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"EDUCATION AND HUMAN RESOURCES DEVELOPMENT IN KENYA"

The new 8.4.4. Education system and its implications for educational policy and practice in Kenya.

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May the Almighty God bless us all.

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PART TWO

THE IMPLICATIONS OF THE 8.4.4. REFORMS FOR EDUCATIONAL POLICY AND PRACTICE IN KENYA

INTRODUCTION

At the end of 1984 Kenya launched a new education system designated as 8.4.4. since it provided for 8 years of primary education followed by 4 of secondary and, for some, 4 years of post-secondary education.

The country abolished forms five and six, in the secondary cycle, which had been in operation since 1961, extended primary education from seven to eight years and restructured the curriculum in primary, secondary, technical and university education.

These reforms were aimed at:

(a) Increasing access to primary education for all children of school age;

(b) solving unemployment problems through introduction of prevocational courses in the primary schools to equip primary school leavers with relevant skills for self and wage employment;

(c) making secondary education terminal by diversifying the secondary school curriculum through the teaching of vocational courses in Industrial, Commercial and Agricultural subjects;

(d) expanding post-school training programmes for primary and secondary school leavers;

(e) improving quality at all levels of the education system; and

(f) ensuring equitable distribution of educational resources.

As similar reforms have been tried out in other developing countries in Sub-Saharan Africa and Latin America the Kenya reforms are examined in the context of some of these experiences in two countries: Tanzania and Zambia in Sub-Saharan Africa and in the context of the current policies and practices in Kenya itself and the implications of the reforms highlighted.

The study is divided into two parts. Part One examines the basic issues in curriculum reforms in developing countries while part two examines the implications and relevance of these issues to educational practice and policy in Kenya.

In Part One, Chapter One discusses theories of educational reforms and expansion of education in Sub-Saharan Africa with special reference to the human capital theory. Chapter Two introduces the historical development of curriculum reforms in Sub-Saharan Africa which led to structural changes in education systems and discusses the finance and cost implications of educational programmes, equity, quality, curricula and examinations based on the experiences gained from educational reforms in Third World Countries.

Kenya reforms are discussed in detail in Chapter Three while the reform experiences in Tanzania and Zambia are discussed in Chapter Four. Kenya and Tanzania share a historical past, use the same top-down model of education reforms but operate on two opposite ideological leanings, which makes the approaches to educational reforms striking. Chapter Five deals with internal efficiency of the new educational system; school quality and inequality are handled together with issues relating to the financing of education. Wastage and repetition as manifestations of educational inefficiency are highlighted. External efficiency is examined in Chapter Six and the need for new approaches to educational planning and the need for coordination of post-secondary training to avoid duplication of training and over supply are stressed.

In conclusion it is suggested that the Kenya reforms are unlikely to go beyond what other developing countries have experienced especially with regard to rural-urban migration which can only be contained through structural changes in the economy to support curriculum changes.

PART ONE

BASIC ISSUES IN EDUCATIONAL REFORMS IN DEVELOPING COUNTRIES

Chapter One

1. Educational Expansion in Developing Countries

1.1 Educational reforms and human resources development

Developing countries have substantial human resources which can be utilized effectively for socio-economic development through imaginative planning and appropriate educational reforms. Despite the academic controversies[1] as to whether education contributes to economic development, in the minds of policy makers and technocrats education is perceived as an integral part of socio-economic development strategies.

In Sub-Saharan Africa, Heads of State and Governments meeting in Lagos in Nigeria in 1980 to review regional strategies for socio-economic and cultural development agreed that:

> "Mobilizing of immense human resources of the continent in order to stimulate and guide the creative imagination of Africans will accelerate the process of transformation of African economies and will rapidly improve the living conditions of our people."[2]

In these sentiments, education is seen as capable of accelerating economic transformation and improving living conditions.

The Second Conference of Ministers Responsible for Human Resources Planning, Development and Utilization[3] held in Addis Ababa in 1984 observed:

> "Many African countries lack the capacity to properly use the potential of the plentiful human resources available to them mainly because of lack of comprehensive policies for proper plannning, development and optimal utilization."(p.4)

The Conference then recommended that "educational policies and practices

must be assessed and reviewed periodically and serve as a basis for educational reforms and reorientation of curricula."(p.5)

In this respect, Kenya is one of the developing countries which has been monitoring the performance of its educational system since independence in 1963 and decided to reform the educational structure and content in 1984.

The educational reforms discussed in detail in Chapter Three and subsequent chapters are aimed at developing skills necessary for improving the quality of life in rural and urban areas, increasing income and gainful employment for school leavers and providing high level skills needed in such sectors as agriculture, industry, commerce and health.

These reforms have come in the wake of similar reforms in other developing countries in Sub-Saharan Africa, Latin America and Asia which have been tried with varying degrees of success. This has been in their attempts to cope with issues related to high rate of population growth, the growing level of unemployment and under-employment, the shortage of different types and levels of manpower, equitable distribution of educational resources and the incidence of rural-urban migration.

Reforms in Third World countries arose as a result of rapidly expanding educational systems which in turn escalated the cost of financing educational programmes. The theoretical and other perspectives attending this expansion will be discussed in this chapter and the emphasis will be on Sub-Saharan Africa.

1.2 Theories and perspectives on the expansion and reform of educational systems

For centuries theories have been used to explain, support or rationalise practice in society. Educational systems in society have had their share of these theories.

In developed and developing countries educational systems have expanded over the years and undergone reforms aimed at streamlining and rationalising educational provision.

In seeking to explain why and how these reforms occurred, theories which fall under two main-theoretical perspectives: the equilibrium paradigm and conflict paradigm are used.[4] Within the equilibrium paradigm is the structural functionist perspective and within the conflict paradigm is the revisionist perspective.[5] Both of these perspectives will be considered in turn.

1.21 Structural-Functionalism

According to the structural functionist view educational reforms occur as a result of interaction between society and school and take place in stages (1) a need arises in society; (2) school is assigned the task of meeting the need; (3) change in the education structure takes place to accommodate the new function; (4) the new role is assumed by schools; (5) manifest changes take place in society as a consequence of the new educational function.[6]

Once society reaches consensus as to the needs and goals of education, school is used as an agency for transformation of society. Schools bring change through social and occupational differentiation. By helping to transform heterogeneous groups into well informed citizens sharing social values, norms, and aspirations and developing national identities, education at the same time opens up avenues for social mobility. Through equality of opportunity, those able to benefit from the system excel as a result of their natural endowments. Differences in income, power and status bestowed by education in some way reflect individual abilities.

Education exists in harmony with Politics, Economics, Religion

and culture and serves to decrease the impact of social background on academic and socio-economic achievements. The key imperatives in structural functionalism are consensus and equilibrium.

1.22 The Revisionist Perspective

This is the Marxist view of education. Society is seen as characterized by perpetual conflict caused by the class struggle for the control of resources and the means of production in which the most powerful and influential economic and political groups control the destiny of the others.

In industrialized societies where class differentiation is polarized into working class and middle class, members of the middle class tend to benefit from education more than the working class with the result that public education reflects the ethos and serves the needs of the middle class.[7]

In this respect, it is argued that educational reforms do not emanate from perceived needs and goals of society which reflect harmony and consensus as assumed by the structural functionist perspective, but changes are initiated and supported only where the vested interests of the minority in the position of control and influence are served. Schools only reproduce the prevailing class prejudices in society.

The basic assumptions by both structural functionism and revisionism that schools bring changes in society or that they are agents of transformation are debatable. There may be changes in society which have nothing to do with the schools while the schools may fail to bring about the required changes as will be shown later.

1.23 The implications of equilibrium and conflict perspectives for educational reforms in the Third World

Both structural functionalism and revisionism have been major influences in the expansion of the educational systems in the world today,[8] but the goals and approaches to educational reforms in the developing countries which are influenced by these two perspectives are not mutually exclusive.

While structural-functionists recognize individual abilities and subscribe to competition where the most able through equality of opportunity, may succeed and take up occupations which generally benefit society, the revisionists discourage individualism and class distinctions and tend to pursue more equalitarian goals for society. But these stances differ only in shadow rather than in substance. For example, educational reforms aimed at restructuring education to serve the rural needs of the mass of the population only after elementary schooling may be viewed as a form of underdevelopment designed by the ruling class to socialize the majority at lower levels in order to maintain hegemony over them. This might be the view of the population irrespective of whether the regime subscribes to structural-functionism or is revisionist. Since in any political system the dominant ideology tends to be that of the ruling class, much depends on how the educational reform intentions are perceived and interpreted by society in both socialist and capitalist regimes in developing countries.

A good example of how different styles can be adopted to achieve the same ends is provided by Kenya's and Tanzania's approaches to educational provision. Both inherited institutions and conditions which tended to perpetuate economic inequality. While Kenya's educational ideology tends to accommodate educational expansion in secondary and higher education, equality of opportunity and advancement on merit through examinations, Tanzania's ideology emphasizes educational

contraction and equality of opportunity through party and worker consensus on selection.

1.24 Structural functionist theory and educational expansion in developing countries

Two related theories: the human capital theory and the technical functionist theory both of which stem from the structural functionist perspective, coupled with population explosion, had profound influence on educational expansion in developing countries.

1.241 Human capital theory

The human capital theory postulates that education is an investment which is vital to economic growth; an idea that was popularized in the States in the sixties by Shultz. Shultz argued that acquisition of skills through education is a productive investment because it increases productivity by providing a technical base for the type of labour force required for rapid economic development.[9]

In order to overcome underdevelopment in developing countries there had to be investment in human resources development. This view was supported by the experience gained from the rapid recovery of Western Europe after World War II, when the American efforts to rehabilitate the Western European economy through the Marshall plan succeeded because of the availability of high level human resources at the time.

Encouraged by this experience, International Agencies: the World Bank, UNESCO, ILO and Ford and Rockefeller foundations channelled funds into education and training programmes in developing countries in the early and late sixties.

This resulted in quantitative expansion of educational systems in third World countries especially following the UNESCO sponsored conferences for Ministers of Education held in Karachi (1960); Santiago

(1962) and Addis Ababa (1961).[10] These conferences set targets for expansion of primary secondary and higher education. Table I below shows that enrollment for primary in Africa and Latin America almost doubled between 1960 and 1975.

TABLE 1

Estimated total Enrollment by level of education in the developing world (thousands)

Region	Year	Total[3]	1st Level	2nd Level	3rd Level
Africa	1960	21,378	19,458	1,739	180
	1965	29,903	26,539	3,058	306
	1975	53,750	44,498	8,378	883
Asia[1]	1960	118,973	89,687	26,581	2,704
	1965	160,692	116,507	39,529	4,656
	1975	230,371	160,063	61,891	8,618
Latin America[2]	1960	31,289	26,228	4,088	572
	1965	42,162	34,424	6,829	914
	1975	72,941	57,071	12,288	3,582

Source: Colclough, 1980, p.27.

1. Excluding China and the Democratic Republic of Korea.
2. Brazil: Beginning 1973 primary schooling increased from 4 to 7 years and second level reduced from 7 to 4 years.
3. Excluding pre-primary.

In sub-Saharan Africa the UNESCO-sponsored conference which was attended by representatives of thirty-five African states in Addis Ababa in 1961 resolved to

> "achieve a desirable educational pyramid and have a basic personnel to move on to universal primary education of high quality by 1980."[11]

It drew up the following long-term targets to be accomplished between 1960-1980:

(a) Universal education to be compulsory and free.

(b) Education at the second level to be provided for 30 per cent of children completing the primary course.

(c) Higher education to be provided mostly in Africa itself to 20 per cent of those completing secondary education.

TABLE II

The progress made between 1960 and 1981 by member states represented at the Conference in Addis Ababa in 1961 in the first and second levels of education.

Country	Year of independence	No. enrolled in primary as percentage of age group		No. enrolled in secondary as percentage of age group	
		1960	1981	1960	1981
Burkina Faso	1960	8	20	1	3
Benin	1960	27	65	2	18
Botswana	1966	42	102	1	23
Burundi	1962	18	32	1	3
Cameroun	1960	65	107	2	19
Central African Republic	1960	32	68	1	13
Chad	1960	17	35	-	3
Congo Peoples Republic	1960	78	156	4	69
Ethiopia	(Not colonized)	7	46	-	12
Gabon	1960	100	202	5	34
Gambia	1965	12	52	3	14
Ghana	1957	38	69	5	36
Guinea	1958	30	33	2	16

TABLE II (contd.)

Country	Year of independence	No. enrolled in primary as percentage of age group		No. enrolled in secondary as percentage of age group	
		1960	1981	1960	1981
Ivory Coast	1960	46	76	2	17
Kenya	1963	47	109	2	19
Lesotho	1966	83	104	3	17
Liberia	1847	31	66	2	20
Malagasy	1960	52	100	4	14
Malawi	1964	-	62	1	4
Mali	1960	10	27	1	9
Mauritania	1960	8	33	-	10
Niger	1960	5	23	-	6
Nigeria	1960	36	98	4	16
Rwanda	1962	49	72	2	2
Senegal	1960	27	48	3	12
Sierra Leone	1961	23	39	2	12
Somalia	1960	9	30	1	11
Sudan	1956	25	52	3	18
Swaziland	1968	58	110	5	40
Tanzania	1961	25	102	2	3
Togo	1960	44	111	2	31
Uganda	1962	49	54	3	5
Zaire	1960	60	90	3	23
Zambia	1964	42	96	2	16
Zimbabwe	1980	96	126	6	15

Source: Court and Kinyanjui, 1985.[12]

Table II shows remarkable expansion in the primary and secondary school enrollments in the last twenty years or so after the Addis Ababa Conference. Only 11 countries out of thirty five had achieved enrollment rates of less than fifty per cent of the primary school age group by 1981.

In secondary education despite the phenomenal increases in overall enrollments from 1960 to 1981, the Addis Ababa target of 30 per cent educational provision for the secondary cycle, had only been realized by five countries, two of which are oil exporting countries while the majority had only managed enrollments of between 10 and 20 per cent.

The net effect of this expansion has been a considerable strain on the educational budgets of Sub-Saharan countries as will be shown in Chapter Two.

The influence of human capital theory on school expansion was tied up with its twin theory of technical functionism.

1.242 Technical Functionism

Technical functionism holds that formal education provides training in specific skills or in general capacities necessary for performance of highly skilled jobs. In industrialized societies, educational requirements for specific jobs rose because skill requirements were upgraded due to technological changes.[13]

While this might be true of more developed countries, in developing countries there are too many people with academic qualifications vying for too few jobs in the modern sector of the economy with the result that credentialism is not determined by the upgrading of job requirements. The more educated are compelled to take up jobs which could be done by less qualified people. Because credentials are used as a basis for hiring of the general cadre by employment agencies in the public and private sectors, more people struggle to acquire higher

qualifications. This leads to certificate inflation and accentuates the educated-unemployment problem with the related issue of over-education. This phenomenon is further discussed in Chapter Six. Unemployment is one of the factors that precipitated educational reforms in developing countries. The background to these reforms and the critical issues of reform will now be discussed in Chapter Two.

FOOTNOTES

1. Dore, R.P. (1976) "Human Capital Theory, the diversity of societies and the problem of quality in Education" in Higher Education, Vol. 5, No. 1, 1976, pp.79-102, and reaction from Gareth Williams in "Defence of Diplomas" in same volume.

2. Mengot, A.D. (1980) UNESCO and UPE in Africa in Commonwealth Secretariat, Universal Primary Education in Commonwealth Africa: Report of the Commonwealth Regional Seminar, Lesotho, 1980, London.

3. ECA (1984) The Report of the Second Technical Preparatory Committee meeting of the Second Conference of Ministers Responsible for Human Resources Planning, Development and Utilization, Addis Ababa, Ethiopia, 1984.

4. See Simons, J. (1983) Better Schools, Praeger Publications for further discussion of equilibrium and conflict theories including a typology of these.

5. Mannick, L.A. and Najafizadeh, K. 1987"Observations of the missing link between theories of historical expansion of schooling and planning for future expansion"in International Education Review, Vol. 33, No. 1, 1987. Mennick and Najafizadeh use the term revisionist to refer to conflict paradigm.

6. Simons, J. (1983) op.cit. p.28.

7. Gentis, H. and Bowles, S. (1976) Schooling in Capitalist America, Basic Books, New York and Conner, M. and Levin, H.M. (eds.) 1978 The Limits of Educational Reforms, Longmans, New York.

8. Mennick and Najafizadeh (1987) op.cit.

9. Schultz, T. (1971) Investment in Human Capital: the role of Education and Research: New York Free Press. The idea was not new as it was propounded by Adam Smith in 19C.

10. Colclough, C. (1980), Primary Schooling and Economic Development: A review of evidence. World Bank WP No. 399, Washington D.C.

11. Mate, M.O.C. (1969) Addis Ababa Conference in Retrospect: an evaluation of experience since the 1961 Conference in Education in Africa by R. Jolly (ed.) EA House, Nairobi.

12. Court, D. and Kinyanjui, K. (1985) Education and Development in Sub-Saharan Africa, WP. No. 421, Institute of Development Studies, Nairobi.

13. Collins, R. (1976) "Functional and Conflict Theories of Educational Stratification" in Power and Ideology in Educ. (Eds.) Kerabel and Halsely, Oxford Univ. Press.

Chapter Two

2. The rise of educational reforms in developing countries

2.1 Historical development

Educational reforms in developing countries began with curricula reforms and moved on to structural changes in educational systems in the post-independence period.

A number of factors continued to influence educational reform initiatives in these countries. These factors range from the influence of international conferences on education, the spread of innovative ideas from curriculum development projects undertaken in other countries to rural-urban migration, to which may be added, the general disillusionment with expansionary policies of educational provision.

The patterns of schooling and curricula bequeathed by departing metropolitan powers had to be restructured in order to serve the post-independence needs of emergent states.

