitment include:

1. The extent to which funds and personnel are made available.
2. The level of motivation on the part of the participants.
3. The degree to which clients are involved in the planning and development of the project.

Where education and human resources development projects are components of multi-approach or minimum package programs which depend on other factors such as markets, loans, agricultural and health services, and the availability of equipment and materials, care must be taken to ensure that each element is available when required.

The futility of seeking an educational solution to a non-educational problem must be considered when attempting to define program strategies. Missions should be realistic in assessing the ability of education and human resources development programs to solve the complex problems which exist in LDCs. While unique and significant contributions to the solution of those problems can be made by specific education and human resources development programs, either independently or as a component of a larger project, each program must be planned realistically and evaluated accordingly.

An additional concern, that has major planning implications is the fact that reductions in overseas personnel have stripped USAID Missions in Africa of technicians in the field of education and human resources development. National and regional African institutions and U.S. organizations have become the major sources of technical personnel

for projects supported by AID. However, it is unrealistic to assume that either African personnel or personnel from American institutions can provide the technical inputs necessary for the development of viable projects which are attuned both to the needs of the host country and to the requirements of AID, many of which are mandated by Congress. It is equally unrealistic to think that economists or program personnel can provide the expertise required. If assistance is to be given to education and human resources development programs in Africa, then persons with a sound basis of training and experience in the field of Education will be required. And these people will require the services of personnel from other disciplines, such as Anthropology, Economics, Management, and others, as the local situation may dictate. We believe that unless such personnel are made available in programs in Education and Human Resources Development should not be attempted, the Congressional mandate notwithstanding.

The participants of the Buea Conference who came to Washington to discuss AID assistance to Africa suggested that AID take a very hard look at its organizational structure, at its donor-recipient relationship, and at the very substantial gap between planning and implementation. As regards the new emphasis on the poor majority, one member noted that this could be judged by "its (AID's) future behavior." They stressed the need for a mutual decision-making process that respects the recipient host country's insights.

We note that the time lag between the idea for a project and the approval of that project is normally two or more years. In this interim period, we suspect that the AID technician or host government official that had the idea might no longer be on the scene, and that the people who were at the outset motivated by the idea might now be interested in other, more recent ideas. It would seem imperative that project planning and implementation be drastically modified and speeded up so that the momentum generated by new, innovative ideas may be capitalized upon in the implementation of the idea. We believe it is essential that planning be done in close cooperation with the persons who will be involved in implementation, and that decision-making powers be placed as near to the point of action as possible. In this way some of the African's reservations may be minimized or eliminated and viable programs developed and implemented.

VI. Summary

The Bureau for Africa should support programs in the area of education and human resources development which stem from the implications of flexible, self-adjusting vector planning.

General Concepts

1. Concentrate upon educational direction rather than educational targets.
2. Provide direct assistance to educational activities aimed at groups which currently derive little benefit from the fruits of development.
3. Support informal, formal, and nonformal learning systems using an integrated approach so that these systems supplement and complement one another.
4. Ease boundaries between diverse learning opportunities and emphasize the building of links and bridges between every component in the educational structure.
5. Capitalize on indigenous innovations.
6. Stress the maieutic approach to the processes of program identification, planning, and implementation.

Programs may be developed using one or more of the following approaches:

A. Formal Education Programs

1. At the early primary level, (grades 1-4) programs should be considered which:

- (a) develop functional literacy and numeracy;
- (b) employ methodologies which involve the school, its pupils, and staff in activities which clearly relate to the problems and needs of the community;
- (c) utilize the human, cultural, physical, and economic resources of the community to give breadth and width to the learning process;
- (d) are a part of other ongoing development efforts; or
- (e) provide information concerning employment opportunities and further education.

2. Support teacher training programs, both in-service and pre-service, that:

- (a) develop improved methodologies that aid teachers in developing closer links with the communities they serve;
- (b) develop proficiency in the maieutic approach to problem-solving
- (c) develop more effective and efficient methods of developing literacy and numeracy capabilities in students; or
- (d) on an international level, cooperate to create a common clearinghouse of experience.

3. At the secondary level, both general and technical/

vocational programs should be assisted, that:

- (a) are reinforced by on-going development programs that make vocational and agricultural occupations or other activities in the informal sector of the economy viable alternatives to white collar employment; or
 - (b) provide multiple entry and re-entry routes into educational opportunities.
4. Assist universities to develop and implement programs, that:
- (a) support study/service programs, especially those relating to collection, analysis, and incorporation of data into campus programs;
 - (b) provide continuing education to the widest variety of clientele and provide field level activities that can result in beneficial feedback to university programs;
 - (c) are engaged in research which develops knowledge essential to development planning; or
 - (d) have, or are developing, capabilities which may be utilized by government and donors in program implementation.

