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**AFRICA'S DEVELOPMENT STRATEGIES AND
THEIR IMPLICATIONS FOR EDUCATION**

I. INTRODUCTION

Towards the end of 1970, it became quite clear that the modernization strategies adopted in the 1960s and 1970s had not brought about the expected socio-economic development in Africa and the growth had not "trickled down" to the masses of Africans. The rate of economic growth remained low both in real terms and relative to other developing regions of the world. Furthermore, no real structural transformation had occurred in African countries - they remained dependent on one or two primary export commodities; the balance of payments and debt crises almost crippled their economies; production and productivity continued to be low; unemployment and underemployment continued to soar; and faltering wages combined with inflationary pressures aggravated the poverty situation in African countries. In the light of the rapidly deteriorating socio-economic situation, alternative paths to modernization strategies were needed to avert further deterioration in the socio-economic conditions in Africa.

It was against the disappointing economic performance and the consequent socio-economic concerns in Africa that the Organization of African Unity (OAU); the United Nations; the Economic Commission for Africa (ECA); the World Bank; and other similar organizations prepared and issued documents, reports, action plans, declarations, etc., on the socio-economic situation in Africa. Notable among the documents spelling out the regional strategies and policy framework for meeting the challenges of the African crisis are the Monrovia Strategy (1979); the Lagos Plan of Action and the Final Act of Lagos (LPA and FAL 1980); Africa's Priority Programme for Economic Recovery (APPER, 1986); the United Nations Programme of Action for African Economic Recovery and Development (UN-PAAERD, 1986); the African Alternative Framework to Structural Adjustment Programmes for Socio-economic Recovery and Transformation (AAF-SAP, 1989); the African Charter for Popular Participation in Development and Transformation (1990); and the United Nations New Agenda for the Development of Africa in the 1990s (UN-NADAF).^{1/}

Against a brief discussion of the development objectives, policy framework and development strategies promoted by the various plans of action and initiatives of the last 13 years or so, this paper examines the implications of such dynamic and innovative policy framework and development strategies for education in Africa. This paper takes the view that among others, an appropriate and relevant education system, which is responsive to Africa's

1/ The Organization of African Unity, Lagos Plan of Action for the Economic Development of Africa 1980-2000. (Addis Ababa: OAU, 1981); Organization of African Unity, Africa's Priority Programmes for Economic Recovery, 1986-1990, AHG/DECH.1(xxi). (Addis Ababa: OAU, 1986); United Nations, Programme of Action for African Economic Recovery and Development, 1986-1990. (New York: United Nations, 1986); Economic Commission for Africa, African Alternative Framework to Structural Adjustment Programmes for Socio-economic Recovery and Transformation. (Addis Ababa: ECA, 1989). E/ECA/CM.15/REV.3; Economic Commission for Africa, The African Charter for Popular Participation in Development and Transformation. (Addis Ababa: ECA, 1990). E/ECA/CM.16/11; and the United Nations, New Agenda for the Development of Africa. (New York: United Nations, 1990).

socio-economic development objectives, can assist in solving some of Africa's profound developmental problems. The pages that follow discuss the key development strategies and strategic objectives for Africa's development in the 1990s (section II); development strategies and their implications for education (section III); realignment of education with Africa's development strategies (section IV); and the major conclusions and policy options (section V).

II. STRATEGIC OBJECTIVES OF AFRICA'S DEVELOPMENT

Development strategies

Taking cognizance of the rapidly deteriorating socio-economic conditions and the poor economic performance in the African countries, the Heads of State and Government of the Organization of African Unity adopted, in 1979, the Monrovia Declaration of commitments on guidelines to be followed and measures to be taken for achieving national and collective self-reliance. The Monrovia Declaration spelt out both the priorities and objectives of development and the modalities for their attainment in the priority areas of regional self-sufficiency in food; the physical integration of the region through the development of transport and communication; the development of capacities and capabilities at national, sub-regional and regional levels for industrial and technological development as well as gain sovereignty over their natural resources; and increase the share of intra-African trade.^{2/}

In pursuance of the Monrovia Declaration, the African heads of State and Government at the Lagos Economic Summit gave a fresh thrust by providing the modalities for the implementation of the Monrovia Strategy for African Development by adopting the Lagos Plan of Action (LPA) and Final Act of Lagos. The LPA went further in elaborating sectoral and inter-sectoral objectives and the modalities for attaining the Monrovia Declaration as follows:

- (i) the establishment and implementation of large-scale and long-term programmes of human resources development, and achievement of a good measure of self-reliance in trained manpower as input to economic activities in all sectors;
- (ii) strengthening of existing sub-regional and regional institutions of training and research for the implementation of priority programmes;
- (iii) strengthening new forms of co-operation among African states in all fields, particularly in training, mineral resource exploitation, trade and finance;
- (iv) development of science and technology to meet the requirements of LPA with special reference to national policies and programmes in science and technology for development within the context of overall national development plans; and

2/ UN/OAU, "The Strategy for the African Region", in the International Development Strategy for the United Nations Third Development Decade, 1979. E/CN/14/IF/107.

- (v) taking appropriate national and collective action in terms of policies, budgetary and financial allocations and international negotiation measures to support the above commitments and the overall objective of attaining viable and meaningful economic independence.