In Sub-Saharan Africa, curriculum reforms were undertaken in response to the Addis Ababa Conference of 1961 which recommended, inter alia, that:

> "African educational authorities should revise and reform the content of education in the area of curricula, textbooks and methods, so as to take account of the African environment, cultural heritage and the demands of technological progress and economic development, especially industrialization."[1]

The revision of syllabuses and textbooks and other instructional materials took place in phases. In the first five or so years of independence, most developing countries, especially in Sub-Saharan Africa, were primarily concerned with indeginising the content of education by eliminating the content distortions arising out of racial segregation in the educational systems.

This phase was followed by the adoption of new approaches to teaching such as discovery learning and child-centred tuition. This was, by and large, part of the international process of curriculum diffusion arising out of the curriculum development efforts of the early sixties in the United Kingdom and North America.

There were also more formal efforts to introduce innovations in science and Mathematics teaching in such projects as S.S.P. Physics and S.S.P. chemistry where emphasis was laid on improvisation of local materials in the teaching of science. These efforts were short-lived, as according to Lewin, it was partly because of lack of support curriculum models such as the British Nuffield Science projects or the Scottish Integrated Science Project which would have sustained interest in such innovations in developing countries and sparked off a wave of curriculum reforms.[2]

The third phase entailed efforts to set up curriculum development centres when it was realized that mere adoption of what was thought appropriate from metropolitan countries could not do. In Asia, Malaysia and Sri Lanka, took steps to establish curriculum centres to produce new curriculum materials in 1965.

In Sub-Saharan Africa, curriculum development evolved through internationally funded regional projects. In the early and later part of 1960 three projects were funded by the State of Massachusetts in U.S.A. under the African Educational Programme project. Through liaison with Ministries of Education in African countries the African Mathematics programme (AMP) the African Primary Science programme (APSP) and the African Social Studies programme were launched.[3] Materials developed were piloted in ten African countries and curriculum development centres opened, culminating in the establishment of a regional centre for Science Educational Programme for Africa (SEPA) in Ghana in 1970. A

number of developing countries set up their own curriculum development and educational resource centres - including a joint coordinating curriculum development centre in Africa: the African Curriculum Organization (ACO), in 1976.

From initial preoccupation with redressing what in curriculum content was dubbed the 'colonial legacy', some developing countries were forced to restructure their educational systems and adopt educational policies that would enable them to cope with the expansionary pressures unleashed by population explosion and economic recession. It became clear that their economies could not generate employment and further education opportunities to cope with school output. The initial experiments in this direction were spearheaded, in Sub-Saharan Africa, by Education for Self Reliance in 1967 discussed in Chapter Four.

2.2 The Rise of Unemployment

In Africa population increased by 2.49 per cent per annum between 1960 and 1965, and by 2.74 per cent per annum between 1970 and 1975 and shot to 2.91 per cent per annum between 1975 and 1980 relative to the world population which declined in the same period and stood at 1.99 per cent per annum, 1.85 per cent per annum and 1.81 per cent per annum respectively.[4] Although the rising population creates demand for expansion of primary and secondary school, only a small proportion of primary school leavers get admitted to secondary schools while a small proportion of secondary school leavers get admitted to post-secondary institutions for training and higher education. Those left out of the system tend to migrate to urban centres in search of wage employment opportunities which are almost non-existent. In some countries the unemployment problem affects Liberal Arts graduates. These developments led the Commonwealth Secretariat to observe in 1969 that:

> "University graduates will be required to accept employment at a lower starting salary with promotions coming slowly; secondary school leavers will have to accept jobs of a lesser order, primary leavers have little chance for beginning wage paid work."[5]

The rural-urban exodus of school leavers strains urban amenities such as recreation, sanitation and housing, and if left unchecked, may lead to the growth of shanty towns and petty crimes due to prolonged frustration. Besides, mass movements of potential labour force from the rural areas may in the long run adversely affect rural productivity. This concern has led to a number of reforms.

In view of the fact that the educational reforms in Kenya should be viewed in the context of the experiences gained from other developing countries we should now turn to crucial issues in educational reforms in developing countries.

Educational reforms should take into account three basic issues: the finance and cost implications, the relevance of the educational programmes introduced and their likely impact.

.3 Critical Issues in Educational Reforms

2.31 Costs and Financing of Education in Developing Countries

Educational expenditure takes a substantial part of the Gross tional Product of a country's budget, sometimes the more resources a untry has the more it is able to spend on education but sometimes the untries with limited resources tend to over allocate part of their dgets to education; but without improving the quality of the educa- onal provision itself.

Between 1960 and 1977 developed countries spent higher proportions their Gross National Products on education than the developing ntries.

TABLE IIIa

Public expenditure on education as a percentage of Gross National Product 1960 - 1977

	1960	1965	1970	1975	1977
Developed Countries	4.0	5.1	5.6	6.0	6.0
Developing Countries	2.3	3.0	3.3	4.1	4.3

Source: UNESCO Yearbook 1980 and Earlier

More developed countries have fewer numbers to cater for as compared to developing countries. The fewer the numbers, the more the resources the higher the quality of the education provided.

The trends in school age population for more developed and less developed regions are shown below.

TABLE IIIb

Trends in school age populations 1960 - 2000 (millions)

More developed regions	1960	1980	2000
Age: 6 - 11	107.8	104.8	109.4
12 - 17	91.1	110.8	108.9
18 - 23	87.6	115.6	103.6
Total	286.5	331.2	321.9
Less developed regions			
Age: 6 - 11	316.6	495.0	664.4
12 - 17	249.2	445.3	615.5
18 - 23	217.2	388.9	550.4
Total	783.0	1,329.2	1,830.3

Source: UNESCO, Based on UN 1978 Assessment

There is a tendency for school age populations to decline in developed countries while the primary and secondary school population seems to be growing almost at the same rate in developing countries in this table.

Although more developed countries tend to devote a higher proportion of the GNP to education as shown in Table IIIa, the data for 1980 shows that the percentages of the GNP spent on each student at primary, secondary and higher education were much lower than those spent by developing countries at each of these levels:

TABLE IIIc

Public expenditure per student on education and enrolment ratios, Major World Regions

Region	Public expenditure per pupil as a percentage of per capita GNP			Enrolment Ratios in Percentage			No. of Countries
	Primary	Secondary	Higher	Primary	Secondary	higher	
Anglophone	18	50	920	77	17	1.2	16
Francophone	29	143	804	46	14	2.4	18
South Asia	8	18	119	71	19	4.4	4
East Asia & Pacific	11	20	118	87	43	9.1	6
Latin America	9	26	88	90	44	12.1	19
Middle East & N.Africa	2	28	150	82	36	9.4	11
Developing Countries	14	41	370	75	23	6.9	74
Developed Countries	22	24	49	100	80	21.0	20

Source: Psacharopoulos et al 1986, p.12

Psacharopoulos has observed that developing countries tend to misallocate their educational resources. Despite the fact that the rate of return

in primary education is higher, the governments tend to oversubsidize higher education at the expense of primary education.[6] This view is borne out by this table. Developing countries spent twice as much on each secondary school pupil in 1980 as developed countries for an enrolment ratio of only 23 per cent as compared to 80 per cent in developed countries. In higher education the expenditure per student in developing countries was seven times as much as that in developed countries for only an enrolment ratio of 6.9 per cent as opposed to 21 per cent in developed countries.

There is a tendency for developing countries to bend to political and social demand for higher education that inevitably leads to over-subsidization of higher education for a minority. In countries like Kenya, Nigeria, Brazil and others with capitalist economies disparities in educational expenditure between elementary, secondary and universities tend to result in what Bowles terms a dual educational structure: i.e. a second rate education for many and a relatively expensive education for just enough to prevent a significant labour scarcity in the capitalist mode.[7] Poor capitalist countries tend to 'under invest' in elementary schooling relative to other forms of schooling.[8] The social benefits derived from investments in various levels of schooling in poor and middle income countries are shown in Table IIId.

TABLE IIId

Social benefits derived from investment in levels of schooling

Level of Schooling	Social Internal Rate of return per cent	Social benefit cost ratio
Primary	26	9.50
Secondary	17	2.37
Higher	13	2.00

Source: Simmons, J. (1980) p.221

The ratio of the direct social cost of secondary and higher education to the direct social costs of primary education is shown in the table below.

TABLE IIIe

Resource inputs per student year at various levels of schooling

Country	Educational Level	
	Secondary	Higher
Pueto Rico	1.5	11.6
Mexico	5.0	9.0
Venezuela	3.0	12.5
Columbia	2.7	17.9
Chile	1.5	8.0
Brazil	2.9	18.0
Israel	2.7	16.8
India	5.1	17.6
Malaysia	1.9	13.0
S. Korea	2.4	5.5
Nigeria	7.2	100.0
Ghana	6.2	118.7
Kenya	11.8	160.4
Uganda	14.5	117.0

Source: Simmons, J. (1980) p.220

Nigeria, Ghana, Uganda, and Kenya stand out as having over-invested in higher education in Table IIIe with Kenya showing the highest investment in a sector that shows the lowest rate of return according to Table IIId. These countries are also members of the Anglophone group of countries shown in Table IIIc as having the highest unit cost in higher education.

Kenya's ability to continue subsidising higher education at an enormous rate will in future be determined by the basic financial implications of funding educational programmes in developing countries. These have been identified by the International Council of Educational Development[9] as:

(a) The proportion of the country's G.N.P. and the total budget already going into education.

(b) The country's rate of economic growth.

(c) The behaviour of unit costs.

(d) The relative size and growth of its private education sector.

To these may be added the extent to which those who benefit from the more expensive forms (e.g. education at university) can be persuaded to contribute to the cost e.g. by loans. These factors are discussed in Chapter Five but the degree of reform may have some bearing on cost.

Educational Reforms can be radical or moderate. Writing on changes in education Beeby has observed:

> "In the early days of independence many new countries had bold hopes of a kind of education that would break with the European model and tailored to their own national cultural needs but in the race to meet the demands and need more and more schooling, the easiest thing was to extend and if possible improve the school system inherited from colonial regimes."[10]

2.32 Alternative approaches to educational reforms

Developing countries have adopted both radical and adaptive models of educational reforms.

2.321 Radical transformation

This approach involves overhauling the educational systems because of their inappropriateness to the prevailing conditions in various countries. Reforms in this category are aimed at the use of political

ideology to create consciousness and transform the economic, social and political structure of the country. The emphasis tends to be placed on mass education both primary and adult education, integration of the school into the community and linkage between school and the world of work and productivity. The Tanzania reforms discussed in Chapter Four and the Cuban and Benin educational reforms fall in this category.

2.322 Educational Adaptation

In adaptation reform category, the educational systems inherited at independence are basically retained, with slight content and structural modifications. The education system tends to be elitist in orientation, aspiring to international standards of performance and qualifications and the emphasis tends to be on manpower needs and training. The pre- and post-reform educational systems in Kenya fall in this category.

Whatever slant taken in educational reforms, issues of curriculum relevance and methodology, the quality of the educational provision, equity in the distribution of educational resources and the effectiveness of execution of educational programmes in the post-reform period are crucial.

2.33 Relevant curriculum

The basic issue of what is a viable educational programme still remains elusive for policy makers, curriculum developers and planners. Three aspects of relevance have been in vogue in educational reforms in developing countries: the need to make education terminal, the need to link school with productivity and work and the desire for vocationalization.

2.331 Making education terminal

Educational reformers seem to be looking for the kind of education that will provide school leavers with skills for self-employment. The basic concern is with deciding on which skills are relevant for self-employment and which subjects within the school system can provide them. It has been observed that there is a tendency among curriculum reformers to increase the number of subjects and the vocational and practical content of the curriculum in the expectation that this will provide useful skills and in some manner accustom students to the world of work.[11] The concept of making education terminal has economic, psychological and curricula implications. The psychological implications have to do with delinking the various levels of schooling in such a way that the primary school leaver does not view secondary school as an escape route out of rural poverty and the secondary school leaver does not view a secondary school as a spring board to social mobility after acquiring academic credentials which employers do not necessarily need! The educational implications include the ability of formal educational institutions to produce entrepreneurs and the economic aspects have to do with resources and generation of opportunities that favour entrepreneural activities in society. In practical matters of the curriculum there are issues of conflict between terminal needs and needs of social mobility. Where education is intended to be terminal for the majority, the minimum knowledge and skills that everybody should know and acquire must be carefully determined as basic education. Teaching methods have to be geared to local needs and local environment in order to link the school with the social organization, culture and occupational structure of the community.

The needs of social mobility require that there should be equality of opportunity, a common examination, selection and text book approach

to learning aimed at passing examinations. The teacher who is the change agent in the educational reform is torn between two conflicting goals and approaches to teaching while the learners may experience sets of conflicting goals and intentions. The teachers work is further complicated by the need to reconcile the common content prescriptions of the syllabuses with the heterogeneous needs of the learners from different parts of the country with regional variations. The teacher is called upon to interpret local situations and solve local problems. These conflicting requirements are key and must be carefully looked into by curriculum designers and reformers if such reforms have to have impact. Teachers need to be trained in new roles, methods, attitudes and dispositions where educational reforms are drastic and more so when schooling has to be linked with production.

2.332 Linking school with productive activities

As a way of facilitating transition from school to the world of work reforms have been introduced which integrate productive work activities within the more academic aspects of the timetable to offset school recurrent expenditure and develop cooperative work habits. The supply and demand implications of such school-based production have to be carefully assessed even if they may be linked to vocationalization goals.

2.333 Vocationalization

Because of the growing mismatch between school-imparted skills and occupational skills, vocationalization has been regarded as a panacea for equipping school leavers with what are thought to be desirable skills for self-employment.

Vocationalization is introduced in different ways: as a parallel structure to the academic system in which technical, agricultural,

commercial and industrial schools are established to provide intermediate levels skills or as a compulsory component of academic core curriculum on the school timetable, or as non-formal post-primary training.[12] One of the major concerns of vocationalization programmes is their rate of return in the cost-benefit analysis to establish the 'real value for money' in the educational reform programmes.

2.34 Internal and external efficiency

Expansion of enrolments in most developing countries tends to exceed the capacities of the economies to sustain the school systems and post-school training facilities. This leads to deterioration in the efficiency of the educational provision as well as the quality of instruction. The crucial issue of efficiency has to do with lowering the unit cost in the educational expenditure without affecting the quality of what is taught or spending less to achieve more.

2.341 Quality

Quality in educational provision is affected by both quantitative and qualitative aspects. Quantitative inefficiency stems from school wastage; due to drop-out rates, repetition, poor attendance, low teacher-pupil ratios and inadequate instructional materials and facilities. The qualitative aspects include poor quality of the teaching force (untrained, demoralized and indisciplined workforce) and support systems such as inspectorate, educational administration and management, poor quality of instructional materials, facilities and mismanagement of human, material and financial resources. Educational reforms have far-reaching implications for quality in the educational provision.

2.342 Equity

Access to educational opportunities in most developing countries

is still unevenly distributed across sexes,regions and social groups. Regions which might have had an historical lead in educational evolution and development tend to retain advantages even in periods of educational diffusion.[13]

The crucial decision between quality and equality of opportunity is whether the governments should offer some kind of education to the majority no matter how inadequate it might be or offer high quality education to a minority who can best benefit from it. But with the pressures of quantitative expansion quality tends to be a secondary issue, except where universalization of education at the elementary level has been attained. In this process, examinations play an important role.

2.35 Examinations and medium of instruction

Examinations sort out the graduates of educational systems in various levels of abilities and serve as selection devices for further education, training and employment. This is so because where facilities and opportunities are limited as is the case in most developing countries, only the most able, with the right motivation and attitudes should benefit from them. In mass education designed to be terminal the criteria for assessment should be reviewed and the examination system reformed in such a way that it serves the needs of the majority by assessing the kind of abilities that are crucial to the type of life that the pupils will be expected to lead. Well intentioned reforms may be frustrated by the system of assessment if due consideration is not given to this issue.

Examinations are directly related to the medium of instruction; foreign and local languages adopted as media of instruction have implications; especially where education at the primary level is terminal.

The issue of language and examinations will be further discussed in subsequent chapters.

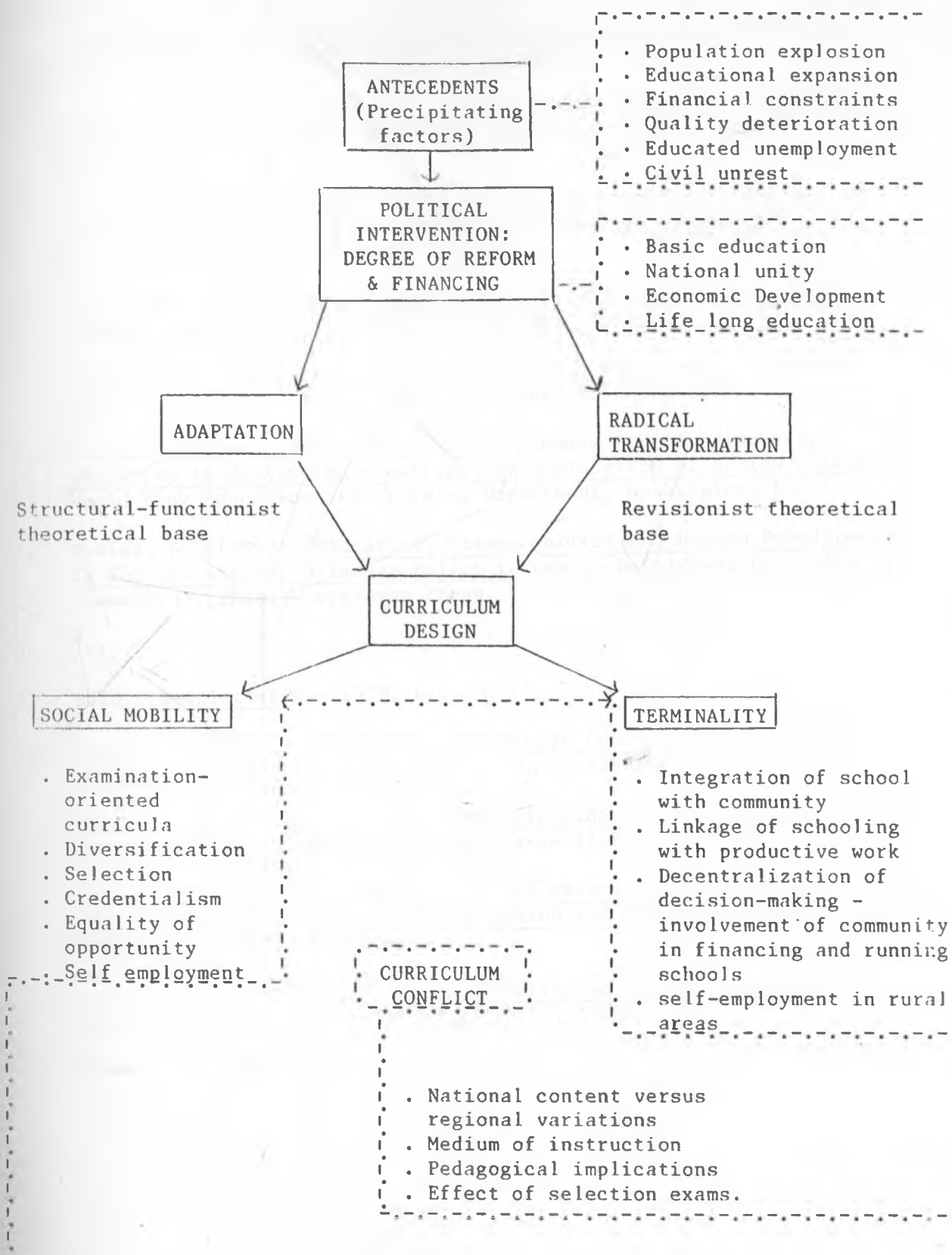
In this chapter I have examined the development of educational reforms, the magnitude of educational changes available as alternative strategies in developing countries, and the implications of the basic issues relevant to educational reforms. In particular, I have noted the issue of financing and cost and its relationship with external and internal efficiency as of fundamental importance in educational reforms.