B. Nonformal Education Programs

Bureau for Africa should support nonformal education projects and activities, that:

1. encourage improvements of rural out-reach programs from

- institutions and agencies where expertise already exists;
2. support research and development programs which cut across the boundaries of informal, formal and nonformal systems;
 3. support indigenous responses to local problems;
 4. capitalize on and support development activities already underway in sectors other than education; and
 5. support workshops and seminars utilizing the maieutic approach at local, national, and multi-national levels.

C. Curriculum and Materials Development

Bureau for Africa should support curriculum and materials development programs, that:

1. reduce relevant research findings, written in technical language, to easily understood educational material; and
2. experiment with various media as a means of reaching the poor and those who are involved with programs designed to help the poor.

APPENDIX I

Nonformal Education Programs in Africa
Which Have Been the Subject of Case Studies

Country	Name of Program or Sponsor
<u>Cameroon</u>	Zones d'Activites Communitaries et Culturelles (ZACC) Zones d'Actions Prioritaires Integrees (ZAPI) Holy Family Center for Female Instruction- Davala Youth Center for Education - Davala Pan African Institutes for Development - Davala and Buea Association pour la Foundation des Cadres d'Industrie et de l'Administration
<u>Botswana</u>	Brigade Training
<u>Dahomey</u>	Ruralization Schemes
<u>Ethiopia</u>	Ethiopian Airlines: Pilot Training Center and Aviation Maintenance School The Bako Project Chilalo Agricultural Development Unit (CADU) Confederation of Ethiopian Trade Unions Ethiopia Child and Family Welfare Assn. Ethiopia University Service Ethiopian Women's Welfare Association Radio Voice of the Gospel YMCA Multi-Purpose Programs
<u>Gambia</u>	Young Farmers Club
<u>Ghana</u>	Mancell's Girls' Vocational Institute - Kumasi National Vocational Training Institute National Family Planning Program National Women's Vocational Train: Center - Accra All Workers Brigades

APPENDIX I
(continued-2)

Nonformal Education Programs in Africa
Which Have Been the Subject of Case Studies

Country	Name of Program or Sponsor
<u>Ivory Coast</u>	Centre de Poids Lourds Centre de Perfectionnement Audio-Visuel Centre National de Promotions des Entreprises Cooperatives (CENAPEC) Community Workshop Institut Africain pour le Developpement Economique et Social (INADES)
<u>Kenya</u>	Christian Industrial Training Center - Nairobi Management Training and Advisory Centers (Regional) Industrial Training Levy Ngashira and Partners Building Contractors Partnership for Productivity Village Polytechnics East African Yearly Meeting Kenya Tea Development Authority (KTDA) Kenya National Youth Service Radio and Correspondence Courses in Kenya YWCA Training Center for Girls Community Development Centers
<u>Lesotho</u>	Young Farmers Clubs
<u>Mali</u>	Centres d'Animation Rurals Mouvement des Pionniers Centre d'Orientalion Practique
<u>Malawi</u>	Malawi Young Pioneers Lilongue Land Development Programme
<u>Morocco</u>	Large Scale Multi-Purpose Program

APPENDIX I
(continued-3)

Nonformal Education Programs in Africa
Which Have Been the Subject of Case Studies

Country	Name of Program or Sponsor
<u>Nigeria</u>	Ceramic Training Center - Western State Domestic Science Center - Lagos Nigerian Driver and Maintenance School - Lagos Opportunities Industrialization Centers - Lagos Vocational Training and Common Facilities Center - Otta Industrial Development Center - Zaria United Africa Company Training Programs Farm Institutes - Kano State Citizenship and Leadership Training Center Lagos St. Brigid's Social Center - Ibadan Shasha Social Development Training Center - Iperu Faith and Farm - Northern Nigeria Textile Training Centers - Western State Vocational Improvement Centers
<u>Sierra Leone</u>	Kenema Rural Training Institute The Boys Society of Sierra Leone
<u>Senegal</u>	Animation Rurale Societe d'Aide Technique et de Cooperati en Senegal (SATEC) Rural Training Centers (RTC) Rural Artisan Training Centers (RATC)
<u>Sudan</u>	The Gezira Scheme

APPENDIX I
(continued-4)

Nonformal Education Programs in Africa
Which Have Been the Subject of Case Studies