It was emphasized within the context of LPA that each of the above measures, particularly the production and service targets set for the various sectors of African economies, requires very substantial inputs of trained manpower, skilled and semi-skilled operations, technical and technological personnel, as well as supervisory and managerial personnel at all levels; instructors and teachers, researchers and specialists in a variety of disciplines as well as experts and a good crop of indigenous entrepreneurs. At the same time, other input factors such as capital, technology and raw materials, are equally needed as co-operants. In respect of human resources, elements such as the will to develop, to improve one's social situation through hard work and the development of positive attitudes to work and national development activities and programmes as well as make sacrifices at the individual and national levels in support of economic and social development are particularly critical to qualitative manpower input.

The implementation of the Lagos Plan of Action, however, was a frustrating experience in that although Africa had "evolved its own continental strategies and programmes of development, most of its governments followed and implemented only those strategies and policy frameworks carved out for Africa from outside in order to have access to the "almighty" foreign exchange resources.^{3/}

It was in the spirit of counter-acting such tendencies by African States that led to the birth of the African Alternative Framework to Structural Adjustment Programmes for Socio-Economic Recovery and Transformation (AAF-SAP) in response to structural adjustment programmes (SAPs) carved by the World Bank and the International Monetary Fund for economic recovery and transformation of the continent.

Whereas the LPA was not only geared towards achieving long-term development goals and targets, it also took cognizance of the need for short-term actions^{4/} in as far as all these constituted a continuum of the long-term development and transformation process. It was therefore hoped that African countries would take necessary action to restructure and transform their social and economic structures and policies so as to create favourable conditions for the realization of long-term objective of self-reliance and self-sustained development. But alas! all efforts in this direction were derailed by the African economic crisis resulting in a shift of priorities from long-term to short-term objectives.

3/ ECA-Laying the Foundation for Socio-Economic Transformation of Africa in the 1990's: The Development Policy Agenda - Statement by the Executive Secretary of ECA at the formal opening of 26th Session of the commission/17th Meeting of the Conference of Ministers, Addis Ababa, 9 May 1991 p.2.

4/ ECA - AAF-SAP, opt cited, p.10.

In an effort to redress this shift of objectives, AAF-SAP was adopted in 1989 by the African Ministers of Economic Planning and Development and the Ministers of Finance with the primary aim of reiterating and resituating Africa's development objectives, as espoused in the LPA, within the contemporary imperatives of recovery with transformation by emphasizing the following:

- (a) the human aspect of development as a primary objective, i.e. development should be human-centred to ensure the alleviation of poverty and raising of the welfare of the people through: (i) increasing access of the poor to basic factors of production, especially land; (ii) creation productive of employment opportunities; and (iii) improving the pattern of distribution of national wealth;
- (b) establishing a self sustaining process of economic growth and development by ensuring that self-sustained development is accompanied by: (i) the maintenance of sustained economic growth; (ii) transformation of the African economic and social structures; and (iii) maintenance of a sustaining resource base; and
- (c) integrating the African economies and ensuring national, sub-regional and regional collective self-reliance through the: (i) integration of the physical, institutional and social infrastructures; (ii) integration of the production structures; and (iii) integration of the African markets^{5/} and with it the creation of an African Economic Community.

In summary, the key strategies promoted by the various plans of action and initiatives to attain the broad objectives and specific priorities included the following:

- * Economic cooperation and integration at the sub-regional and regional levels.
- * Self-reliance at national, sub-regional and regional levels without isolating Africa from the rest of the world.
- * Restructuring the production base to increase the rate of agricultural and industrial output.
- * Development of a science and technology capacity and its adaptation to increase economic productivity and to diversify the range of products.
- * Human resources development by increasing access of the overall population to literacy and numeracy; and enhancing its intellectual and productive capacities and its health status.

5/ ECA-AAF-SAP, op. cit. (for full details see pages 9-15).

Revisiting Africa's strategic development objectives

Africa's development strategies and plans of action enunciated over the last decade or so have not been successful. A number of weaknesses can be identified, among others. For example, underdevelopment of human capacities; persistence of mono-cultural production structures; external factors, such as the unsustainable external debt burdens, natural and man-made disasters such as recurring droughts, civil strife; endemic diseases and pests; energy deficiencies; etc. are some of the basic constraints and vulnerabilities that have tended to stall the region's efforts to engineer sustained development.

It was mentioned earlier that a number of the old development challenges have not materialised in Africa. At the same time, the region is faced with a host of new and daunting challenges in the wake of the changes that are taking place in the world and Africa itself, following the end of the cold war era. There are at least five major changes that have taken place or continue to evolve in such a way that they will impact the new world order. This will have implications for Africa, which have to be taken into account when implementing the existing development strategies. These changes include the following:^{6/}

- the peace dispensation as the cold war comes to an end, subsequent to the disintegration of the Soviet Union;
- the globalisation of the world;
- the transnationalisation of operations and relations among countries as they form political and economic blocs;
- the new awareness about the environment as a global issue;
- competition for world resources;