Changes in educational systems tend to be affected by a complex of interactions among local, national and international factors.[14] At the national level these may include the ideological stances adopted by national governments, the conflicting needs of the teachers, students, parents, curriculum planners and the technical content of the reform programme. I have summed up these characteristics in the education reform model depicted in Figure 1.

Chapter Three will now be devoted to the examination of the structure, rationale, aims and objectives of the Kenya 8.4.4. Educational Reforms in the context of these basic issues.

Fig. 1

MODEL OF EDUCATIONAL REFORMS IN DEVELOPING COUNTRIES



Key ←.-.-.-.-.-→ Overlap between terminal and social mobility slants in curricula

FOOTNOTES

1. UNESCO (1961) Conference of African States on the Development of Education in Africa Addis Ababa 15-25 May 1961.

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8. Ibid.

9. ICED, Newsletter May 1979, p.4.

10. Beeby, C.E. (1980) "The thesis of stages fourteen years later"in International Review of Education, No. 4, 1980, p.461.

11. Court, D. and King, K. (1984) The planning of technical and vocational education and training, Paris IIEP.

12. Lillis, K. (1983) Problems associated with vocational education in less developed countries in Education and Development by Garret, R.M. (ed.) Croom Helm.

13. Foster, P. (1980) Social differentiation in African education in Journal of Modern African Studies 18(2), 1980.

14. Simons, J. (1983) op.cit.

Chapter Three

3. The background to the 8.4.4. system, structure, rationale and strategies

3.1 Background

3.11 Educational expansion

The factors discussed in chapters one and two, notably, the human capital debate, international commitments and the population explosion which led to educational expansion in developing countries also played their part in Kenya.

Although Kenya had not achieved her independence during the Addis Ababa Conference of 1961, she was committed to the expansion of primary and secondary education as a result of this international requirement and the political pressure for Africanization of the private and public sector to stem the tide of post-independence expectations from 1963 onwards.

The Kenya African National Union; the political party that emerged victorious in the pre-independence election promised free and universal primary education, creating expectations and leading to demand for more schools.[1]

This demand had been accelerated earlier by two pre-independence educational reforms in 1961: the introduction of 'A' level[2] as a basis for selection to University and the abolition of the Competitive Entrace examination which was taken at the end of standard IV in primary schools. This examination had a very high elimination rate and prevented 80 to 90 per cent of the primary pupils from proceeding to the intermediate stage of primary education as borne out by the table over:

TABLE IVa

Enrollment in primary education in standard IV and V
1959 - 1962 ('000s)

	1959	1960	1961	1962
Standard IV	135.3	156.7	171.1	165.7
Standard V	38.2	45.4	75.5	128.7

Source: Thias and Carnay [3], 1972

The abolition of this examination enabled all pupils in lower primary schools to continue to the upper primary school system. This led to unprecedented expansion especially at the secondary school level. The magnitude of this expansion in the early post-independence period is shown below:

TABLE IVb

Educational expansion in Kenya
1963 - 1970

Level and Type of School	1963		1970	
	No. of schools	No. of pupils	No. of schools	No. of pupils
Primary				
Aided	5,906	880,016	6,014	1,416,000
Unaided	152	11,537	109	11,589
Total	6,058	891,553	6,123	1,427,589
Secondary				
Aided	118	22,613	300	70,056
Unaided	32	4,896	483	52,183
Total	150	27,509	783	122,239

Source: Evans[4], 1975

During this period although primary education was seen as an important level, it was not regarded as a priority, the emphasis was on expansion of secondary education with the result that within only seven years of independence secondary schools had increased by 422 per cent while the secondary school population had grown by 344 per cent. Planning of education focused on secondary and higher education sectors for development of intermediate and high level manpower.

3.12 Previous Reports

The educational policy publication which launched the 8.4.4. educational system in 1984 noted that previous reports on education had indicated that the old educational system did not respond adequately to the needs of the country.[5]

The educational reforms in Kenya marked the culmination of a series of disquieting reactions about the appropriateness of the previous education system expressed by Government Commissions, International Missions, Conferences, and research reports over the years. In particular, the Kenya Education Commission Report, the International Labour Organization Mission, the National Committee on Educational Objectives and Policies and the Working Party on the Second University Reports provide a background to the precipitating factors to the current reforms.

The Ominde Commission was the first post-independence commission on education.[6] It recommended, among other things, centralized control and planning of education arguing that "due to limited resources the powers of the central government must be those of the planning authority, to enable the government to determine the nature, the extent and location of educational development."[11] p.26

This commission also abolished the teaching of Agriculture and Carpentry, the latter of which had for a long time been one of the

vocational aspects of the primary school curriculum, arguing that specific job training element in primary schools was retrogressive and out of harmony with the trends at the time.

As a result of the expansion shown in Table IV (b) a primary school unemployment problem ensued. Unlike their counterparts before the abolition of vocational education, the new brand of school leavers had no skills. In response to this concern, a non-Governmental organization (the Christian Council of Kenya) established non-formal institutions with vocational biases; the village polytechnics; discussed in Chapter Six.

At the same time a Conference on Education, Employment and Rural development funded by the Ford Foundation in 1966 devoted its deliberations in Kericho in Kenya on how to make the primary school curriculum more practically oriented.[7] The Conference stressed the need for integrating education and rural development.

About the same time in 1969 an independent study by Brownstein (1972) (op.cit.) concluded that:

(a) The education system had been oriented to the needs of the modern urban sector and the relationship between education and the needs of the rural sector had not been thought through; and that each level was treated as if it was a preparation for the next.

(b) Students in primary schools in particular saw education as a way of securing a job in the modern urban sector and tended to shun life in the rural areas, noting that the attempts to change this view of education were likely to meet with resistance because "attitudes engrained over a long period are very slow to die."

(c) Excessive demand for education was threatening quality especially in secondary education.

It was in the wake of these concerns that the International Labour

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(c) Excessive demand for education was threatening quality especially in secondary education.

It was in the wake of these concerns that the International Labour

Organization mission to Kenya[8] after studying the education system and the unemployment problem concluded that:

> "Kenya needs to embark on a long term and fundamental reconstruction of its whole educational system. Changes of structure, coverage, content and quality are long overdue."(ILO)p.241.

The mission recommended, inter alia, the restructuring of the school system to include one cycle of basic education of 8 to 9 years duration in which pre-vccational subjects were to be taught, called for overhauling of the primary school examination system and advocated a comprehensive system of upper secondary education catering for commercial technical and agricultural subject biases.

The Government accepted the recommendation in principle pending the availability of funds for implementation.[9]

Four years later in 1976, the National Committee on Educational Objectives and Policies[10] endorsed the recommendations of the International Labour Organization Mission and observed that:

> "the unemployment of the school leavers was aggravated by the enormous expansion of the system in the first ten years of independence. This expansion was not matched by a similar expansion in income earning opportunities."(p.16)

The Committee recommended:

(a) The creation of income earning opportunities in the rural areas through use of technologies appropriate to Kenya's level of development.

(b) The diversification of the curriculum in which students should be given a broadly-based education leading to competence in a variety of developmental tasks.

(c) That forms I and II be reconstituted into junior secondary and be made terminal as part of the basic education cycle lasting 9 years while the then form 5 and 6 be merged with forms 3 and 4 to form a 4 year secondary education cycle.

Five years later in 1981, the Presidential Working Party whose terms of reference were to examine the feasibility of setting up a second University in Kenya addressed itself to the need to restructure the whole school system. Appreciating the work of the National Committee on Educational Objectives and policies, the Working Party observed that in addition to numeracy and literacy it was necessary that the primary schools acquire basic education and recommended that the primary cycle be extended from seven to eight years and be restructured to offer numeracy and literacy skills in the first six years and basic education with practical orientation in the last two years. It also recommended that the 'A' level segment be scrapped.

It can be seen from the sentiments of the various reports that the basic issues of concern were those discussed in Chapter Two. Issues to do with unemployment, relevance, equity, quality and finance.

3.2 The structure of 8.4.4. Education system

At the time of decision-making the alternative modes of restructuring the system were considered against the need to keep the entire education duration from the primary school to university at 16 years.

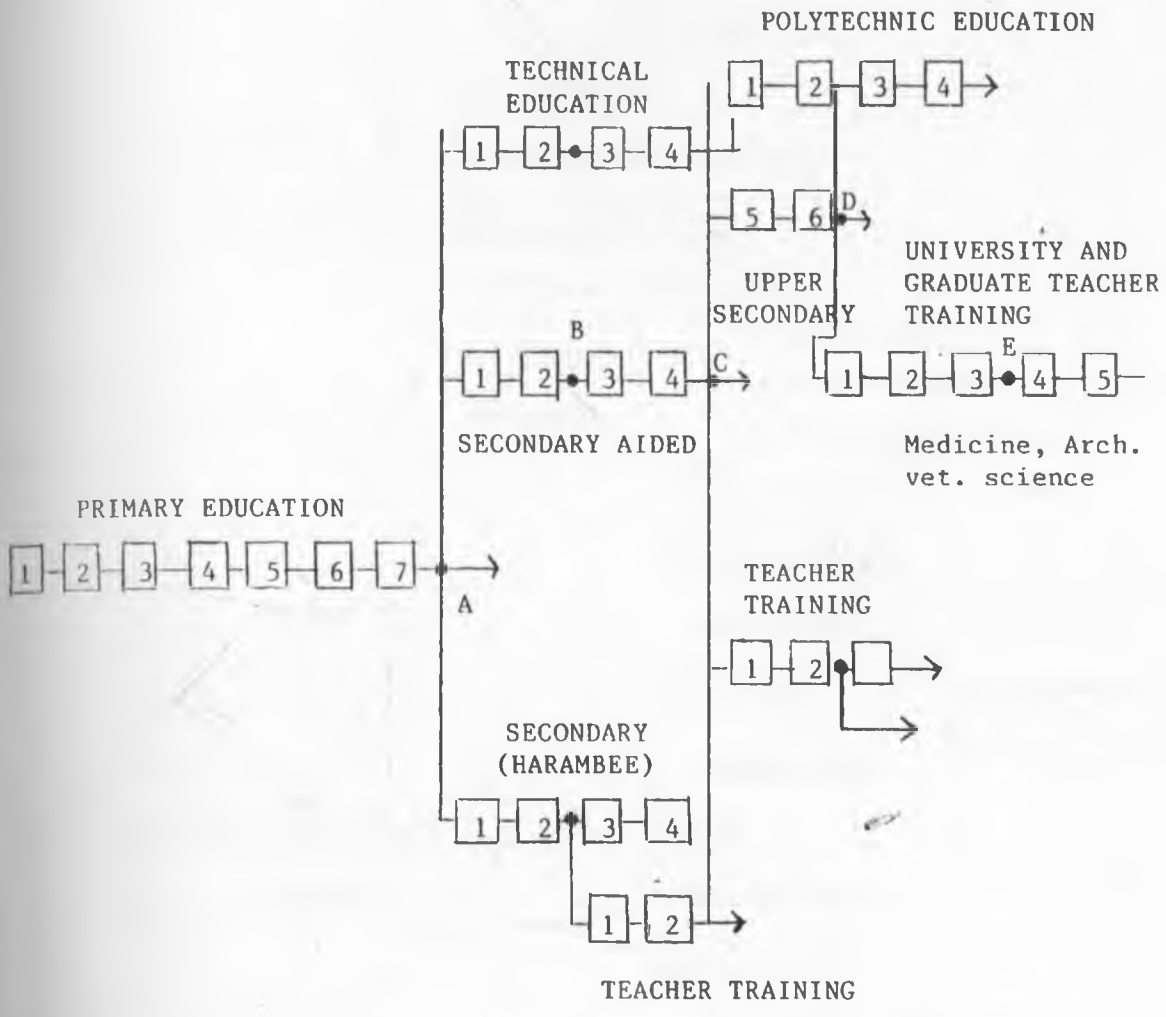
Fig. 2

Education Level	Mode I existing	Mode 2 proposed by NCEOP	Mode 3 proposed by the Working Party
Primary	7 years	9	8
Secondary	4 + 2	4	4
University	3	3	4
Total	16	16	16

Source: Republic of Kenya. The Presidential Working Party on the Second University in Kenya, 1981. Government Printer.

Fig. 3

The structure of formal education in Kenya prior to the 8.4.4. system.



Source: Jon Lauglo 1985, p.38*

Key: 1. Dot in the diagram indicates points at which examinations are taken.

2. A. C.P.E.: Certificate of Primary Education

B. K.J.S.E.: Kenya Junior Secondary Examination

C. K.C.E.: Kenya Certificate of Education

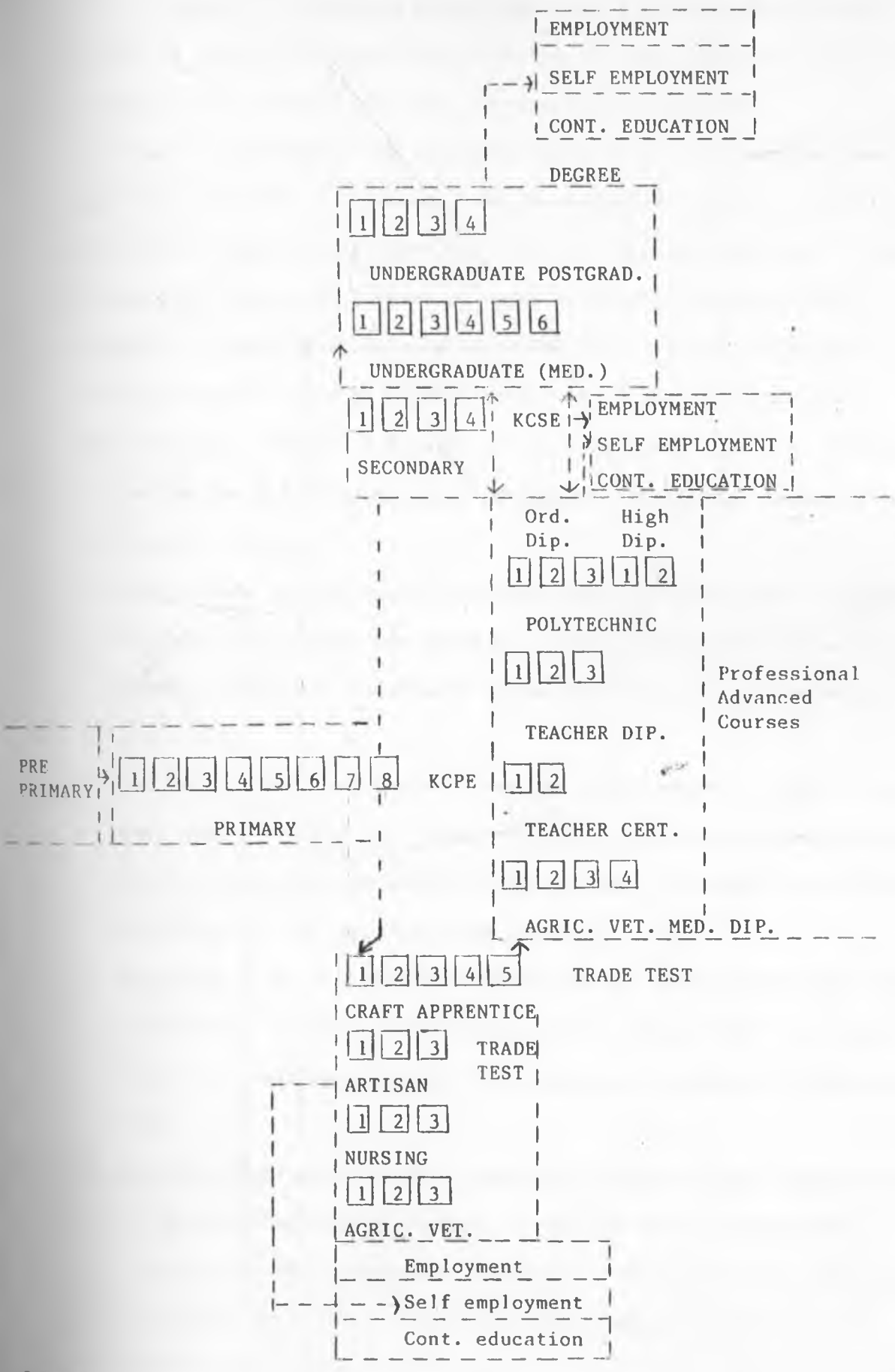
D. K.A.C.E.: Kenya Advanced Certificate of Education

E. University General Degree final exams.

* Lauglo J. (1985) Technical Secondary Schools in Kenya: An Assessment SIDA Report.