Country	Name of Program or Sponsor
<u>Tanzania</u>	Msimbazi Study Group - Dar es Salaam National Industrial Training Council YMCA Farm Schools - Marangu Cooperative Education Lushato Integrated Development Projects (LIDEP) Multi-Purpose Rural Training Centers YWCA Training Program Cottage Training Work Oriented Functional Literacy Project Mwanza
<u>Tunisia</u>	Pre-Apprenticeship Training Centers Center for Rural Girls Social Action Centers
<u>Uganda</u>	Mukono Handloom Weaving Project Agricultural Settlement Schemes for Youth Management Training and Advisory Centers - Kampala Martyrs' Community Center - Kampala Urban Kampala Grail Team YMCA Multi-Purpose Program
<u>Upper Volta</u>	Rural Education Centers
<u>Zambia</u>	Buseko Home Industries (YWCA Training Project for Girls) Tuanshya Youth Self-help Project Kalaleeshi Farm College - Kitwe The Chizera Project Africa Literature Center Mindolo Eccumenical Foundation

APPENDIX I
(continued-5)

Nonformal Education Programs in Africa
Which Have Been the Subject of Case Studies

Country	Name of Program or Sponsor
<u>East Africa (Reg)</u>	Farmer Training Center Agricultural Extension Services Christian Rural Service

APPENDIX II

World Bank/IDA Education Projects in Africa
 Approved as of June 30, 1974

Country	\$(millions)	Purpose
Tunisia I	9.2	Sec. gen., technical and teacher training
Tanzania I	6.0	Sec. gen.
Nigeria	30.0	Sec. gen., technical, adult and teacher training
Morocco	16.2	Sec. gen., technical, agricultural
Ethiopia	10.7	Sec. gen., technical and teacher training
Kenya I	9.7	Sec. gen., technical and teacher training
Tunisia II	19.8	Sec. gen. and agricultural
Uganda	14.3	Sec. gen.
Malawi	7.0	Sec. gen. and teacher training
Malagasy	7.2	Sec. gen., technical and teacher training
Gabon	3.6	Sec. gen. and teacher training
Sudan	15.4	Sec. gen., post secondary agricultural and teacher training
Chad	2.1	ec. agricultural and teacher training (T.A.)
Zambia I	36.2	Sec. gen., technical and teacher training

APPENDIX II

(continued)

World Bank/IDA Education Projects in Africa
 Approved as of June 30, 1974

Country	\$(millions)	Purpose
Tanzania II	7.1	Sec. gen., and teacher training
Cameroon	14.0	Sec. gen., technical, agricultural and adult and teacher training (T.A.)
Zambia II	7.4	University, technical and teacher training
Sierra Leone	4.5	Sec. gen., technical and teacher training (T.A.)
Ivory Coast	19.1	Primary, secondary, general, technical, postsecondary technical, agricultural and teacher training (T.A.)
Kenya II	9.3	Secondary technical, postsecondary agriculture, and adult and teacher training (T.A.)
Tanzania III	4.7	Nonformal rural training and postsecondary agricultural
Congo (B)	4.1	Secondary general and technical teacher training; nonformal rural education (T.A.)
Chad II	3.1	Sec. technical and agricultural
Somalia	3.7	Sec. gen., technical teacher training and nonformal agricultural (T.A.)
Senegal	2.3	Sec. gen., technical, and agricultural

APPENDIX II

(continued)

World Bank/IDA Education Projects in Africa
Approved as of June 30, 1974

Country	\$(millions)	Purpose
Uganda II	10.4	Sec. gen., technical post-secondary and nonformal agricultural; health and medical training (T.A.)
Morocco II	13.5	Sec. gen., and technical, agricultural, postsecondary teacher training, agricultural, adult nonformal (T.A.)
Zaire I	11.8	Sec. tech., primary and technical teacher training (T.A.)
Nigeria	27.8	Postsecondary gen., teacher training (T.A.)
Liberia	9.6	Sec. gen., postsecondary agricultural, teacher training (T.A.)
Central African Republic	5.4	Sec. gen., postsecondary technical, teacher training
Cameroon II	11.4	Sec. gen., and technical, teacher training, nonformal adult technical (T.A.)
Tanzania IV	14.6	Primary, sec. gen., medical school, technical secondary (T.A.)
Algeria	10.2	Technical, agricultural, and postsecondary

APPENDIX II

(continued)

World Bank/IDA Education Projects in Africa
Approved as of June 30, 1974

Country	\$(millions)	Purpose
Zambia III	40.1	Para-medical, health training centers, agricultural school of university, former training centers, teacher training and gen. sec. development (T.A.)
Mali	5.5	Technical teacher training, sec. gen., technical education development (T.A.)
Nigeria	107.4	Sec. gen., teacher training (T.A.)
Upper Volta	3.6	Sec. technical, youth training, (T.A.)
Ethiopia	12.7	Sec. gen., agricultural training, university school of science, teacher training (T.A.)
Chad	.9	Supplemental to Chad I and II
Mauritania	4.3	Sec. technical, community development, vocational and teacher training (T.A.)

Source: Developed from information on pages 66-68 of Education Sector Working Paper, (New York, International Bank for Reconstruction and Development, 1974)

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