The phenomenon of globalisation and heightened competition in the world is characterised by high speed advanced technology - both production and process; integration of the advances in information dissemination technology; innovations in international finance; transnationalisation of production; cross-border mobility of investment resources; the new trade regime; etc. These emerging trends in the world are posing and presenting formidable development challenges to individual African countries as well as the region as a whole. Thus under the circumstances of growing regionalism and formation of economic blocs, Africa is faced with the challenges of long-term sustained and sustainable development and growth, especially how the African countries can, individually and collectively, build and renew their comparative advantage in a highly competitive world and thus promote

6/ For a detailed examination and discussion on the emerging trends in Africa and the world, see ECA, Strategic objectives for Africa's economic development in the 1990s. Paper prepared for presentation at the 19th Meeting of the Conference of Ministers, Addis Ababa, April 1993. E/ECA/CM.194.

industrialisation in an era of intense global competition. This calls for a challenge to all of Africa's diverse economic agents to increase their efficiency, effectiveness and productivity so as to increase their collective competitiveness within the global economic system.

The global awareness about the detrimental impact of rapid economic growth on the environmental equilibrium has emphasised the critical importance of the environment on development. The consensus emerging in the Agenda 21 is that economic development must be "sustainable".^{7/} The challenge to Africa is how to make the transition from the present environmentally unsustainable mode of production to sustainable development, i.e. how to devise the measures and strategies that can ensure robust and sustainable development called for under the United Nations New Agenda of Development for Africa (UN-NADAF)?

The increasing demand for capital by reforming economic systems in the former Soviet Union and the economies of Eastern Europe; the fast growing newly industrializing countries of Asia and Pacific; and China and India; which have embarked on substantial structural reforms would heighten the competition for the world resources. This means that a new Africa would have to fiercely compete for the world resources as well as improve its own resource management and utilization strategy if the growth and development of its economies is to become 'sustainable' and 'viable'. Therefore, the challenge to Africa is how to make the transition to a more effective resource mobilization - domestic savings as well as external resources - and utilization strategy?

One of the preconditions for achieving the long-term socio-economic objective of self-reliant and sustained development in Africa is creating a conducive political and economic environment. This is critical to mobilizing the domestic resources as well as retaining human and capital resources for endogenising and internalising the growth and development process in Africa. Therefore, the challenge to African countries is to create an enabling environment, including respect for human rights and individual freedom for the good of the society as a whole.

Africa, itself, is experiencing a number of changes which are presenting new challenges to African leadership as well as the socio-economic system. Some of the recent changes are: democratisation and pluralism; economic liberalisation as a result of the implementation of the World Bank/IMF structural adjustment programmes; a move towards regional integration, marked by the establishment of regional groupings and progress towards the formation of an African Economic Community; high population growth; deterioration of the African environment; and the liberation of South Africa as indicated by the recent political changes suggesting an imminent collapse of apartheid and the strong possibility of achieving the majority rule in South Africa. These recent changes present formidable challenges to Africa's political, economic and social systems, if Africa is to become a viable

7/ The recently held International Summit on Environment - the Earth Summit in Rio de Janeiro (Brazil) in June 1992 and the adoption of Agenda 21 have brought to the fore the seriousness and heightened consciousness of the world with regard to the need to reverse environmental degradation, see the United Nations, Conference on Environment and Development. Rio de Janeiro (Brazil), 3-4 June 1992.

partner in the new world order and sustain its socio-economic development with the ultimate objective of improving the living conditions of the masses of the African population.

In the light of the emerging trends in Africa and the world; the challenges in long-term development; and the new challenges that have evolved in the recent time; certain strategic objectives for Africa's development in the 1990s may be identified to include the following principal elements:

1. building and strengthening human capacities in Africa and the indiginisation of scientific and technical progress;
2. developing agricultural potentials with particular focus on food self-sufficiency at national, sub-regional and regional levels;
3. progress towards the establishment of the African Economic Community;
4. rational and sustainable industrialisation at national, sub-regional and regional levels;
5. redefining the role of the state and its institutions with the aim of improving economic production; maintaining political stability, enhancing national cohesion, and improving the quality of governance;
6. enhancing popular participation and human centred development;
7. efficient strategies for domestic and external resources mobilization; and
8. progress towards regional stability, peace and security.

While the old challenges that the development strategies and plans of action promoted over the last 13 years or so remain today as critical for Africa's socio-economic well-being as ever, they must take into consideration the new and emerging challenges spurred by the recent changes in Africa and the world. Africa has yet to gain mastery over its national resources through a wide-spread application of science, technology and results - oriented management techniques, which are the preconditions for Africa to move out of the subsistence economic conditions into a rapid and sustained growth and development scenario. The world economy is more and more driven by innovations in science, technology and management which are being generated at an unprecedented rate. Information gathering, processing and dissemination are increasingly becoming decisive factors in securing a successful niche in the world economy. Africa can ill afford to fall behind the rest of the world in fields of human endeavour and endanger a further marginalization of its population from the global economy.

III. DEVELOPMENT STRATEGIES AND THEIR IMPLICATIONS FOR EDUCATION

In Africa, as elsewhere, education is recognised as the catalyst that activates socio-economic development; and the means through which national consciousness and identity are created and fostered. In short, education (knowledge, skills and attitudes) is regarded as a vital factor input in the development process. Thus the daunting challenges facing the African education systems in the 21st century are how to assist African countries individually and collectively in:

- (i) achieving structural transformation and sustained development through internally-generated process of growth and development for the well-being of the African population as a whole; and
- (ii) securing a niche in the world economy marked by intense competition and high-technology, including informatics.