Fig. 4

The structure of the new 8.4.4. Education System in Kenya



Source: Republic of Kenya Ministry of Education, Science and Technology 8.4.4. System of Education, Government Printer, p.27.

In figure 2, the option shown under mode 3 was accepted on the grounds of cost; it offered one extra year of basic education as opposed to mode 2 which offered two extra years of basic education.

Figure 3 represents the education structure the country has moved away from and figure 4 represents the new education system. The old structure in figure 3 was based on 7 years of primary education, 4 years of secondary education, 2 years of upper secondary education and a minimum of 3 years of university education i.e. 7.4.2.3. The new system provides 8 years of primary education, 4 years of secondary education and a minimum of 4 years of university education i.e. 8.4.4.

In the new 8.4.4. educational system four structural changes have been made as follows:

(a) The primary school segment has been extended by one year to enable the children to have two years of prevocational education before leaving school as recommended by the Working Party on the second university.

(b) The former technical secondary school system shown in figure 3 has been dismantled and the former technical schools reconstituted into post-primary training institutions in order to expand the training opportunities for primary school leavers.

(c) The forms 5 and 6 which constituted the 'A' level segment have been abolished. Students eligible to join university will be required to choose their specialisms after one year of university preparatory work.

(d) The old structure in figure 3 provided for three final examinations in the secondary school system: at the end of the second year, fourth year and sixth year. There will now be only one examination: the Kenya Certificate of Secondary Education, at the end of the fourth year.

The reforms in the structure and content of education in Kenya are aimed at achieving the following:

(a) Providing relevant curricula for the majority of the primary and secondary pupils and students for whom primary and secondary education are terminal.[11]

(b) Improving the quality of education at all levels.[12]

(c) Making the 8 year primary education available to all primary school age children.[13]

(d) Providing for the equality of opportunity through distribution of educational resources.[14]

(e) Production of skilled manpower.[15]

3.3 Rationale and strategies for 8.4.4. Educational Reform

3.31 Relevant curricula

At all levels of the primary, secondary and post-secondary education, the emphasis is to be placed on diversified curricula with intellectual and practical skills useful for living in both urban and rural areas.

3.311 Primary education

The primary curriculum is designed to enhance competence in a variety of developmental tasks. It is broad-based and lays greater emphasis on practical skills. Fourteen subjects are offered as follows:

English, Kiswahili, mathematics, mother tongue, science, history and civics, physical education, Religious education, business education, art and crafts, home science, agriculture, music and geography.

The practical subjects from which pupils will acquire skills have been identified as follows:

Art
Craft
Home science
Agriculture

Art and Craft

The purpose of Art and Craft is to enable the pupil produce functional and aesthetically appealing articles of economic value using the acquired skills. He should be able to implement and control small scale projects such as setting up and maintaining simple workshops for leatherwork, woodwork, metal work, weaving and painting and be able to share knowledge and skills with others.[16] The following skills will be emphasized: drawing, painting, graphic design, leather work, weaving, claywork/pottery, fabric design, woodwork and metal work. Pupils will make posters, greeting cards, baskets, table mats, ropes, coat hangers, bricks etc.

Home science

This covers food and nutrition, health education, clothing and textiles, consumer education and home management. Pupils will be prepared in needlework, food preparation, child care and care of the home in order to be able to make tableclothes, blouses and childrens' clothes.[17]

Agriculture

The following practical activities will be emphasized: growing of crops for use and sale, rearing of domestic animals, poultry and bee keeping, making farm tools and caring for the soil and environment.[18] The objectives of teaching agriculture in primary school are meant to change attitudes, impart skills and integrate the school in rural community and are stated as follows:[19]

1. To demonstrate through practical experiences that agriculture is a profitable and honorable occupation.
2. To assist the pupils to practically acquire agricultural knowledge and skills which are relevant and useful to their lives.
3. To ensure that schools take active part in rural development by integrating agricultural activities in the school curriculum.

4. To stimulate genuine interest and develop positive attitudes leading towards active participation in agriculture.

To achieve objectives (1) and (2) the classes should organize their own project plots in the school and these plots should be used for food production. Projects should be on crops and animals found in the area. It is the work on these plots which should be evaluated to show pupils abilities in knowledge and skills acquired from the various experiments and results.[20]

Objective (3) should be achieved by relating school activities with those being carried out by the community eg. weeding, and the schools should participate in community projects. Objective (4) should be encouraged through incentives.

The income from projects carried out by pupils should be seen to be of use to them eg. buying more seeds, animals, materials for construction, books etc. The use of produce by teachers without pay should not be allowed. The teacher should organize for the display of the pupils produce.[21]

The school farm should have two separate plots: a demonstration plot and the plot to serve as a museum. The demonstration plots are basically for experiments on the effects of inputs on productivity while the museum should have a wide range of crops even those not grown in the local area to acquaint the pupils with cash crops and perennials.[22] Teachers are required to liaise with their head teachers and school committees to sort out resources required for purchasing farm inputs and other materials related to farming.

3.312 Secondary Education

The secondary school curriculum is broad-based and builds on the concepts, principles and skills established in the primary cycle. Its main objective is to prepare the learner for self-reliance, training and further education.[23]

Physical Education and Social Education and Ethics are taught but are not examinable. The subjects under (9) are meant to provide skills for self-employment and a wage-employment.

3.313 University Education

Universities will design and develop basic degree courses of study to cover four years. Specialized degree courses such as medicine and architecture will take longer. The following fields are available at the three universities:

Moi University	Kenyatta	Nairobi
Technology	Science	Agriculture
Agriculture	Arts	Architecture, design and development
Veterinary medicine	Education	Commerce
Forest resources and Wild Life Management Science		Engineering
Information Science		Medicine
Health Science		Veterinary medicine
Environmental Studies		Arts
Continuing Education		

3.32 Post-school training

For both primary and secondary school leavers, post school training is aimed at providing practical skills and attitudes which will lead to income earning activities in the rural or urban areas through salaried employment or self-employment as well as the skills for growth of agricultural, industrial and commercial development.[25]

3.321 Primary

Post-primary training have been planned to be offered in the village polytechnics which have been turned into rural craft centres, in the

farmers training centres, and in the former technical education secondary institutions; for Artisan courses lasting two years.

3.322 Secondary

Training for secondary school leavers will take place in post-secondary technical colleges, agricultural colleges and national polytechnics for ordinary diploma and higher diploma geared towards providing middle-level manpower after two to three years duration.

3.33 Examination and assessment

The 8.4.4. will have built into it a plan for continuous assessment of each child's progress right through his/her school career in every subject and every learning activity which can be assessed.[26]

3.34 Educational objectives

Educational objectives for primary, secondary, technical and university education have been drawn up and are to be found at appendix (i) while the flow of students from the old school system to the new system launched in 1985 is at the appendix (ii) of this dissertation.

The rationale for changing curricula and emphasising post-school training as educational reform strategies have been well articulated as shown in the foregoing paragraphs but they do not seem to have been matched by similar articulation of strategies aimed at improvement of internal efficiency and the implications of equitable distribution of educational resources, although these two are listed as some of the aims of the 8.4.4. educational reforms. Kenya's declared twin intention of expanding educational and training facilities and improving quality have far-reaching human, material and financial implications, some of which will be examined in Chapter Five.

The educational reforms and strategies described in the foregoing paragraphs are based on the rationale that introducing practical subjects

in the formal primary school curriculum and expanding post-primary training opportunities will make primary education terminal.

The Kenya 1984-88 Development Plan expresses reservations in the following words:

> "The majority of primary school leavers who do not find places in the secondary schools enter the labour market poorly equipped to take up opportunities for meaningful self-employment due to inadequate quality and quantity of vocational training institutions."[27]

These reservations imply that more needs to be done if the programme has to be viable.

As to whether the diversified curriculum in secondary school will increase the chances of salaried employment or self-employment experience elsewhere does not seem to support this possibility.

The reforms aimed at making education terminal at various points, correcting attitudes of pupils to create rural animation, universalization of education, and diversification of curricula and production of high level manpower implied in the Kenya reforms have been tried elsewhere and Chapter Four will now examine these experiences.

FOOTNOTES

1. Brownstein, L. (1972) Education and Development in rural Kenya - a study of primary school graduates; Praeger publishers.
Kenya got independence as a multi-party state and KANU was one of the parties. The main opposition party, the Kenya African Democratic Union (KADU) was dissolved, making Kenya a one party state.

2. Republic of Kenya (1981) Second University in Kenya Report of the Presidential Working Party, Government Printer.

3. Thias, H.H. and Carnay, M. (1972) Cost-benefit analysis in education - a case study of Kenya, John Hopkins Press.

4. Evans, E.B. (1975) "Secondary Education, unemployment and crime in Kenya"in Journal of Modern African Studies, Vol. 13(1), 1975, pp.55-66.

5. Republic of Kenya (1984) 8.4.4. System of education, Ministry of Education Science and Technology, Government Printer, Nairobi.

6. Republic of Kenya (1964) Kenya Education Commission Report, Part I, Government Printer, Nairobi.
There were other education reports before Independence, notably the Beecher Report of 1950 which introduced the Competitive Entrance Examination in Standard IV in African Primary Schools and recommended separate curricula for Europeans, Asians, Arabs and Africans. See Abreu, E. (1982) The role of self help in the development of education in Kenya, 1900-1972, E.A. Publishing House.

7. Sifuna, D.N. (1986) "The vocational curriculum in primary education in Kenya: an evaluation in 'Prospects'" Vol. XVI, No. 1, 1986.

8. ILO (1972) Employment, Incomes and Equality: a strategy for increasing productive Employment in Kenya, Geneva, 1972.

9. Republic of Kenya (1973) Sessional Paper No. 10 on Employment, Government Printer.

10. Republic of Kenya (1976) The National Committee on Educational Objectives and Policies, Government Printer, Nairobi.

11. Jomo Kenyatta Foundation (1986) Syllabuses for Kenya Primary Schools, Volume II and

Republic of Kenya (1985) Secondary Education Syllabuses, Kenya Institute of Education.

12. Republic of Kenya (1984) 8.4.4. System of Education, Ministry of Education Science and Technology, Government Printer, Nairobi.

13. Ibid, p.4.

14. Ibid, p.1.

15. Ibid, p.1.

16. Jomo Kenyatta Foundation (1986) Syllabuses for Kenya Primary Schools Volume II, Upper Primary, p.38.

17. Republic of Kenya (1984) 8.4.4. System of Education, p.5, op.cit.

18. Ibid, p.5.

19. Jomo Kenyatta Foundation (1986) op.cit.

20. Ibid.

21. Jomo Kenyatta Foundation, (1986) op.cit.

22. Ibid.

23. Republic of Kenya (1985) Secondary Education Syllabuses: Kenya Institute of Education.

24. Republic of Kenya (1984) op.cit.

25. Republic of Kenya (1984) op.cit.

26. Republic of Kenya (1984) op.cit.

27. Republic of Kenya (1984-88) Development Plan, Government Printer.

PART TWO

THE IMPLICATIONS OF THE 8.4.4. REFORMS FOR EDUCATIONAL POLICY AND PRACTICE IN KENYA

Chapter Four

4. Lessons from Educational Reforms in other Developing Countries

In the Kenyan Development Plan of 1984-88, the new 8.4.4 reforms will be pursued with vigour in order to produce school leavers who are willing to work in the rural areas."[1]

It has been pointed out that an attempt to introduce rural and practical elements into the curriculum in the hope of pursuading school leavers not to leave the rural areas and to equip them with marketabl skills which are valuable for a rural economy have been tried in Tanzania and found unsuccessful.[3]

Nyerere himself, the proponent of Education for Self Reliance in Tanzania, speaking to the Editor of the Third World Quarterly in 1984 conceded failure in the following words:

> "We defined education for self-reliance. We have not quite succeeded there. The reason was the model we inherited: the British Grammar School. There is a tremendous outcry for secondary education...What starts as frustration ends in allienation.....most of the exiles you see in Dar-es-Salaam are rural people. All education has done for them is to bring them to the cities and leave them there. It is a kind of punishment to be told to go back to the villages. Now this is a real failure and it is much more painful because we understood the problem but went about it the wrong way."[4]

In this chapter we shall now focus on some of the educational reforms which have been undertaken by Tanzania but which are similar to the Kenyan reforms, namely universal primary education, education for self-reliance with particular reference to agriculture and the linkage

between education and productivity, and diversification of the curriculum at the secondary school level.

We shall first look at the ideological background to the establishment of education for self-reliance.

4.1 Tanzania's ideological leadership and developmental philosophy

The country decided to move away from the inherited capitalist economy to the socialist economy through the philosophy of self-reliance at the regional and national level and equitable distribution of wealth between individuals and regions.

These goals had to be achieved through rural development, social ownership of the means of production which entailed widespread nationalization of industry and commerce and creation of parastatal bodies to manage the nationalized industrial and commercial concerns.[5]

This strategy of nationalization and equitable distribution of resources was buttressed by a leadership code which forbade dual sources of incomes among people, narrowed wage differentials and instituted taxation systems aimed at spreading out the fruits of independence.

People were moved from their original homes and placed in communal villages to facilitate distribution of government services such as health, water, large scale communal agriculture and educational facilities.

It was hoped that this strategy of villagization would make it possible, among other things, for children to be within easy proximity to the schools and be easily integrated into the community affairs.

It was in the wake of this social reorganization of society that Education for Self-Reliance was launched amidst a lot of disgruntlement about the inability of the economy to generate adequate employment

rural community was adopted and primary education became basic education. General entrance examination was changed to primary leaving examination to avoid psychological expectation for entry into secondary school.[7]

(d) The farm work and the products were tobe integrated into the school life so that, for example, the properties of fertilizers could be explained in the science classes but their use experienced by the pupils as they saw them in use.[8]

(e) Examinations as tools for selection had to be played down. Continuous assessment and character assessment had to play a prominent role.

4.13 Organization of employment for primary school leavers

In order to enable primary school leavers to have jobs in the rural areas, planning of education was decentralized at the village level. villages had to identify needs of their school leavers by providing self-contained village level employment and be able to integrate them into the rural life.[9] In this way the idea of seeking employment in the urban centres, it was hoped, would not arise. Self-reliance would in this way generate new socialist attitudes and destroy the traditional concept of employment.

4.14 Why education for self-reliance did not work

4.141 Strategy of implementation

In Tanzania, education is highly politicizedlike in most other developing countries. The political party which is supreme to parliament makes resolutions which bind government policy including education. In the case of education for self-reliance introduced by Nyerere, the policy document was written and passed on to the schools in 1967 and only received official party sanction in 1974 after the

Musoma Resolution.[10] The document was floating in schools without official sanction. Teachers did not know what to do with it; some discussed its content as if it was the syllabus while others regarded self-reliance as sheer socialization in manual labour. Its declared intention that education for self-reliance should turn out men and women "who are educated to be members and servants of the just and egalitarian future in which this country aspires",[11] was hampered by several factors.

4.142 The dichotomy between declared policy and actual school practice

Linkage between education and practical work

Mmari identifies three concepts of work: linking school with the world of work through part study and part work where learners move between the theory class and the world of work; work as linking theory with practice so that whatever is learned is put into practice, and work, as using content to solve practical problems which emanate from the community and the environment. Nyerere's concept of work refered to the second but in the actual practice all the three created problems.

Integrating the school with the community required mutual participation by both the school and the community on mutually beneficial projects such as road building, construction of dispensaries or cattle dips, poultry keeping, fruits and vegetable gardening, fish bonds, bee keeping, cereal cultivation etc. As it turned out,projects were not being operated in collaboration with the village communities which led to apathy on the part of the community and lack of representation by either side in each other's committees.[12]

The need to link theory with practice in agriculture as advocated by Nyerere was beset by societal conservatism and lack of resources as exemplified in this quotation.

> "We can teach our students that they are supposed to test for acidity of the soil and then apply such and such fertilizer, but when they go to the shamba (farm) there is no equipment for testing, no fertilizer to apply. We preach modern agriculture but the truth is students are farming the way they always have done at home."[13]

The noble idea of using knowledge to solve local problems in the community was frustrated by lack of adequate numbers of trained teachers in agriculture and their related practical subjects both in primary and secondary schools. The few who were available could not cope with large classes in the primary schools. Besides, the teachers concern was with covering the content-laden syllabuses for examination work. they were not trained to improvise problem solving approaches and were generally poorly rewarded.[14] This was further aggravated by the fact that the economic aspects of agricultural production in the schools were stressed at the expense of educational dimension as evidenced by Nyerere's own extollation of manual labour and the economic contribution of school production. Noting that in 1974/75 financial year schools had produced food worth 7.7 million shillings Nyerere observed:

> "Those who have participated in this productive labour will no longer look down upon manual labour."[15]

This was an exaggerated optimism because the schools in Tanzania were required to meet 25% of their recurrent expenditure through school production but the majority only managed 3 per cent.[16]

4.143 Changing attitudes of pupils through education

According to the theory of structural functionism discussed in chapter One, society decides on goals and uses schools to effect changes. the experience in Tanzania shows that schools have been dysfunctional in effecting the change in attitudes of the pupils. Pupils were required to carry out democratic decision-making in their projects, learn cooperative strategies for social living and appreciate one another's contribution. These intentions were hampered by the

authoritarian and hierarchical arrangements inherent in the school social organization.[17]

If there was any change leading to positive socialist attitudes this emanated from society rather than the school.

4.144 Providing employment for school leavers in the villages

the physical and economic infrastructure of much of village life could only support a handful of artisans for whose products there was very little demand. The villagers were expected to assume an involved role in planning when they had hardly emerged from illiteracy through the adult literacy compaigns. Many of the youth, unable to survive on their own in the rural areas, responded to what Nyerere described as the 'British Grammar School' mentality by flocking into Dar-es-Salaam and going into 'exiles' in their own country. To the present time rural areas in Tanzania like in most developing countries, are just not attractive enough to provide employment for school leavers whether primary or secondary schools. This now leads us to the issue of diversified curriculum in the secondary schools in Tanzania and the educational efficacy of such innovation.

4.15 Diversification and vocationalization of curricula in Secondary Schools in Tanzania

In Tanzania, secondary schools have prevocational biases which include agriculture, commerce, technical, domestic science and academic streams. This is a single track prevocational system where students are supposed to choose one of the specialisms in the course of their career in secondary school. In 1982 the distribution of students was as shown in Table V.

Table V

Distribution of the state secondary school students between the various biases 1982 Forms I - IV

Vocational Bias	Boys	Girls	Total
Agriculture	12,203	3,281	15,484
Commerce	5,886	4,969	10,850
Technical	3,086	695	3,781
Domestic Science	-	1,535	1,535
Academic	2,382	949	3,331
Total	23,557	11,424	34,981

Source: Croksey, 1986 (op.cit.)

This arrangement is meant to equip students with skills for economic production through self employment or salaried employment. Psacharopoulos[19] in a research commissioned by the World Bank in Tanzania and Columbia carried out curriculum evaluation to establish the following in 1983:

(a) whether diversified curriculum encourages terminal education by creating less private demand for post-secondary schooling;

(b) whether those with vocational bias had better prospects for employment;

(c) whether they had higher rates of return as opposed to academic counterparts;

(d) whether there was a match between the skills learned in school through diversified curricula and the labour market.

His findings in both Tanzania and Columbia were as follows:

(i) Diversification does not reduce the desire of secondary students to want to continue with post-secondary education. In Tanzania the data showed that there were more people opting for form V in

the prevocational classes than in the purely academic control groups.

(ii) Those who had followed prevocational studies experienced significantly longer periods of unemployment after a longer waiting period of unemployment. In a number of cases they had to take up jobs unrelated to their initial training. For those who managed to get employment academic graduates earned more than the prevocational graduates.

(iii) Self employment requires equipment and capital.

Psacharopoulos who had carried out tracer studies of graduates of various options after various post-secondary experiences cautioned that the findings of this study should not be generalized to other countries unless more studies have been undertaken. But similar findings have been reported by Lauglo in a tracer study in 1983/84 in Industrial Education in Kenya. He reports that only 6 out of a sample of 1046 were self-employed, 2 of them in peasant farming. A number of respondents attributed this to lack of initial capital, equipment and the market.[20]

Both Psacharopoulos and Lauglo warn that the unit costs are high, as well as building costs and costs of maintaining equipment most of which tend to be unused due to lack of materials and teachers. In Kenya, Lauglo adds that woodwork workshops do not produce desks and chairs for school use because making things for the school is not conceived as an opportunity for teaching because teachers interpret the content prescriptions of the school syllabuses as having priority over production. These findings imply cost which may be magnified if larger programmes such as universal primary education are undertaken as was the case in Tanzania.

4.16 Universal primary Education in Tanzania

The Musoma Resolution of November 1974 directed the Tanzanian government to implement universal primary education. This was in view of the fact that parents in the Ujamaa Villeges wanted their children to go to school and there had to be no discrimination.[21] Universal primary education was implemented without reference to the quality of education that was being provided. Those who showed concern with quality were chastised by Nyerere who saw this as tantamount to a preoccupation with the needs of elitism at the expense of those of the masses:

> "We cannot protect the excellence of education for the few by neglecting education for the majority. In Tanzania it is a sin to do so."[22]

The country recruited teachers from among the following with an unprecedented urgency:

- Retired teachers
- Local educated volunteers
- Primary school leavers of outstanding character
- Secondary school pupils who had participated in Adult Education programmes.

The recruited teachers were trained through a Distance Education Project which involved the following elements:

- Face to face instructions 3 times a week for 3 hours with programme coordinators drawn from among trained primary school teachers.
- Correspondence courses in Kiswahili, mathematics and methodology.
- Teaching practice lasting 15-24 hours a week under the supervision of experienced teachers.
- A 6-week programme in teacher training.
- Regular radio programmes taped and replayed to various groups under supervision.

The paraprofessional staff trained in this way were given heavy workloads in difficult classes.[23] The exercise revealed the following problems identified by Omari and others.

- Although an enrollment ratio of 93% was attained there were a number of children in poor families and remote areas who had not been tapped.
- Nomadic parents could not permit their children to be at school throughout the day at the expense of cattle herding.
- It was very difficult to obtain accurate demographic data on fertility, mortality, migration, school drop-out, grade repetition, transition rates and correct ages of children, and in the latter, birth certificates were not enforced, especially in the rural areas.

Omari and others observe that Tanzania has the lowest annual expenditure on primary education. Consequently;

> "The Government has left the task of establishing facilities to local initiatives and resources. Many children go to school in shanties, a condition morally unacceptable in a society promoting egalitarian principles."[24] p.65

Since the establishment of universal primary education, agriculture in Tanzania is taught in an abstract, bookish manner without concrete examination of what is possible in the local circumstances,[25] apart from not being wholly relevant to agriculture.[26]

In Kenya there seems to be an attempt to emphasize practical education as reflected in the time allocation in the timetable in the primary school as will be shown later in this chapter; in the meantime Kenya and Tanzania seem to have something to learn from each other in their approaches to curriculum reforms.

4.2 Kenya's approach to reform

Kenya's approach to agricultural reform in the syllabus is less ambitious. Integration of agricultural activities into the community

is left to the agricultural teacher and is not a massive integrative exercise as was the case in Tanzania. The issue of resources is crucial in Kenya as there are not enough qualified teachers to teach agriculture in primary schools. This problem is accentuated by the fact that teacher trainees can choose to do agriculture among other subjects or leave it out. Other elective subjects include art, music and home science. This is likely to adversely affect effective implementation of the 8.4.4. system.

Secondly, post-primary employment and training requirements are conceived as national responsibilities rather than village commitments. There is emphasis on post-primary training and the practical prevocational courses are conceived as purely preparatory; although training facilities are limited as discussed in Chapter Five and the post-primary training does not seem to have taken off as originally anticipated, especially in training in the former technical secondary schools. In 1987 only 220 primary pupils enrolled in these post-primary training institutions.[27] The majority of the primary school leavers are poised to put up with this prevocational preparation for life.

As the table below shows, practical subjects are being emphasized.

Table VIa

Time allocation for selected practical and academic subjects in upper primary school classes 6-8 in Kenya.

	Subject	No. of 35 minute periods per day	Teacher contact time per day	Remarks
Practical subjects	Agriculture	3	2hrs 33min	One double period
	Home science	4	3hrs 50min	Two double periods
	Art	4	2hrs 92min	One double periods
	Craft	3	2hrs 33min	Two double periods
Academic subjects	English	7	4hrs 8 min	One Library period
	Kiswahili	4	2hrs 33min	
	Geog., Hist. & Civics combined	4	2hrs 33min	
	Mathematics	6	3hrs 50min	
	Science	3	2hrs 33min	One double period

Source: Computed from the timetable on p.xiv of the Volume II Upper Primary School Syllabus, Jomo Kenyatta Foundation, 1986.

In this table, among the prevocational subjects the emphasis is on home science, art, craft and agriculture in this order. Agriculture is being treated as an academic subject like science both of which are given one double period per day. Some work can be accomplished in a double period. Changing the system to match the agricultural seasons of the year does not appear to be a viable arrangement as this is tantamount to subjecting school social organization to vagaries of weather. The drought which took place in Tanzania destablised school organization. Because of shortage of financial resources and qualified teachers in primary schools in art and home science, despite the amount of time being spent on these subjects in Kenya, the quality of the products is unlikely to be impressive given that art, for example, can really only be taught by artists. Reports available in the Kenya National Examinations Council which conducts primary teacher examinations nationally indicate that performance of the teacher trainees in practical art (drawing and painting) tends to leave a lot to be desired. Experience in India during the basic Education Reforms of 1937 revealed that resources and workmanship determine the supply and demand for school-based production; it tends to be low where there is low finish and quality.[25]

Research evidence produced in Tanzania, Columbia and Kenya suggests that the diversified curriculum neither leads to terminal education, improves employment prospects nor ensures higher rates of return. Kenya's secondary school diversified curriculum which closely approximates Tanzanian model is unlikely to prove a panacea for the intended aim of ensuring wage and salaried employment for school leavers.

In universal primary education the problems experienced with regard to demographic data, lack of access to formal schooling by disadvantaged

groups and erosion of quality are relevant to Kenya's efforts to universalize education and some of these are discussed in Chapter Five.

4.3 Zambian Educational Reforms

The problem of resource availability is of fundamental importance and can throw well intended reforms into disarray. Zambian experience is a case in point. In 1976, Zambia came up with far reaching reforms expressed as follows:[29]

> To extend education opportunities to all adults and children and specifically eliminate illiteracy and enable all citizens to acquire basic education.
>
> To combine study and productive work at all stages and all programmes of the system.
>
> To operate a selection system based on continuous assessment and incorporate humanist socialism in all programmes.

The programme was quietly shelved when the financial implications were assessed. The integration of work with work study was not emphasized, the public examination and selection systems were retained while the education system continued as a pyramid. In a state of desparation the ministry resigned to this situation in the following words:

> "The inspectorate once again became conscious of the problems facing teachers in the classroom in the form of over enrollment, lack of suitable text books, and absence of suitable classrooms, furniture and need for repairs and maintenance of school buildings. It is hoped the picture will become brighter one day."[30]

4.4 Kenya's and Tanzania's levels of development

In Chapter five it is shown that Tanzania spends a lesser percentage of her Gross National Product on education than does Kenya and this seems to be a reflection of the resource bases of the two countries as shown in the table over:

Table VIb

Comparison of development performance of Kenya and Tanzania 1960 - 1980

Country	Growth Rate of GDP		Per Capita Income US $	Growth Rate	Adult Literacy	Life Expectancy
	1960-70	1970-80	1980	1960-80	%	at Birth
Kenya	6.0	6.5	420	2.7	50	55
Tanzania	6.0	4.9	280	1.9	66	52

Source: World Bank, World Development Report, 1982.

4.5 Descrepancies in Kenya's curriculum Reforms and the aims and objectives model

Kenya's expansion of universal primary education tends to widen demand for secondary education and its commitment to this social demand means that quality at the primary level and other levels is bound to suffer to some extent and may well defeat the purpose of the intended terminal nature of the system.

In Table VIa for example the amount of time devoted to teaching English is more than that allocated to practical subjects. While this might have been justifiable before independence when primary schools were used to cater for small numbers of children who could go to further education and obtain clerical jobs, there is no justification for this emphasis for people intended to live in the countryside. the selection system is still based on written examination at the primary level while continuous assessment does not count towards selection. These are pointers to the fact that the system is likely to remain elitist for quite some time despite the declared intention of making the system terminal. This dichotomy between intention and actual practice is also seen in the secondary school curriculum. One of the aims of secondary education is stated as:

"To build a firm foundation for further education."

It is difficult to see how an expanded system can provide a firm foundation at the same time and this comes out clearly in the figure below:

Fig. 5

Subject	The old system No. of 40 min. periods per day	8.4.4. system No. of 45 min periods per day
Maths.	7	6
Physical Sciences	6	3
Biological Sciences	4	3

Source: Kenya National Examinations Council.[28]

Inherent in this arrangement is the inability of the system to foster a sound scientific base necessary for technological advancement and the long term effect of this curtailment in the contact time of the teacher in mathematical and physical sciences requires further investigation; despite the commendable efforts made to stipulate general and specific objectives which education should bring about in the behaviour of the educands.

There is, however, a danger in the Tylerian model of Educational aims and objectives which has been adopted in the preparation of curricula. It may be difficult for teachers to recognize the intended change in the pupils behaviour. Besides, certain goals may not be achieved in terms of specific objectives, such as creativity, cooperation, problem-solving and non cognitive behaviour patterns. The traditional argument that the intended outcomes may be stressed at the risk of failing to recognize the unintended outcomes is also worth watching. It is also important to remember that limiting objectives only to those outcomes which are measurable

may lead to excessive preoccupation with assertaining the presence or absence of certain behaviour rather than educating a whole human being.[31]

A good curriculum implies quality in education and issues of quality and equality stressed in the 8.4.4. reforms will now be considered in Chapter Five.

FOOTNOTES

1. Republic of Kenya, 1984-88 Development Plan, Government Printer.

2. Ibid.

3. Sifuna, D.N. (1986) op.cit.

4. Gauhar, A., 'Julius Nyerere' Third world Quarterly Vol. 6, No. 4, October 1984.

5. Court, D. and King, K. (1979) Education and Production needs in the rural community: issues in the search for a national system, UNESCO IIEP Occasional Paper No. 52.

6. Mmari, G.R.V. (1979) "A school for work: Tanzanian experience" Learning and Working UNESCO prospects Reports, Paris 1979.

7. Ibid.

8. Nyerere J.K. Education for Self-Reliance, op.cit.

9. Court and King,(1979) op.cit.

10. Mmari, G.V.R. (1979), op.cit.

11. Nyerere, J.K. (1967) Education for Self-Reliance.

12. Cooksey, B. (1986) "Policy and practice in Tanzania Education since 1967" International Journal of Educational Development Vol. 6, No. 3.

13. Kernen, D. (1984) "Education, production and social differentiation, a comparative study of two Tanzanian Regions" quoted in Cooksey, 1986, op.cit.

14. Saunders, S.M. (1984) Implementing a practical action curriculum policy, a case study of education for Self-Reliance in Tanzanian secondary schools, Unpublished Ph.d. thesis.

15. Nyerere, quoted in Mmari (1979) op.cit.

16. Cooksey, op.cit.

17. Court, D. (1976) "The Education system as a response to inequality in Tanzania and Kenya" Journal of Modern African Studies, Vol. 14, No. 4, 1976.

18. Court and King (1979) op.cit.

19. Psacharopoulos (1985) Curriculum diversification in Columbia and Tanzania: an evaluation,Comparative Education Review Vol. 29, No.4.

20. Jon Lauglo (1985) Practical Subjects in Kenyan academic secondary schools. General Report for the Swedish International Development Agency, Education division, document no. 20.

21. Omari, J.M. Mbise, S.T., Mahese, G.A., Malekela and Besha M.P. (1983) Universal Primary Education in Tanzania IDRC TS42e Ottowa, Canada.

22. ibid.

23. Omari, et.al. (1983) op.cit.

24. Omari, et.al. (1983) op.cit.

25. Shonmeir H.W. (1977) Agriculture in Conflict, The Shamba Case, Bensheim Kubel Foundation.

26. In the syllabus agriculture is combined with science and covers 'the earth' astronomy, energy, living things, machines and ecology. Omari, p.73.

27. Written confirmation from Kenya National Examination Council indicates that 15 pupils enrolled in each of the 17 schools.

28. Pauchamukhi, P.R. (1983) India: "A century of effort" in Better Schools, edited by Simons, Praeger Press op.cit.

29. Alexander, P.J. (1983) "Problems of Educational Reforms in Zambia" International Journal of Educational Development vol. 3, No. 2.

30. Ministry of Education and culture. Annual Report for 1979 Lusaka, quoted in Alexander (1983).

31. Kenya National Examinations council (1986) Coordination and Harmonisation of Curriculum, examinations certification and accreditation of educational and other training institutions in Kenya.

32. Howe, W. (1986) "Reflections on some contemporary education slogans." International Education Review vol. 32, No. 1 (1986)

Chapter Five

5. Quality and Equity in Education in Kenya

As noted in Chapter Three the new 8.4.4. education system aims at expansion of educational opportunities, equitable distribution of educational opportunities, equitable distribution of educational resources as well as improvement of quality at the various levels of the ducational systems.

This commitment requires that Kenya decides how much of its resources is to be devoted to education as against other equally important development needs such as industry, agriculture, housing, defence and transportation. It also entails the willingess and the ability to utilize the available resources to achieve maximum educational results both qualitatively and quantitatively.

In this connection this chapter will examine the effect of demographic factors on the planning and forecasting of educational needs, the financing policies and practices, the quality of education and inequality in the distribution of educational resources.

Past trends, policies and practices will be explored and their policy implications for the new system highlighted.

5.1 Population and education

Kenya's last population census was carried out in 1979 and gave a natural increase of 3.8 per cent[1] which is presumably one of the highest in the world.

The population was estimated at 18.8 million people in 1983. The Kenya Fertility Survey indicated that Kenya has a total fertility rate of about 8.0.[2] Fertility rate has been rising while the mortality rate has been declining.

The table below shows that due to improved health facilities and education there has been a rapid decline in mortality rates in the country since 1962.

Table VII

Proportion of children dead by mother's age group

1962 - 1979

Age of Mother	1962 Census	1969 Census	1979 Census	1979 as % 1962
15 -19	0.146	0.128	0.116	79
20 - 24	0.170	0.147	0.125	74
25 - 29	0.205	0.174	0.141	69
30 - 34	0.238	0.202	0.166	70
35 - 39	0.269	0.231	0.185	69
45 - 49	0.336	0.304	0.253	75

Source: Population Studies and Research Institute, University of Nairobi

The indices of fertility and mortality rates vary from province to province in Kenya as shown below:

Table VIII

Indices of fertility and mortality by province in Kenya based on 1979 population census

Province	Total Fertility Rate	Percentage of Children dying in first two years		Expectations of Life at Birth	
		Males	Females	Males	Females
Coast	7.08	18.0	16.7	47.9	49.9
Central	8.61	7.8	6.9	58.1	63.6
Eastern	8.37	11.3	10.4	54.6	57.0
Nairobi	5.48	9.5	8.3	55.6	61.6
Rift Valley	8.42	11.9	10.7	53.6	57.6
Western	9.00	16.8	14.8	50.6	53.6
Nyanza	8.67	19.2	17.7	45.6	49.1
North Eastern	7.37	13.4	13.7	49.5	49.5

Source: Agunda K.O.1979. p.73

In this table Central Province has the lowest mortality rate and the highest life expectancy while Nyanza has the highest mortality rate and Nairobi and Coast provinces have the lowest fertility rates.