In examining the development strategies in Africa and their implications for education, a few questions may be asked:

- What knowledge, skills and attitudes should education provide to ensure their utility in national development efforts?
- What methodologies, strategies and approaches should education employ to ensure that these are properly imparted?
- How and by whom are such moral qualities and attributes such as co-operation, perseverance, creativity, production of goods and services, creative works, attitudes, confidence, respect, loyalty, unity and self-reliance, to be attained, nurtured and fostered?

Equally important, we may restate these questions as follows:

- (a) As a tool, how best can education be used as a means of social restructuring, and a means of economic recovery and transformation?
- (b) As an instrument, to what extent should education be primarily for training and acquisition of knowledge, skills and attitudes for socio-economic recovery and transformation?
- (c) To what extent should education be an end in itself, that is as a process of personality formation based on the primacy of the individual; or as a means for the socialization of individuals as well as the transmittal of particular values, attitudes and cultures deemed necessary for the development and maintenance of a dynamic society?

In asking these questions, African countries will find it necessary to restate society's basic objectives as well as the aims and objectives of education in relation to the new development strategies and policy frameworks, viz: economic, social, political and educational objectives of a society.

(i) Social objectives

In the pursuit of social objectives account should be taken of the social organization of production, the patterns of ownership and distribution, forms of social differentiation and the cultural milieu within which societies exist i.e. the totality of values, norms, mores, code of ethics, attitudes and beliefs, language, religion, arts and ethical principles of a society as well as a society's social, political and economic organizations and institutions, and general feelings towards development, change, work, and other related issues.

Admittedly certain social values, attitudes and practices are not conducive to African development because they tend to nurture cultural cleavages, provoke cultural conflicts and divisions as well as making it very difficult to administer and manage human beings. The reason is that the product of the school system is two people in one - he/she has one foot in the African traditions and the other in the white community where he has never been completely adopted. And as one writer put it: "We have ceased to be what we were and that truly we are no longer what we were, and that we were not exactly ourselves." ^{8/}

This divorcing from the African background of Western education has contributed towards a break-down of African life and cultural identity and resulted in imported life styles. Therefore, for education to contribute to the attainment of Africa's development goals, education curricula should have strong cultural base to ensure a marriage (not of convenience but a lasting union) between Western schooling and African traditions in their entirety - family, kinship, values, ethics etc.

(ii) Political objectives

As pointed out in the Khartoum Declaration, "the political context for promoting healthy human development has been marred by instability, war, intolerance, restrictions on the freedom and human rights of individuals and groups as well as over concentration of power with attendant restrictions on popular participation in decision-making." ^{9/} Experience has shown that these political constraints are a barrier to motivation for high productivity and for initiatives and participation in national development activities.

Therefore, if education is to assist African nations develop integrity, respect for one's nation and a sense of public accountability as well as positive attitudes for the promotion of peace, national educational systems should introduce curricula which will encourage students

8/ Camara Laye - The African Child, Fantana, London 1977, p. 62

9/ ECA - The Khartoum Declaration on the Human Dimension of Africa's Economic Recovery and Development, op.cit., p. 19.

to respect their traditions, foster nationalism and promote peaceful ways of living; develop positive attitude and respect for work of all types. At the same time, with peace prevailing refugees and returnees as well as the displaced should be allowed to resettle and be encouraged to participate in national development activities. Therefore education should encompass activities for peace and rehabilitation.

(iii) Economic objectives

To achieve the economic objectives of the strategies, it will be necessary to reform educational curricula so as to become more relevant and in tune with the economic needs as well as the conditions and environment which foster positive attitudes, relevant knowledge and skills for the exploration and exploitation of natural resources. Education provided should also allow for the development of skills and knowledge to engage in activities for self-generating incomes in the informal sector as well as self-development and employment in the formal sector.

In line with development strategies, therefore, there is need to improve schools, teachers and students so that they become agents of economic change. Education should, therefore, be linked with centres of industrial and agricultural production as well as arts, social and craft centres. It may, perhaps, be necessary to have a polytechnical approach to educational development as a way of realigning education with Africa's development strategies.

At the same time, there is evidence in a number of countries with respect to misuse and mismanagement of resources (human, financial and material particularly public resources). The efficient use of resources is crucial to the effective management of the economy and it is, therefore, important that management skills should be a major component of education and training programmes.

(iv) Educational objectives

Mention has already been made that education is a crucial factor input of production. Therefore knowledge, skills and attitudes should be relevant and useful to production activities. In this regard, education should be oriented toward agricultural and informal sector activities just as much as in the industrial and formal sectors. As of now, however, education systems in Africa seem charged with paving highways to the cities rather than clearing pathways to the field and rural areas. In other words, the focus of the present day education system is on the preparation of skills for the modern sector with little concern for the needs of the informal and agricultural sectors. It will, therefore, be necessary to make this shift in order to achieve the objective of self-sufficiency in food production in a continent full of unskilled labour.

To do this, training institutions will need to produce teachers who are capable of guiding learners towards independent adulthood by changing their attitudes towards work, respect for manual work, societal norms, values and ethics. At the same time, institutions should help them to become creative thinkers and entrepreneurs as well as productive citizens.