The population of Kenya has been projected as follows:

Table IX

Total Population by Province and the Country

1969 - 1989 ('000)

Province	1969	1979	% Growth	1989 Projected	Growth 1979-89 in %
Rift Valley	2210	3240	47	5127	58
Nyanza	2122	2644	25	4175	58
Eastern	1907	1770	43	4194	54
Central	1676	2346	40	2551	51
Western	1328	1832	38	2755	49
Coast	944	1343	42	2733	54
Nairobi	509	828	63	2065	73
North Eastern	246	374	52	611	63
Total for Kenya	10,943	15,327	40	23,887	56

Source: Republic of Kenya 1982/83 Report of the Presidential Committee on Unemployment.

It is interesting to note that there is no correlation between the column on total fertility rate shown in Table VIII and the rate of growth shown in column 4 in this table. Nairobi which has the lowest fertility rate of 5.48 presumably because of easy availability of family planning services has the highest growth rate in this table. North Eastern province has the second highest. These are attributable to immigration from up-country in the case of Nairobi and from neighbouring countries

in the case of North-Eastern province i.e. from Somalia and Ethiopia. Western province which has the highest fertility rate only recorded an increase of 38 per cent.

This demographic behaviour has an important bearing on the planning and forecasting of educational enrollments of school age children.

Arising out of this total population projection, school age children have been estimated as shown in the table below.

Table X

Projected Population in Kenya 1988 and 2000 ('000)

	Base Year		Constant Birth Rate			
	1980		1988		2000	
	Number	%	Number	%	Number	%
Total Population	16,667	100.0	23,032	100.0	38,499	100.0
Pre school age (0-5)	4,140	24.8	5,719	24.8	9,602	25.0
Primary School (6-12)	3,607	21.8	4,921	21.4	8,181	21.3
Secondary School (13-16)	1,567	9.4	2,266	9.8	3,764	9.8

Source: Republic of Kenya 1984-88 Development Plan.

This table shows that by the year 2000, out of the projected population of 38,499,000, 31 per cent will be in the primary and secondary school system in Kenya and will represent 11,945,000 people.

The actual pattern of growth of the students and teachers participation in the educational system is shown in the table over for the last three years:

Table XI

The growth rates of the main educational sectors in Kenya 1983 - 1986

Sector	Participation Rates				Growth in Percentages			
	1983	1984	1985	1986	1983	1984	1985	1986
Primary Education								
pupils	4,323,822	4,380,232	4,702,414	4,843,500	4.9	1.3	7.4	3.0
teachers	117,475	122,788	137,776	142,807	2.1	4.5	12.2	3.7
Secondary Education								
students	493,710	510,943	437,207	458,702	12.6	3.4	-14.4	4.9
teachers	18,960	19,367	21,712	22,296	12.5	2.4	12.1	2.7
Technical Education								
students	9,258	9,571	7,840	.....	0.6	3.4	-18.0	....
teachers	499	524	535	.....	6.7	5.0	2.1	....
Teacher Education								
students	13,657	15,413	15,588	.....	19.7	12.9	1.1	....
teachers	713	1,027	1,218	.....	-0.1	44.0	18.6	....
University Education								
students	.....	8,882	8,855	9,751	....	....	0.3	10

Source: Growth rates calculated from Tables 172, 173, 174 Republic of Kenya, Statistical Abstract 1986 and Table 15.5 Republic of Kenya Economic Survey 1987.

Key (.....) data not available.

Each education sector in the table shows its own peculiar characteristic growth that is erratic. In the primary sector in 1985 which was the year of implementation of the new 8.4.4. system, there was a big jump both in student enrollment and teacher recruitment from 1.3% to 7.4% and from 4.5% to 12.2% respectively. A total of 12,500 untrained

teachers were recruited into the teaching service. In the secondary sector, the enrollment for 1985 declined by 14% because there was no intake to form one as the standard seven class moved to standard eight. In technical education the enrollment seems to have gone down following the decision to convert technical schools into post-secondary training institutions.

The economic development plan projection that there will be 2,266,000 (13-16 year) cohort in 1988 seems to be staggeringly high given that in 1986 the secondary school population is shown as averaging 459,000 pupils in this table. A two year time lag will not lead to such astronomical growth.

Over inflation of school enrollment projections by planning officers may unduly commit scarce resources that may be required in other sectors of the economy. In the 8.4.4. system demographic factors; migration patterns, mortality rates and fertility rates need to be studied very carefully and their effect on the social and private demand for education and resultant educational expansion monitored. This entails closer liaison between the various planning units of the government's planning agency and the availability of accurate statistics to eliminate or minimise descrepancies in raw data.

But given that the entire education sector has had fluctuating growth rates ranging from 1.1 per cent in teacher education to 13 per cent in secondary education this has financial and cost implications.

5.2 Financing of Education in Kenya

Simmons has observed that the portion of the Gross National Product which a country allocates to education is used as a proxy for the value assigned to education by society.[4] He holds that increments in the portion are meant to compensate for previous under investment in human resources. In Kenya this expenditure has been varying since 1975

as shown in the Table below:

Table XII

The comparison of Kenya's educational expenditure as a percentage of Gross National Product with that of Tanzania

Country	Year	G.N.P.	Percentage of Government Expenditure
Kenya	1975	6.3	19.4
	1980	6.9	18.1
	1981	6.8	17.7
	1982	6.7	16.5
	1983	4.8*	18.3
Tanzania	1975	5.4	17.8
	1980	5.4	14.3
	1981	5.0	15.1
	1982	5.3	15.0
	1983	5.8	15.3

Source: UNESCO Statistical Year Book 1986

* Psacharapoulos, 1986, op.cit. p.4.

Kenya has been devoting about 7 per cent of her Gross National Product to Education while Tanzania has operated at 5 per cent.

The Government expenditure in the main services shades further light on the emphasis given to Education in Kenya.

In Table XIII education occupies second position in two financial years, defence is a fifth priority while housing and community welfare are last in the list of priorities.

A lot of resources are committed to debt servicing which has led to

two government reports expressing concern over this development. The Ndegwa Report noted in 1982:

> "Present commitments for future payments of debt and interest charges in past borrowing means that there will be less disposable revenue to allocate to other government activities."[5] p.4

Table XIII

Central government expenditure on main services in Kenya 1984 - 1986 (K£ millions)

Sector	Expenditure as percentage of national budget			
	1984/85		1985/86	
	Amount	%	Amount	%
1. Debt servicing and other services	403.96	26.32	442.57	26.79
2. Education	259.81	16.92	332.79	20.14
3. Agriculture,forestry & fishing	140.83	9.17	147.69	8.94
4. General public Admin.	127.33	8.29	127.56	8.29
5. Defence	112.22	7.31	127.34	7.70
6. Health	82.73	5.39	92.73	5.61
7. Gen.Administration	69.93	4.55	75.41	2.14
8. Public order & safety	68.05	4.43	81.10	4.9
9. Road	59.20	3.85	52.16	3.15
10. Social welfare	55.77	3.63	46.32	2.8
11. Mining, manufacturing and construction	49.01	3.19	34.84	2.10
12. Electricity, gas, steam and water	37.27	2.42	41.25	2.49
13. Economic services	36.13	2.35	40.49	2,45
14. External affairs	17.30	1.12	18.84	1.14
15. Transport and communications	11.79	0.76	13.52	0.81
16. Housing and community welfare	3.34	0.21	17.21	1.04

Source: Republic of Kenya: Economic Survey 1987. Percentages and order or priority based on data in Table 6.8 1984/85 column reflects order of priority in government expenditure.

In the same year the Mwendwa Report observed:

> The government expenditure has been expanding at a higher rate than the rate at which the economy has been growing. This has led the government to limit its allocation to education as a whole to 30 per cent or below, of the total government aid expenditure which excludes defence and debt servicing. The government has also decided to limit growth of expenditure on education to the rate of growth of government revenue.[6] p.7

The gross domestic product growth is shown below.

Table XIV

Gross Domestic Product, Percentage Rates of Growth 1983 - 1986 K £ Millions

Services	Current Prices				Percentage Growth			
	1983	1984	1985	1986	1983	1984	1985	1986
Education	212.56	240.12	243.23	372.86	13.0	22.1	27.1	16.8
Public Admin.	95.34	103.01	118.77	145.30	8.0	15.3	22.3	22.33
Other Services	62.15	67.81	83.08	101.33	9.1	22.5	22.6	18.25
Health	52.30	56.57	65.40	79.05	8.2	15.6	20.9	20.87
Agric. Services	34.62	37.29	41.90	40.50	7.1	7.71	12.36	-3.34
Defence	18.28	17.42	16.36	18.55	-4.7	-6.1	12.2	13.38
Country's total Monetary Economy	3,114.06	3,400.00	3,893.78	4,514.88	9.2	14.5	16.0	13.

Source: Republic of Kenya Economic survey 1987, Tables 2.1 and 2.2.

This table shows expenditure on education in relation to other government services. Education is still the highest spender. This expenditure has been kept at below 30 per cent but it has not been possible to limit the growth of expenditure on education to the rate of growth of government revenue as the education expenditure has been growing at 13.0, 22.1, 27.1 and 16.8 as opposed to the revenue growth rates of 9.2, 14.5, 16.0 and 13.3 shown in the table.

It would appear as if the declared government intentions are not strictly reinforced or the expenditure just goes wild. There is a negative growth in expenditure on defence while agricultural services are fifth in the list of expenditure in a country whose mainstay of the economy is agriculture; but given that agricultural services are handled by parastatal organizations this is probably understandable.

5.21 Educational expenditure on various sectors

Shiefelbein who did research on the financing of education in developing countries concluded that the distribution of expenditure by level of education reflects subjective preferences as well as rational appraisal.[7] If subjective preferences are considered the amount of resources available may dictate these preferences. Psacharopoulos holds that investment should reflect the social and private rates of return to the individual and the country.[8] Dominguez on the other hand,believes efficiency of the level should determine investment since repetition and dropout rates lead to wastage of resources.[9] Jallade holds that educational expenditure should reflect the social distribution of income and should operate in favour of the poor.[10]

As to which of these may be said to determine investments in education at various levels in Kenya is difficult to say as the table below indicates:

Table XV

The expenditure on each type of education as a percentage of total expenditure on education 1983 - 1986 in (K £ millions.)

Level	Financial Years					
	1983/84		1984/85		1985/6	
	Amount	%	Amount	%	Amount	%
Pre-primary	.10	0.04	0.14	0.05	0.16	0.05
Primary	127.91	63.13	121.63	50.52	160.89	50.48
Secondary	25.72	12.69	31.49	13.07	43.42	13.62
Technical	2.56	1.26	2.82	1.17	2.47	0.77
Special Educ.	0.98	0.48	1.17	1.81	1.78	0.55
Polytechnic Educ.	3.69	1.82	3.33	1.38	3.81	1.19
Higher Educ.	21.01	10.37	31.16	12.94	41.60	13.05
Total Expenditure	181.97	95.18	191.74	86.05	254.13	84.51

Source: Republic of Kenya: Economic Survey 1987: Adapted from Table 15.3. The figures do not include expenditure on administration which accounted for 4.82 per cent, 13.95 and 15.49 per cent respectively in the three financial years.

The table shows that expenditure on primary education has been declining in the last three years while that in secondary and higher education has been rising for the same period. There was a lower allocation in primary in 1984/85 financial year while in secondary and higher education the amounts allocated have been rising steadily. Investment in technical education at the polytechnic and other technical institutions has also been going down. It can be said that Kenya is committed to the promotion of secondary and higher education and the higher expenditure in primary is occasioned by numbers rather than policy.

The tables below show unit costs for pupils and teachers based on recurrent expenditure.

Table XVI a

Unit costs based on the recurrent expenditure in main sectors of education 1983-85.

Level	Year	Enrolment in ('000)	Expenditure K £ Million	Unit Cost in K £ p.a.
Primary	1983	4323.8	127.44	2.95
	1984	4380.2	121.18	2.76
	1985	4702.4	159.81	3.40
Secondary	1983	493,710	24.76	50.15
	1984	510,943	30.34	59.38
	1985	437,207	41.68	95.33
Technical	1983	9,258	1.87	202.00
	1984	9,571	2.22	232.00
	1985	7,840	2.46	314.00
Polytechnic	1983	4,001	3.56	890.00
	1984	3,240	3.29	1015.43
	1985	5,233	2.78	531.24
Teacher Training	1983	13,657	8.72	639.00
	1984	15,413	9.76	633.23
	1985	15,588	11.44	733.25
Higher Education	1983	-	-	-
	1984	8,882	26.57	2991.44
	1985	8,855	34.25	3868.00

Source: Republic of Kenya, 1987, Economic Survey and Republic of Kenya Statistical Abstract, 1986.

The unit costs for secondary education, technical and higher education have been rising steadily for the last three years while those in primary, teacher education and polytechnic have been fluctuating. It costs the Kenya Government 6 times as much to educate one person in

Secondary school than in primary school, 4 times as much to train one person in post-school technical institution and 10 times as much to educate one person at University. It has been observed by Shiefelbein 1983 (op.cit.) that the difference between unit costs at the primary and university are attributed to teachers salaries and their work load. The table below shows percentages spent on salaries at each level.

Table XVIb

Recurrent expenditure on teachers salaries at various levels of education in Kenya in K £ Million 1985/86

Educational Level	Recurrent Expenditure on Salaries	Total Recurrent Expenditure on Each Level	Percentage Expenditure on Salaries
Primary	142.0	159.810	89
Secondary	30.858	41.680	74
Post Secondary (Technical)	2.309	2.460	94
Teacher Education	3.632	11.430	32
University	10.704	34.250	31

Source: Republic of Kenya: computed from Recurrent Estimates 1985/86-1986/87.

The view that salaries take up three quarters of the recurrent expenditure on universities, and other higher education institutions is not supported by the data on university and teacher education in this table as the salaries in these institutions consume less than one third of the total recurrent expenditure. The bulk of the expenditure seems to go on maintenance of equipment, house allowances,pensions, gratuities and supplies.

Because a substantial amount of secondary and primary education

expenditure is devoted to teachers salaries very little is spent on educational resources such as books for the library and learning equipment and materials.

The unit costs based on the number of teachers at various levels of education below university are as follows:

Table XVIc

Government expenditure on teachers salaries per head 1985/86

Educational Level	No. of Teachers in Service	Amount spent on Salary per Level K £ Million	Unit Cost in K £ p.a.
Primary	137,776	142.0	103
Secondary	21,712	30.858	1421
Teacher Education	1,218	3.632	2982
Technical Education	535	2.309	4317
Total	141,641	177,941	8823

Source: Based on data in Republic of Kenya Statistical Abstract, 1986.

Unit costs have been rising both for the pupils and the teachers. In primary education only 11 per cent of the recurrent expenditure may be devoted to learning resources while at secondary level only 26 per cent is available. In technical education only 6 per cent of recurrent expenditure may be devoted to learning resources as shown by the table on teachers salaries. If the 8.4.4. system has to be viable in terms of quality, more financial input will be required at the primary, secondary and technical education levels. This requires resources. It has been recommended that those who benefit from government services should pay a higher share of the cost. This will

increase government funds which can be used to finance improvements in quality and extension of services to new areas. This should be so because the per capita income which stood at 420 US $[11] in 1981 has risen substantially and more families are now better off.[12]

This observation is misleading because what matters is not so much the per capita income per se but how this income is distributed. Research in the distribution of income in the rural and urban areas established that:

> "Wealth in Kenya is not evenly distributed. The lowest 40% of the population receives only 9 per cent of the national income whereas 60 per cent of the income accrues to the top 20 per cent of the population."[13]

In the rural areas the level of disparity in income distribution is not the issue but those who live below the poverty level are in the majority as another researcher observed:

> "nearly 50 per cent of those in the rural economy receive average household incomes of K Shs 100 per annum or less. Of the 1.42 million small holder households, which comprises 80 per cent of the total Kenya population, 44 per cent earn average incomes of less than K Shs 100 and a further 51 per cent average £250 per annum."[14]

In Kenya the sons and daughters of the poor who do well in public examinations stand a chance of being selected for further studies and the idea of passing on the financial burden to the beneficiaries will only limit the opportunity for greater representation of the poorer sections of society in educational participation and will negate the principle of equality of opportunity. But it now appears that equality of opportunity principle weighed against harsh economic realities will eventually be ignored as secondary and higher education become dominated by the privileged as is the case in developed countries where further education is dominated by the already well to do.

5.22 Financing of Education at Institutional Level

5.221 Primary and Secondary Education

The government gives each maintained school a grant as shown below.[15]

School equipment and stores (SES)
Local transport and travelling (LTT)
Repairs, maintenance and improvement
Electricity, water and conservancy
Boarding equipment and stores (BES)
Tuition and statutory boarding grants:
- Low cost boarding school
- High cost boarding school
- Day school.

The SES and BES grants are given on per capita basis (per student) as well as tuition and statutory boarding fees. The actual amounts are revised from time to time according to economic circumstances. Research conducted in secondary school financing in 1985 showed that parents pay more than the statutory grants from the government.[16]

Capital development expenses have been passed on to the parents and contributions are on self-help basis including the cost of running boarding facilities in secondary and primary schools. This is eventually intended to lead to cost sharing between the central government through which regions and communities are required to meet the cost of physical facilities while the government undertakes the payment of teachers salaries and text books and related materials. But as already pointed out, due to inequitable distribution of incomes in various regions this arrangement is not feasible despite the fact that it will also go counter to the government policy of centralized control since partnership entails shared control.

Consequently the government employs the following measures to minimise expenses:

(a) Encouraging the establishment of day schools instead of boarding schools;

(b) decentralized financing through district focus for development;

(c) the establishment of self-help streams in government maintained schools paid for by the parents;

(d) stimulating the people to supply more of their development needs through self-help.

It has been further suggested that the following measures be instituted[17]:

(e) encouragement of on-the-job training for teachers;

(f) running double sessions in which the same teachers and facilities are used in the mornings and afternoons; especially in the urban schools.

5.222 The private education sector

Private secondary schools are financed by individuals or organizations. The schools vary in the quality of facilities, services and the amounts charged. Those with better facilities charge more fees. Those who can afford the fees end up in such schools and enable the government to alleviate its financial constraints through reduced participation in its own educational service.