The curriculum should also facilitate the development of better relationships between teachers and learners; between schools/institutions and the community; between schools/institutions, teachers and learners on the one hand, and the management and establishment on the other. Beyond this and in line with the development strategies, Africa will need to re-examine the organization and structure of education itself; the lifelong aspect of education, and inter alia teacher education because the knowledge, skills and attitudes as well as management skills of teachers are absolutely crucial for implementing a curriculum designed to respond to Africa's development strategies.

IV. REALIGNMENT OF EDUCATION WITH AFRICA'S DEVELOPMENT STRATEGIES

The modalities provided and outlined in LPA and AAF-SAP for human resources development and utilization as well as administrative and managerial capabilities appear to summarily answer the following questions: human resources and administrative capabilities for what? What types and levels? What knowledge, skills and attitudes and where and when are they needed? What are the sources of supply and at what cost? If Africa is to achieve self-sufficiency in food, explore and exploit the dormant natural resources; industrialize and increase the share of African trade in world markets, develop self-sufficiency in human resources and establish a workable economic community, it will be necessary to increase the quantities and improved qualities of trained and specialized manpower at all levels and in varying degrees. This will require all types and levels of trained technical and supervisory, operational and managerial personnel; lecturers, tutors, teachers, instructors, researchers, experts and specialists in all fields such as doctors, engineers, lawyers, planners, technologists, agronomists, surgeons, hydrologists, architects etc. with a view to ultimately eliminating dependence on foreign experts and specialists. The aim being, ultimately to utilize Africa's own expertise. In view of this, the realignment of Africa's development strategies with education should focus on the following:

(1) Development and public education and information

The adoption of strategies or policy frameworks is not enough unless people have full knowledge of the content and action requirements of those policy frameworks and strategies and are aware of the role they are going to play. In a rapidly changing world with instant global communications, rising population densities, rising material expectations, powerful technological advances, rising ecological degradation, frequent disasters of famine, drought, floods, earthquakes; deteriorating socio-economic conditions; and political strife and civil wars, it is necessary for all people to be subjected to public and development education. In other words, deliberate efforts should be made at helping the entire population to understand the process of change and the implications of such changes; how to cope with the aforementioned problems and disasters; and the individual's role and responsibilities in participating to solve a given problem.

In relation to development strategies, public and development education and information, require that people should understand the reason why they should learn new knowledge and skills and for what purpose; and why they should change their attitudes

towards certain things. Unless people are made aware of the need and necessity to acquire new knowledge and skills as well as their attitudes towards certain issues, the motivation to learn and contend change will not be there. Therefore, public and development education should be made a focal point of all non-formal education.

In this regard, public education should be given to politicians, policy-makers, planners, educators, employers, people of all walks of life and the general public. Through the use of mass media, radio, television, workshops, seminars, conferences, meetings of interest groups and professional associations, national fora etc. people should be provided with public and development education and information about development policies, strategies and programmes. Higher institutions can make sure they build into their course programmes elements that produce a sense of loyalty and national commitment to industry and production as well as positive attitudes to work. In this regard, education should be made more functional and development oriented in line with Africa's development strategies.

(2) Institutional capabilities and diversification of institutional responsibility

Having determined the needs and shortcomings in skills, knowledge and attitudes, local training, research and educational institutions are needed to undertake training programmes. In this regard, it may be necessary to diversify institutional responsibilities for educational activities so as to take account of the extensive socio-economic and technological problems prevalent on the African continent. Therefore, there is need to reorient existing institutions to the requirements of development strategies and where possible establish new ones in order to cater for the various fields in local government, research, finance, marketing and distribution, rural development, food production and preservation, arts and crafts, rural technology, child health care, nutrition, specialized training etc.

If Africans are to play the role due to them in such matters as trade policies, trade negotiations, international financial arrangements, taxation, development of appropriate technology etc., Africa needs to develop her own corps of experts and specialists, skilled and trained personnel in various fields who can speak the same language and have an understanding of African problems and issues as those foreign experts from developed countries.

Through TCDC in human resources development, African countries should endeavour to have their institutions diversify their training activities to cater for a whole range of skills and knowledge needed for self-reliant and self-sustained economies. It should be emphasized that reliance should no longer be placed on developed countries for training enough quantities of Africans and with the right skill and knowledge mix to respond to the requirements of African development strategies. At the same time, training and research programmes and activities undertaken in developed countries are not sufficiently relevant to solving Africa's development problems. For this reason, all efforts should be made to support materially and financially the establishment, development and maintenance of African institutions so that the region can develop its own stock of expertise.

(3) Priority areas for education and training

Resource constraints in terms of institutional capacity and capability, physical, financial and human, make it imperative and mandatory that some priority areas should be determined for the education and training of needed manpower. Such priority setting should be done in relation to the strategies set in LPA and AAF-SAP viz: regional self-sufficiency in food; establishment of a sound industrial base; physical integration of the African region; development capabilities for exercising effective control over the continent's natural resources; increase in the share of African trade; and the development of co-operation and collaboration among African countries.

In this regard, education and training will need to determine the specific requirements of knowledge, skills, attitudes and know-how in respect of each priority areas particularly as regards, food production, processing and preservation; natural resources exploitation; transport and communication, finance, agronomy, science and technological development; industrial development, processes and products; administration and enterprise management; trade development and promotion; education itself (research, scholarship and academic excellence).

Education and training institutions should be aware of the requirements of those priority development sectors and should accordingly reorient their programmes and activities to these requirements. At the same time, having determined the priority areas for specialised training, governments will need to commit themselves by words and deeds (both materially and financially) to such education and training programme areas. For without such commitment, it will not be possible for the African region to achieve self-reliance and self-sufficiency in human resources.

(4) General and specialized training by the private sector

Africa's development strategy apply to both the private and public sectors. Yet the private sector continues to rely heavily on the government's efforts made to investments in education and training for the private sector's open market recruitment of trained and skilled manpower; and on foreign sources for the supply of technical managerial and supervisory staff at the middle and high levels. In response to the development strategies and to meet Africa's human resources requirements, the private sector should become substantially involved in the education and training of personnel needed for development.

The indigenous enterprises from the private sector invest very little in the training of manpower. Instead they rely on the offer of high salaries to skilled and trained manpower. To respond to Africa's requirements, private sector enterprises should get more involved in training through increased contribution to nationally instituted training fund system; or through private sector co-operation in providing opportunities in the establishment of personnel for in-plan practical training of students of engineering; technology and management; applied sciences; law, chemical engineering, etc. Also the private sector could initiate and operate large-scale vocational and in-service training programmes, as well as up-grading courses/programmes for employees engaged in agriculture, industry and social

services. This would go a long way in responding to manpower needs for development in our countries.

(5) Women education for development

More emphasis should be placed on the education and training of women in Africa as they constitute not only a large proportion of agricultural producers, but also a crucial factor input in popular participation and rural development. Unfortunately, the majority of women involved in productive activities are illiterate. In 1990 for instance of the total female folk aged 15 years and over, only 40% were literate as opposed to male literacy rate of 62% of those 15 years and over in the countries of Sub-Saharan Africa.^{10/} In the same sub-region girls enrolment ratio at primary level was only 42% in 1989; 13% at the secondary level and only 1% at the tertiary level.

The implications of this is that greater effort should be made to ensure more female participation in education and training. Indeed it would be presumptuous of Africa to expect self-sufficiency and self-reliance in human resource utilization without positive action being taken for the education and training of female population, intensify literacy programmes for them and strengthen women's organizations to effect their popular participation in development.

(6) Teaching force

Development strategies have serious implications for the implementation of educational and training programmes because teachers, instructors, tutors, lecturers and academics have great influence on learners in terms of character formation, attitude cultivation and the acquisition of knowledge. What often affects the effective contribution of teaching staff is the lack of proper training; poor remuneration and low social standing of teachers in society, poor conditions of service, and lack of recognition of their services.

Therefore if educational and manpower programmes are to be effective in producing the required, trained manpower for Africa's development, African countries should put greater emphasis on the training of teachers at the first and second levels of the education system and on staff development programmes. To expand an educational system, education and training institutions will need to be strengthened and where possible new ones built.

To ensure proper implementation of educational plans, provision has to be made not only for the training of teachers, lecturers and research staff; but also for a whole range of administrative, management, supervisory, technical, accounting, clerical, catering, social welfare, and other support and non-teaching staff, all of whom should themselves be adequately prepared and trained. Of particular emphasis is the training and development of a cadre of science, mathematics, and technological staff whose shortfall is heavily pronounced in many African countries. Their training should receive highest priority if the continent has

10/ UNDP - Human Development Report 1992. (New York: UNDP, 1992), Table 5.

to have some measure of self-sufficiency and self-reliance in employing its own human resources in the exploration and exploitation of its natural resources.

(7) Specialized training and expertise

For Africa to attain and maintain a level of sufficiency and efficiency required in a rapidly transforming economies in terms of technology, industrialization, as well as repairing and reconstructing the ravages of civil wars and strife and natural disasters, specialized training and development of expertise will need to be undertaken in:

- control of public waste and spending
- resource mobilization and financial management;
- physical and maintenance management and rehabilitation;
- public administration and enterprise management;
- education, vocational and career guidance and counselling

(a) Control of public waste and spending

A lot of public finance is wasted or inappropriately utilized due to poor financial planning and management; non-adherence to financial rules and regulations; and non-adherence to development priorities. To avoid public waste and spending, it is important that African governments should introduce and pursue sound financial management practices as well as institute better ways of revenue collection and tax administration, and ways and means of stopping leakages in public financial management and control of public expenditure.

To effect this, it will be necessary to undertake the training of personnel of those in the public service as well as those in parastatal organizations. Such training should ensure that public servants are not only academically trained but professionally and attitudinally attuned to their roles and responsibilities in the management and execution of public finances. They will therefore need to have their skills upgraded in finance, administration and management and public ethics and accountability. Training institutions will need to adjust their programmes accordingly.