5.223 University loans system

This was introduced in 1974 to assist students to finance personal needs such as buying books, food and paying for accommodation.

The loans were not given to most disserving cases on the basis of parental backgrounds at the same time there was no legal statute built into the system to enable the government recover the loans or prosecute the loan defaulters. The scheme was bedevilled with logistical problems; poor record keeping, and inability to trace the beneficiaries coupled with false identities. By July 1981 out of 4583 loanees only 1973 had began to pay back the loan and out of

K £ 540025 collectable total only £99,404 had been recovered from willing beneficiaries.[18]

From the cost-saving measures outlined, the fees recoveries should, as a matter of policy, be reinvested in the sector with the highest social rate of return i.e. primary education. This will be in line with the avowed intention of distributing educational resources equitably to support primary education and ensure wider access to educational opportunity.

Table XVII

Rate of Return for various educational levels in Kenya in relation to Africa

	Private			Social		
	Primary	Secondary	Higher	Primary	Secondary	Higher
Kenya	28.0	33.0	31.0	21.7	19.2	8.8
Africa	45.0	26.0	32.0	28.0	17.0	13.0

Source: Kenya; Schiefelbein (1983) p.45. Survey year 1971 and, Africa; Psacharopoulos (1986) p.6, based on 16 countries; Survey Year 1985.

This analysis of the financing of education in Kenya has shown that the main sources of financing are the central government through its allocation of grants for recurrent and capital development and the parents through payment of statutory fees in secondary education, meeting 'hidden' costs in secondary and primary education, although the latter is free, and voluntary contributions. Through their limited resource base (for most parents) they are oversubsidising the state system of education in what appears to be a form of 'indirect partnership' at the first and second levels of education. The government on the other hand continues to subsidize further education which is beyond the means of the majority of parents. In view of the wide-spread disparities

in the income distribution in the country, the resource base of the majority of the parents is poised to be exhausted while the government expenditure on higher education needs to be looked into in view of the fact that the salaries account for less than one third of the total expenditure. This is mandatory in view of the need to recover costs and reinvest in other sectors of education that need attention. Failure to do this means that the issue of improvement of quality of education which is crucial at the first and second levels may continue to be determined by the parents rather than the government contrary to the avowed intention of the government to improve quality at all levels. In technical education the bulk of the recurrent cost will be borne by industry, which is the main sponsor of students for training, and individuals; who are employed and decide to undertake sandwich courses on day release basis. In the meantime disparities in educational provision abound and we shall now explore the sources and evidence of this inequality.

5.3 Inequality in the distribution of educational resources in Kenya

5.31 Historical sources of inequality

Kenya inherited an educational system that had been influenced by three inter-related social forces: the educational policies pursued by the colonial administration, the missionary influence and the African reaction to the colonial and missionary educational policies and practices.

The pre-independence educational policy engendered racial segregation in the educational provision; the quality of education differed from racial group to racial group as the groups were being socialized differently through the school system for their destined roles. The European education was superior to that of the Indians and that of the

Indians was superior to that of the Arabs and the latter was superior to that of the Africans. The level of resource allocation, the quality of physical facilities and the learning resources reflected this dichotomy of racial segregation.

In policy orientation, education was compulsory for European children aged 7 to 15 from the early settler days while Asian education was made compulsory in 1943. Asian and European schools grew spontaneously in white settled areas and urban centres while missionary schools sprouted around missionary outposts as an inevitable consequence of the missionary evangelization activities in various settlements in the countryside. Consequently, some parts of the country benefitted from their earlier contact with the missionary schools and gained literacy and numeracy skills before others.

In the central province the missionary settlements concentrated in Kiambu, Nyeri and Muranga districts, in Western province, they concentrated in Kakamega and Busia districts while in Nyanza this concentration was in Kisumu and Kisii. At the coast, although the earliest missionary outposts were there, the Islamic influence and culture supplanted the missionary interprise as the missionaries penetrated inland after the establishment of the railway. Ethnically, the communities which benefitted most from their earlier contacts with the missionaries were the Kikuyu, Luhya, Luo, Kamba, Meru and Embu.[19]

Besides the early contact with missionary schools the pre-independence administration established Local Native Councils and allowed them to levy taxes, establish, finance and administer primary schools. Government grants were channelled through missionary organizations and independent school organizations. The rich and more enterprising districts established more schools and gave themselves a head start while others stagnated. These developments marked the origin of

educational disparities in Kenya so that at the time of Independence three types of schools were bequeathed to the nation: the grammar type public schools characterized by large assembly halls, sanatoria and chaples which were former European schools, the large, oriental style type of schools formerlly used predominantly by the Asians and the somewhat semi-permanent structures erected by the Africans as part of their enthusiasm to expand formal education facilities for themselves.

5.32 Evidence of post-independence inequality

5.321 Access to Universal Education

A country is usually said to have achieved a primary school capacity corresponding to Universal primary education when its gross enrollment ratio for the level of education attains 100% i.e. when the number of pupils registered at school equals the number of children of primary school age.[20] Kenya,through policy intervention, removed tuition fees from primary schools in 1974 and is headed for universal primary education. The table below shows the response to this policy intervention for the period between 1971-78.

Table XVIII

Primary school enrollments as percentages of estimated school age population (6 - 12) years 1971-78 for 4 out of 8 provinces in Kenya

Province and District	1971	1972	1973	1974	1975	1976	1977	1978
Coast								
Lamu	29	34	55	98	126	132	152	126
Kilifi	35	41	42	67	63	68	63	62
Kwale	38	42	44	77	77	78	72	76
Taita Taveta	80	78	86	109	114	116	109	113
Mombasa	64	67	67	75	74	72	70	68
Tana River	45	45	35	61	72	70	62	58

Table XVIII (contd.)

Province and district	1971	1972	1973	1974	1975	1976	1977	1978
Central								
Kiambu	109	110	116	136	131	136	132	131
Kirinyaga	76	84	110	125	125	128	114	120
Muranga	107	111	118	140	138	141	134	134
Nyandarua	95	102	109	124	132	131	117	120
Nyeri	109	115	119	133	136	141	134	132
Rift Valley								
Baringo	43	54	59	92	103	103	117	91
Kajiado	51	55	59	67	79	81	87	82
Kericho	46	43	48	80	82	93	87	85
Nandi	58	63	64	109	118	121	113	100
Narok	36	34	34	49	60	61	58	64
Samburu	20	22	22	26	25	28	26	27
Turkana	6	8	10	15	12	11	11	1
West Pokot	28	38	38	62	66	66	71	66
Keiyo Markwet	44	47	51	83	90	94	85	95
Nyanza								
Kisii	58	66	61	120	128	121	104	90
Kisumu	53	56	51	111	110	93	89	86
Siaya	64	69	65	114	118	115	108	82
South Nyanza	41	43	42	96	90	77	81	72

Source: Nkinyangi (1982)[21]

This table displays three distinctive enrolment patterns 1971 to 1973, 1974 to 1976 and 1977 to 1978. The enrollments were low in the first band and increased phenomenally in 1974 when primary school fees were

removed and began declining in 1977 and 1978. All districts enrolled more pupils in 1974 averaging 100 per cent in Nyanza. Central province which has a historical lead as observed in Chapter Two was already enrolling 100 per cent before the fees were removed while the Rift Valley,(which shows only the pastoral districts) has not attained 100 per cent enrolment in all pastoral districts except Nandi which is a tea growing district. The decline in enrollments after 1977 could be attributed to 'hidden costs' in primary education after the initial three years enthusiasm has waned. The Government will need to resolve the dilemma of the need to make education universal and compulsory in its efforts to expand educational opportunities for school age children. Making primary education compulsory has financial, cultural and material resource implications. The nomadic, pastoral and Islamic groups need special attention in the campaign for universalization of primary education as they are disadvantaged both in absolute numbers and the disparities between the sexes as shown in the table below.

Table XIX

The ratio of boys to girls in enrollments in primary schools in selected pastoral nomadic and Islamic districts in Kenya in 1985

District	Boys	Girls	Ratio of boys to girls
Isiolo	5242	3766	1.39
Marsabit	7141	3817	1.87
Garissa	5101	2217	2.30
Mandera	5275	1486	3.50
Wajir	3951	1902	2.07
Samburu	8626	4180	2.06
Turkana	14040	7032	1.99

The enrollment ratios of girls in these districts is almost 50 per cent below those of boys with Mandera and Garissa showing the lowest enrollment ratios of girls relative to boys. The nomadic district of Turkana had only 50 per cent of the girls enrolled in primary schools in 1985. The nomadic and pastoral groups tend to be difficult to integrate within the mainstream of formal education because they require mobile schools while their nomadic routes are unpredictable and tend to be sceptical about the benefits of formal education.

5.322 Access to Secondary education

Although the 8.4.4. system aims at making primary education terminal for the majority of the pupils, selection to secondary school is very competitive and is done through a centrally administered process which enables the best people to be selected on the basis of their performance in a primary leaving examination. The index of opportunity for all secondary schools shows that two out of every three primary leaving examination pupils do not get form one places.[22] The table below shows the number of pupils admitted to form one in government maintained private and Harambee schools in 1983.

Table XX

The proportion of primary 7 pupils admitted to form I per province in Kenya in 1983

Province	No. who took C.P.E.	No. admitted to form 1	Index of opportunity %	No. of Secondary Schools
Coast	21,394	8,045	37.6	113
Central	74,557	28,704	38.5	696
Eastern	67,242	22,190	33.0	532
Nairobi	11,924	9,563	80.2	79
Rift Valley	66,706	19,945	29.9	443
Western	45,339	19,632	43.3	373
Nyanza	60,812	22,804	37.5	443
North Eastern	901	428	47.5	8
	349,941	131,311	37.5	2686

Sources: Republic of Kenya Statistical Abstract 1986 and Kenya National Examinations Council.

The lowest index of opportunity is in the Rift Valley and the highest in Nairobi. In 1983 only 38 per cent of the primary school leavers found admission to secondary schools. This figure has now risen to 40 per cent in 1986. 60 per cent of the primary school graduates have no formal access to secondary education. Some of them are expected to go for post-secondary training or be self-employed after being exposed to pre-vocational training. The implication of this is discussed in Chapter Six.

For those who are lucky to be selected to form I the kind of school they go to makes all the difference depending on how the educational resources are distributed. The table below shows the distribution of graduate teachers in some urban and rural districts.

Table XXI

Distribution of graduate teachers in selected urban and rural districts in Kenya 1984

Location	District	No. of govt. Aided Schools	Total no. of teachers	No. of graduates	%
Urban	Nairobi	37	1120	708	63
	Mombasa	13	535	283	55
	Nakuru	49	584	216	37
Rural	Kiambu	105	1588	621	39
	Muranga	115	1301	335	26
	Machakos	79	1616	383	24
	Meru	93	1028	253	25
	Isiolo	2	82	44	54
	Mandera	2	13	8	61
	West Pokot	6	31	22	71
	Samburu	5	19	10	53
	Lamu	4	33	18	54
	Kajiado	13	178	97	54

Source: Ministry of Education Planning Section 1986

The distribution of educational resources in the form of graduate teachers favours urban areas and remote rural districts in the last column. In Nairobi and Mombasa more than half of the qualified teaching staff are graduates. There are also disparities in the distribution of graduate teachers within the rural districts. Although distribution of teachers is by teaching establishments and subject specialisms, it is difficult to see why Muranga with 115 schools has only half the number of graduate teachers assigned to Kiambu with 105 schools, ten schools less. Isiolo district is oversubscribed: there are 44 graduate teachers for only two secondary schools which gives an average of 22 graduate teachers per school. The idea of giving priority to remote districts is in the right direction but it should not be so untenable as to raise eyebrows!

Although, good performance in public examinations depends on the quality of the candidates, their backgrounds, self concepts and intelligence, the type of school and teacher play a role,especially in developing countries. Coleman has observed that it is for the most disadvantaged that improvement in school quality makes a difference.[22] Husen having carried out research in teacher training and student achievement concluded that:

> "trained teachers do make a difference in student achievements in L.D. countries. In particular it seems clear that teacher qualifications, experience, amount of education and knowledge are positively related to student achievement.[24]

In line with these sentiments I analysed the Kenya Certificate of Education results issued by the Kenya National Examinations Council in November, 1986 in English and Mathematics which are taken by all candidates at 'O' level. The comparisons between Harambee and Government maintained schools, and between girls and boys are shown in the tables below. The differences in means were tested and found significant statistically at the 5% level of significance.

Table XXIIa

Comparison between the performance of Government maintained secondary schools and Harambee secondary schools in KCE English and Mathematics in 1986.

Type of School	No. of Schools	English N	English Mean	English SD	Mathematics N	Mathematics Mean	Mathematics SD
Government maintained	12	1349	7.2	36.7	1376	7.5	37.0
Harambee (self-help)	9	690	8.3	25.9	540	8.9	23.7
Total	21	2019			1916		

The differences in means are significant at 0.05 level.

Table XXIIb

Comparison between the performance of boys and girls in 4 high cost schools in English and Mathematics in KCE in November 1986.

Type of School	No. of Schools	English N	English Mean	English SD	Mathematics N	Mathematics Mean	Mathematics SD
Boys Boarding	2	330	5.2	18.1	323	5.2	17.9
Girls boarding	2	291	5.5	17.1	300	6.0	17.3
Total	4	621			623		

Only the difference in means in mathematics was significant at 0.05 level.

Table XXIIc

Comparison in performance between boys and girls in English and Mathematics in two highly selective secondary schools in KCE 1986.

Type of School	No. of Schools	No. of candidates	English Mean	English SD	Mathematics Mean	Mathematics SD
Girls boarding	1	120	4.55	10.95	4.95	10.95
Boys boarding	1	113	4.53	10.63	3.61	10.63
Total	2	333				

Only the difference in means in mathematics was significant at 0.05 level.

KCE is graded on a nine point scale: 1 - 2 distinction, 3 - 6 credit, 7 - 8 pass, and 9 is a fail. The means were calculated from the grades awarded to various candidates. In these tables the lower the mean the better the performance. In figure two in chapter two, the old education system has Harambee (self-help schools) running parallel to the government-maintained school system. They still remain part of the new 8.4.4. system. They admit low quality students who are left out of the government maintained system and they have large enrollments; overcrowded classrooms and most of them employ unqualified teachers of 'A' level or 'O' level standard.

Table XXII(a) shows that their performance is below that of government maintained schools. In Table XXII(b) high cost schools, the average performance is a grade 5 while that of highly selective schools in Table XXII(c) is between grade 3 and 5. In both high cost and highly selective schools boys did better than girls in mathematics. Mathematics is regarded as a science subject and in a majority of schools aided and unaided a significant number of girls shy away from science options,[25] although in this case mathematics is compulsory.

From the analysis of the quality of performance in various categories of schools which reflect inequality of educational endowments, inequality is closely related to quality in education.

5.4 Evidence of poor quality of education

The efficiency of an educational system depends on its ability to achieve its goals through inputs into the system which determines the output. The inputs vary from financial resources already discussed to teacher quality, facilities and the duration of the system. Quality is affected by attrition rates i.e. wastage brought about by drop outs, dessertions and repetitions which in turn affect participation rates in the educational system.

5.41 Wastage and possible suggestions for improvement

5.411 Dropouts

As the 8.4.4. has been designed to last eight years at the primary level, four at secondary and four at university, those who pull out before they complete a full cycle are unlikely to benefit from the system although there is leverage for taking less years within the primary cycle for the talented who may be promoted ahead of schedule within the various 'rungs' of the system. Psacharopoulos and Woodhall have observed that measuring output by the number of students who successfully complete a course and comparing this by the number of pupil years may indicate that the high rates of wastage are connected with very low efficiency.[26]

Using data published by the Government in the economic survey for 1987 it has been possible in this study to work out the wastage rates for the last three years. The table shows the wastage rate for 1983 and 1984 while patterns of dropouts based on similarly computed tables are shown in figures 6, 7, 8 and 9.