(b) Resource mobilization and financial management

Closely connected with public waste, is the mobilization of resources, particularly domestic resources, often manifesting in apparent financial leakages, poor methods of revenue collection and serious financial mismanagement. To correct this, it is necessary to train or provide in-service and upgrading programmes for revenue and budget management personnel which provide for the acquisition of knowledge, skills and attitudes as well as personal integrity so that public as well as private funds and finances can be adequately mobilized and then judiciously utilized. At the same time, knowledge and skills are required for mobilizing external resources and negotiating better for loans and debt payments. It is therefore important that elements of resource mobilization and financial management should feature in our institutions particularly management institutes and institutions of higher learning.

(c) Physical and maintenance management and rehabilitation

The ravages of war, the neglect of physical infrastructure, roads, buildings, schools, hospitals, water supply system, dilapidated public buildings and dwelling places; industrial machinery; equipment in public institutions, vehicles etc., all of which need attention. Unfortunately, not much attention has been given to the supply, procurement and maintenance functions of the public service. The consequence has been that expensive installations, establishment, equipment and machinery have gone out of use, simply for lack of maintenance.

Considerable sums of money have been spent on the purchase of new items while apathy prevails in the maintenance of such items to ensure optimum use and life service. Accordingly rather than insisting on the purchase of new items, building new establishments, effort should be made to train personnel so that they are equipped with skills in procurement, supply, maintenance and rehabilitation functions of physical infrastructures, machinery, equipment and other things. Undoubtedly this would save countries millions of scarce foreign exchange. At a time of such scarce and limited resources, training in maintenance and rehabilitation of infrastructure, equipment and machinery would ensure possible attainment of the continents long-term objectives.

(d) Education, vocational and career guidance and counselling

In education as well as employment, there is need for educational and vocational/career guidance and counselling considering the manpower requirements needed for implementing Africa's development strategies. Human resources development and utilization policies should take into account the job aptitudes of individuals pursuing different courses of study and training to ensure the harmonization of individual interests and the national employment requirement.

Educational and vocational/career guidance and counselling would ensure that students at the second and third levels do not opt out for easy options in the arts and humanities, or for status courses such as law and medicine when they do not have the aptitude and abilities to study such courses.

What is needed therefore is that students and those seeking training should be advised about job opportunities and availability for the next five to ten years to facilitate individual choice of subjects of study and training courses in line with their aptitudes and potentialities. In this regard, therefore, there is need to have a national machinery for the provision of vocational/career and educational guidance and counselling, and for ensuring that information on employment opportunities gets to educational and training institutions and to those who need it. Both public and private enterprises should provide good indications in line with the development priorities and objectives of future patterns and trends in occupational and manpower development and in critical areas of future trained and skilled manpower.

(e) **Enterprise management and public administration**

In the private sector, the capability to plan, execute and evaluate development projects as well as manage investments lies with the management. Equally in the public sector that capability lies with the management, administrators and decision makers. However, planning, implementing, evaluating and initiating development projects and translating development objectives and strategies into concrete projects require substantial administrative capability and managerial skills and knowledge at all levels of the public service - local, regional and national.

In the first place, therefore, it will be necessary to streamline established organizational structures in both the public and private sectors, review procedures, rules and regulations for planning, implementing and evaluating projects, and then restructure such services or enterprises accordingly. Second, it is necessary to conduct skills and knowledge up-grading programmes in both the public and private sectors for the technical supervisory and administrative and managerial staff to ensure the adequate availability of such knowledge, skills and attitudinal disposition among staff in this category in both sectors. The major reason for doing this is that the efficiency, effectiveness of the structures, rules and procedures in the private and public sectors; as well as the knowledge, skills and attitudes of the people entrusted in these positions will, in the final analysis, determine the extent to which national development objectives and strategies are translated into concrete projects and effectively implemented and evaluated.

V. CONCLUSIONS AND POLICY OPTIONS

It may seem presumptuous to make claims for the power of education as an elixir for solving Africa's profound problems ranging from ecological imbalance and degradation, decreasing agricultural production, famine, drought, malnutrition, high rates of illiteracy, high child mortality, unexplored natural resources; lack of human and financial resources, to accumulated debts. Major questions such as those of international and intra-African trade; debt payments and financial policies, as well as national fiscal, pricing, investment and population policies are at issue; indeed these are quite apart from the familiar natural constraints of climate, drought, environmental degradation and desertification or the deep-rooted social factors increasing refugees, inadequate health services, malnutrition disease and illiteracy.

What is important, however, is to recognise the urgency of human resources development for the management and exploitation of Africa's natural resources, the achievement of food self-sufficiency, and sound financial management. It should be emphasized that education is not synonymous with human resource development, but that education, training, research, communication and awareness raising are vital ingredients of it. Thus for the purpose of concluding this paper, it is possible to come up with a package of educational measures in the broadest term which would enhance the capacities and capabilities of African nations to respond to the requirements of Africa's development strategies and policy frameworks. These educational measures include the following:

- (i) Improved and better co-ordinated public education and information and outreach programmes through distance teaching for men and women as well as youths in basic survival and development skills and awareness as well as knowledge needed. Such programmes should be related to community and family health, nutrition; food and agricultural production; preservation of the environment, forest and soil conservation; literacy and skills programmes, as well as basic information and awareness on/of topical and development issues such as popular participation in development, and the fight against HIV/AIDS.
- (ii) Well-programmed and directed training of African researchers, academics and specialists in agriculture; hydrology; food conservation/preservation and processing, fisheries, forest and fuel technology, entrepreneurship; modern and traditional medicine; and mineralogy. It is in most of these fields that the African continent is grossly under-provided, and where it is not under-provided the use of expatriate personnel and specialists is highly prevalent. For this reason Africa needs to put great emphasis on the development of well co-ordinated and directed training programmes in these fields if the continent is to reduce and eliminate its dependence on the services of foreign experts.
- (iii) Research and experimentation, as distinct from the training of researchers and academics, should be attuned to the production of goods and services needed by Africans; and should be geared towards solving pernicious problems in Africa. Research should, for instance, be directed towards the production of spare parts for machinery, agricultural tools and implements, farm chemicals and improved agricultural productivity, all of which are urgently needed in Africa. It should also be directed towards the transfer of real resources involving technical assistance and technology; as for instance, how much of real resources of a technical assistance programme actually reach Africa rather than remain in donor countries through payments of equipment, purchase of capital goods, and payments of experts and specialists.

In making technical assistance more relevant to the objectives of increased self-reliance, research in African educational institutions should be geared towards the training of specialists in various disciplines for the acquisition of critical skills and how best the external and internal brain-drain, which continues to weaken the very basis of self-reliance, can be halted or slowed down. More important is for institutions of higher learning as well as African countries to stop thinking of technology as a piece of equipment, a process formula, or a set of blueprints; or some kind of highly specialised knowledge in the minds of technologists, scientists, engineers or specialists ready to usher it whenever it is wanted. Rather, technology should be thought of as a system which extends from such activities as the identification and selection, installation, use, operation and maintenance, improvement and reproduction of equipment, knowledge or skills suitable for a given situation. Indeed, there can be dependence at any point along this chain of activities provided these activities are African focused and African based.

It is to be emphasized in this regard that priority should be given to the creation, establishment and conversion of existing institutions into specialized training centres and institutions, as well as centres of excellence for specialized research and training of experts, specialists, technologists etc. in response to Africa's development needs and as a means of reducing the region's dependence on foreign expertise in various fields.

- (iv) Beyond the creation and establishment of institutions, training institutions, particularly institutions of higher learning, should cease functioning in relative isolation from the country's actual problems and the needs of the public and private sectors. It is to be emphasized that in the production of middle and high level manpower; currently in short supply in many countries; the training of such personnel should be problem-based with a strong practical orientation.

Moreover, African countries are experiencing surpluses of university graduates with degrees in the arts, social sciences and the humanities while at the same time having shortages of personnel with managerial, financial entrepreneurial and technical skills and know-how. The shortages can be alleviated through a dynamic reorientation policy and programmes aimed at training the surplus of graduates into a cadre of project implementors, supervisory, entrepreneurs, managers, project designers and evaluators, community workers, financiers, trade negotiators at different levels, producers, suppliers and distributors of goods; managers of co-operatives, and agricultural credit. Training institutions should therefore have their curricula designed in such a way as to allow for flexibility of activities to cater for specific skills needed for development activities.

- (v) The education curricula should be concerned with the problems of natural resources, agricultural production, food and nutrition, promotion of peace, rehabilitation and the environment. This should not only be done through the strengthening of the knowledge base, but by striving to encourage the achievement, on the part of learners, of skills of observation, enquiry and problem solving, decision-making, creative thinking, self-confidence; and the development of attitudes of responsibilities toward the environment, society, government, family and the community in relation to their needs.
- (vi) Perhaps much more to take note of is that the problems and the development of Africa should not be treated in vacuum or isolation from culture of the African people. In this regard, curriculum should be culture-based i.e. efforts should be made to have a culture-loaded curriculum comprising of:
- African languages with emphasis on the teaching of African literature based on African themes so that learners can experience what is important and what has value in African culture;
 - the arts comprising fine and dramatic arts, music, sculpture, drawing, graphics, painting as well as oral and written literature, poetry and drama.

These should be given special treatment in our schools to foster the development of our traditions;

- mythology and science with emphasis on African philosophy, traditional science (such as traditional methods of extracting salt from salty seas and lakes); modern and traditional medicine;
- ethics and religious studies as a means of inculcating in the young ethical principles and values, fostering attitude and self confidence, respect for authority, government, parents and society; loyalty to one's nation, and unity in living together as a nation;
- family and social practices with emphasis on social studies, history, geography, civics, sociology, psychology, anthropology etc. The teaching of these should emphasize African family life and the collective behaviour of working together through team spirit;
- government and welfare with emphasis on indigenous political systems, traditional rules and customs, government machinery, human rights and general welfare.

All these measures stated above which appear so obvious may not be easily put together in a co-ordinated programme for execution by the agents of education. The reason being partly a question of resources and partly an organizational problem. In the African educational systems, such emphasis, as we have tried to portray, may be difficult to adopt and sustain in systems already overloaded or saturated with academic subjects; and with embattled teachers and lack of educational materials. But as much as anything else, what is needed, both nationally and among aid agencies, is a clear sense of priority and urgency for reorienting education to Africa's development objectives and priorities. So the familiar dilemma reasserts itself: rethink, reform or regress! Hopefully we have passed this familiar dilemma and are now in the action stage - the implementation phase of translating Africa's development strategies into concrete programmes and projects.