Table XXIII

Dropout rates in primary education in Kenya between 1983 and 1984

Primary classes		No. enrolled in '000							
1983	1984	1983		1984		Dropouts in '000		Dropout Rates %	
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
I	- II	460.6	429.4	366.1	340.9	94.5	88.5	20.5	20.6
II	- III	367.7	343.0	339.3	319.1	24.4	23.9	6.6	6.9
III	- IV	340.3	321.9	316.8	308.6	23.5	13.3	6.9	0.16
IV	- V	315.8	301.9	282.5	274.6	33.3	27.3	10.5	9.04
V	- VI	276.7	260.6	267.2	247.6	9.5	13.0	3.4	4.6
VI	- VII	272.2	248.5	250.2	202.8	22.0	45.7	8.08	18.39
Total		2033.3	1905.3	1822.1	1692.8	207.2	211.7	10.19	11.1

FIG.6: PATTERN OF PRIMARY SCHOOL DROPOUT RATES IN KENYA
1983/84 SESSION

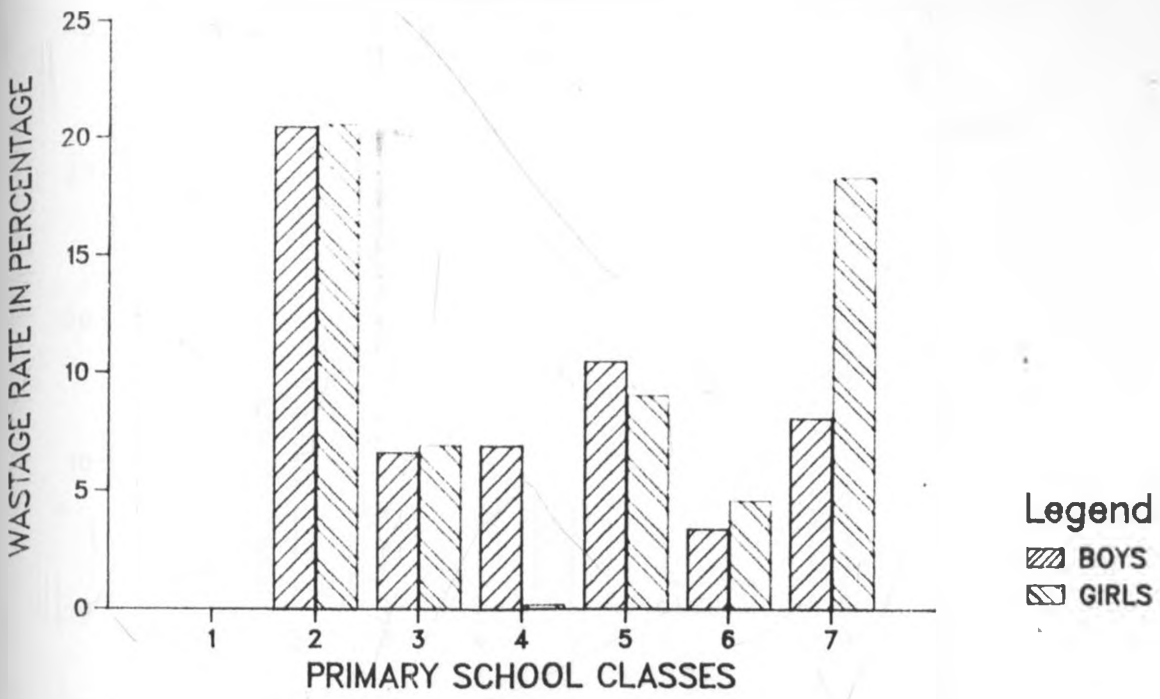


FIG.7: PATTERN OF PRIMARY SCHOOL DROPOUT RATES IN KENYA
1984/85 SESSION

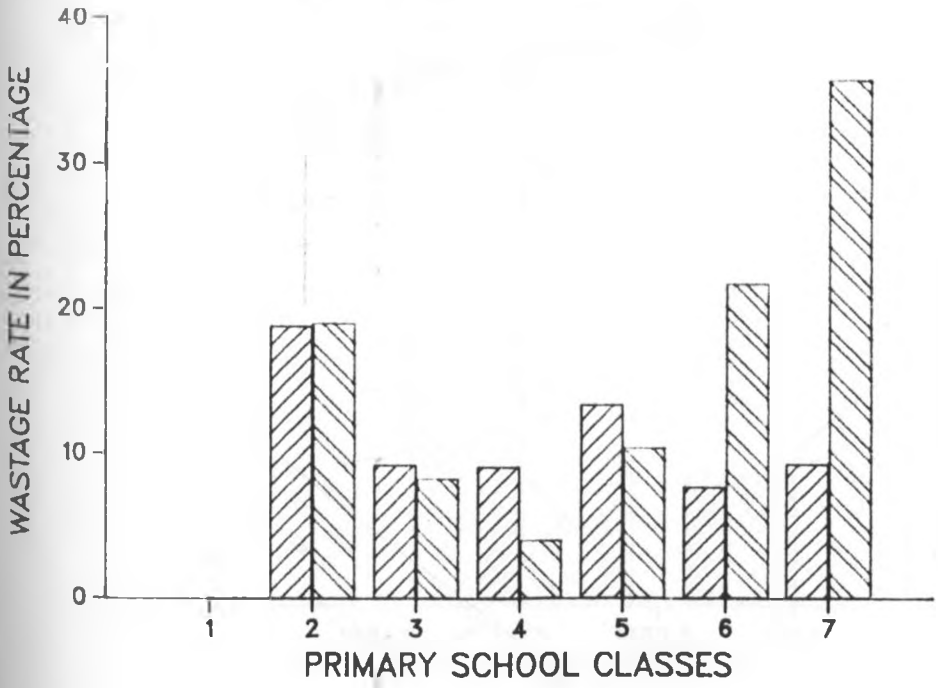


FIG.8: PATTERN OF PRIMARY SCHOOL DROPOUT RATES IN KENYA 1985/86 SESSION

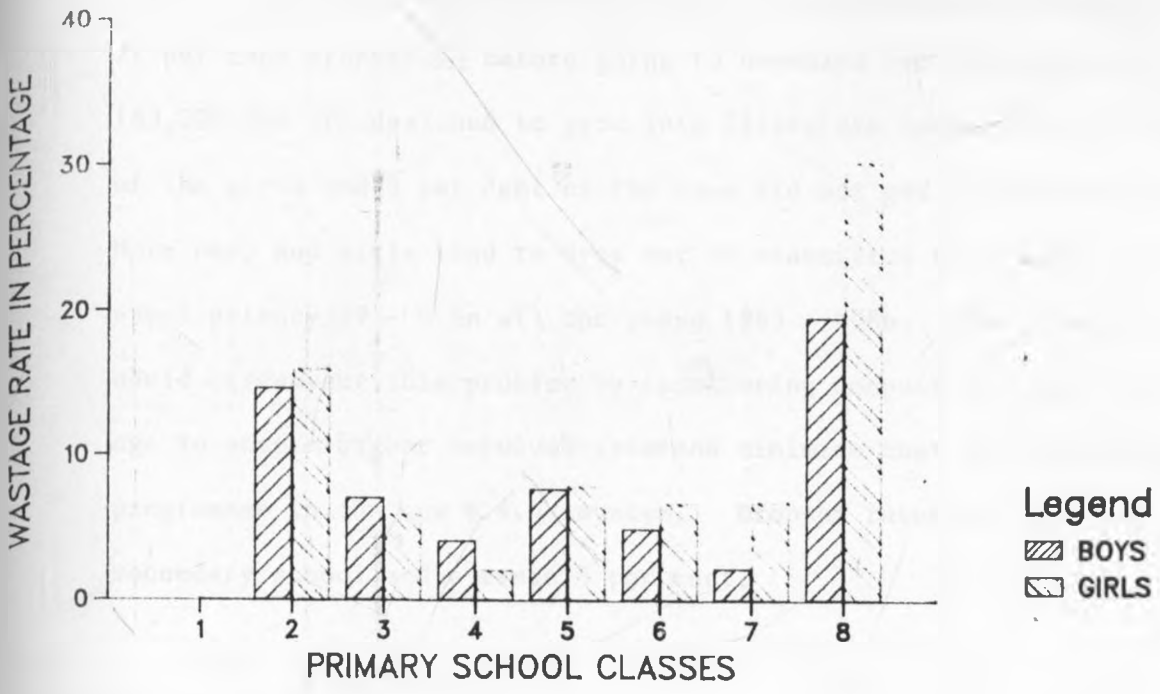
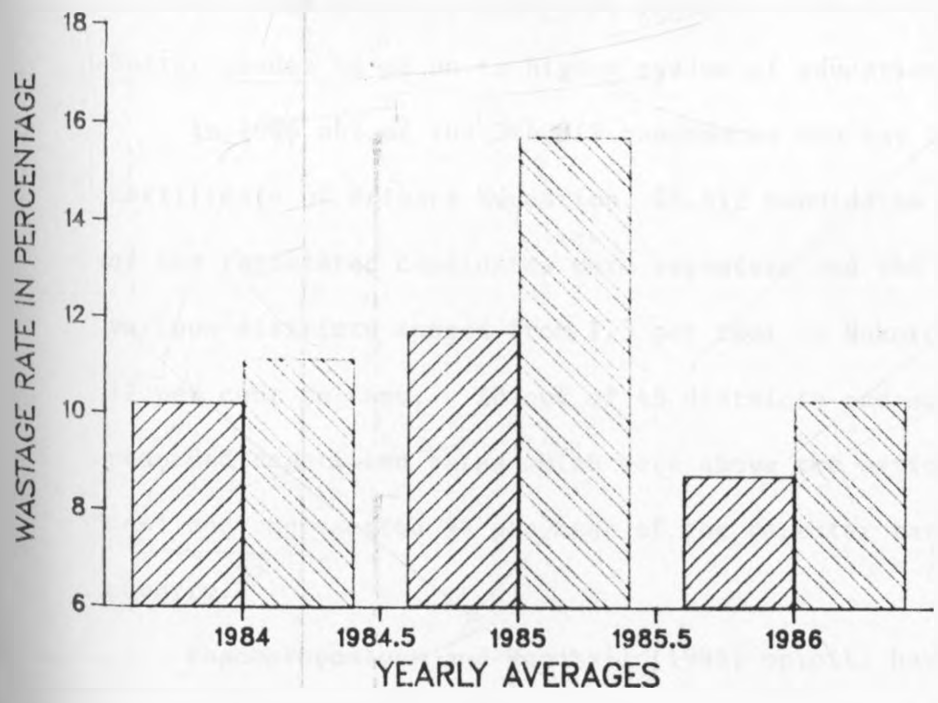


FIG.9: TREND IN PRIMARY SCHOOL DROPOUT RATES FOR THE PERIOD 1983 TO 1986



The table shows that between 1983 and 1984 11 per cent of the girls and a total of 41 per cent of the boys and girls dropped out of the primary school. 21 per cent dropped out before going to standard two representing 183,000 who are destined to grow into illiterate adults while 18 per cent of the girls and 8 per cent of the boys did not get to standard seven. More boys and girls tend to drop out in transition from lower primary to upper primary IV - V in all the years 1983 - 1986. The government could circumvent this problem by instituting compulsory school leaving age to ensure higher survival rates and minimise cost on adult education programmes in the new 8.4.4. system. Dropout rates are lower at secondary school and average 5 per cent.

5.412 Repetition

Repetition increases unit costs, interferes with vacancies which should go to others in the system by causing congestion and for under achievers, it does not improve subsequent performance in a majority of cases. In Kenya repetition is rampant among the pupils who reach standard eight when they are too young to work or with a hope of gaining better grades to go on to higher cycles of education.

In 1986 out of the 344,819 candidates who sat for the Kenya Certificate of Primary Education, 24,512 candidates representing 7.3% of the registered candidates were repeaters and the repeater rate in various districts ranged from 1.5 per cent in Nakuru Municipality to 12 per cent in Lamu. 20 out of 45 districts and municipalities recorded repetition rates which were above the national rate of 7.3 per cent and represented 44 per cent of the repeater rate in the entire country.[27]

Psacharopoulous and Woodhall (1985) op.cit. have suggested the following measures to improve the flow of pupils through primary and secondary schools in developing countries:

(a) Introducing automatic promotion between grades. This is an official policy in Kenya although it is often flouted by head teachers in primary schools who talk parents into getting their children to repeat because they are under achieving.

(b) Reducing the number of examinations. This has been done in the 8.4.4. system as pointed out in Chapter Three. The middle level development harambee schools used to 'drop out' after the 2nd year of secondary education after taking K.J.S.E. They will now survive to the fourth year but they will be exposed to an examination which requires laboratory facilities (Biological and Physical Sciences) are compulsory in the new system. The majority of the schools which now stand at 1500[28] have no science facilities as they used to do general science which did not require such facilities.

(c) Improving teacher training so that empirical learning replaces memorization and rote learning. In 1986 in primary schools out of 142,807, 32 per cent of the teachers (45,235) were untrained while 9,033 out of a total of 22,296 in secondary schools were untrained; representing 40.5 per cent of the teaching force. Research conducted in primary schools in Kenya revealed that the uneven distribution of trained teachers, frequent transfers, lack of inservicing programmes for practising teachers lead to teachers employing traditional lecture methods instead of child-centred approaches, while, in a number of cases, teachers teach without lesson plans and schemes of work which affect teaching quality.[30]

(d) Improving the quality of the curriculum and making it more relevant to pupils interests and surroundings. Sustaining pupils interests in learnig is not only a function of the curriculum. This aspect is already discussed in Chapter Four.

(e) Providing more training opportunities for primary school leavers in

order to reduce repetition of the final grade. Repetition rate at the primary final grade in 1986 was as already shown 7.3 per cent while that at Secondary was only 5 per cent in 1986. Chapter Six will now discuss post school training and employment prospects for school leavers.

FOOTNOTES

1. Republic of Kenya, 1984-88 Development Plan, Government Printer Nairobi.

2. Republic of Kenya,1982/83 Report of the Presidential Committee on Unemployment. Government Printer, Nairobi. Total fertility is defined as the number of live births a woman gives birth to by the end of her productive life.

3. Agunda, K.O. 1979, Compendium to Volume I 1979 Population Census Kenya Literature Bureau, Nairobi.

4. Simmons, J. (1973) Investment in Education: Alternative National Strategies, IBRD Washington, D.C. U.S.A.

5. Republic of Kenya: Report of the Working Party on Government Expenditure, 1982, Government Printer Nairobi.

6. Republic of Kenya, Report of the working Party on Financing of Higher Education, 1982, Government Printer, Nairobi.

7. Shiefelbein, E. (1983) Educational Financing in Developing Countries: Research Findings and Contemporary Issues, IDRC TS 38e Ottawa, Canada.

8. Psacharopoulos, G. (1972) "Rates of return to investment in Education around the World" in Comparative Educational Review 16, 1 Feb. 1972.

9. Dominguez, J. Efficiency and other indicators of performance in Education, IBRD, Tanner, 1980.

10. Jallade, J.P. (1973) The financing of Education: an examination of basic issues, World Bank, WP No. 157, 1973, Washington D.C.

11. World Bank: World Development Report, 1983, Oxford University Press, Table I, p.148.

12. Republic of Kenya, 1982/83, Report of the Working Party on Government Expenditure, Government Printer, Nairobi.

13. Vandermoortele, J. (1982) "Income distribution and poverty in Kenya: a statistical analysis" IDS Discussion Paper no. 275. University of Nairobi.

14. House, W.I. and Killick, T. (1979) Social Justice and Development Policy in Kenya's rural economy: a Survey, University of Nairobi.

15. Makau, B.M. (1985) Equity and Efficiency in Financing Secondary Education in Kenya. Key Issues in State Community Partnership WP No. 429 IDS,University of Nairobi.

16. Olembo, J.O. (1985) Financing of Secondary Education in Kenya, Kenya Educational Research Association, Report No. 2.2, Kenyatta University.
In 14 secondary schools studied in 1982 the total government grants amounted to K £ 116,775 while fees from parents amounted to K £ 193,500. These include payments for books, examinations, caution money, medical expenses, club membership etc.

17. Republic of Kenya, 1982, Report of Working Party on Financing of Higher Education.

18. Ibid.

19. Kinyanjui, K. (1974) Distribution of educational resources and opportunities in Kenya. Discussion paper No. 908, IDS, University of Nairobi.

20. Fredmiksen, B. (1983) The Arithmetic of Achieving Universal Primary Education in International Review of Education, Vol. 29, No. 2, 1983.

21. Nkinyangi, J.A. (1982) The Impact of government Policy on primary School Repetition and Dropout rates in Kenya 1970-78, Bureau of Educational Research, Kenyatta, University College.

22. Republic of Kenya (1982) Report of the Working Party on Financing of Higher Education, Government Printer, Nairobi.

23. Coleman, J.S. et al (1966) Equality of Educational Opportunity, Washington, D.C., Department of Health Education and Welfare, 1966.

24. Husen, T. et al (1978) Teacher Training and Student Achievement in Less Developed Countries. World Bank Staff Working Paper No. 310, Washington, D.C. IBRD 1978.

25. Eshiwani, G.S. (1986) Private Secondary Schools in Kenya, a study of some aspects of quality education. Bureau of Educational Research, Kenyatta University.

26. Psacharopoulos, G. and Woodhall, M. (1985) Education for development; an analysis of investment choices, World Bank, Oxford University Press.

27. Data analysed from entry register for Kenya Certificate of Primary Education from the Kenya National Examinations Council.

28. Eshiwani, G. (1986) op.cit.

29. Republic of Kenya, Statistical Abstract, 1986.

30. Ogula, a. (1983) Evaluation of Teaching of Social Studies in primary Schools in Busia district; Bureau of Educational Research, Kenyatta University College.

Chapter Six

6. Human Resource Planning, Development and Utilization

In Chapter Five we dealt with equity and the internal efficiency of the educational system in Kenya. It was shown that of the 50 per cent of the civil recurrent expenditure that goes into primary education, 89 per cent of it is used to sustain a teaching force that is 32 per cent untrained. This was also shown to be true of secondary schools which had an even higher percentage. Inherited inequities in the school system appear to be being perpetuated, either by design or default, as evidenced by maldistribution of educational resources in the rural and urban schools. Unlike in developing countries where performance in public examinations seems to be highly influenced by socio-economic backgrounds of the candidates, in Kenya this is highly influenced by the school characteristics. The performance of students in well endowed high cost and elitist schools is nowhere near the mediocre performance put up by those in other government maintained schools, not to mention harambee schools, in the K.C.E. results analysed.

In this chapter we shall examine external efficiency; what happens to those who go through the system and what prospects are available for training, wage or salaried employment; especially in view of the fact that figure 8 in Chapter Five showed that 35 per cent of the girls and 9 per cent of the boys in standard seven did not proceed to standard eight to take the new 8.4.4. examination.

Since training does not create employment we shall first consider the unemployment situation and its implication for educational planning.

6.1 Educational output and employment opportunities in the labour market

As discussed in chapter three the education-economy debate by the various commissions was centred around the rising scarcity of wage employment for school leavers. This state of affairs is portrayed in the table below.

Table XXIV

Graduates of the education system entering the labour market and new positions in wage employment in Kenya 1979 - 1983 in ('000)

Category	Period			
	1979/80	1980/81	1981/82	1982/83
Primary school leavers	160	197	209	210
'O' and 'A' level leavers	70	84	84	91
Graduates of post-school education and training[1]	14	15	15	15
Total	244	296	308	316
New jobs in all sectors of the modern economy	34	19	22	47

Source: Makau, 1986[1]

All figures are rounded to the nearest thousand.

1 Graduates from foreign institutions estimated to be 7000 Kenyans studying in foreign institutions by the Presidential Working Party on the Second university in 1981 are not included.

The table shows that there has been a rapid growth of the labour force since 1979 but the economy has not grown at a rate that could create enough jobs for the growing labour force since the growth in size of the labour force does not in itself create unemployment.

In more recent times it has been estimated that Kenya produces about 400,000 school leavers annually and only manages to provide

employment for about 15 per cent of the total.[2]

Because of over expansion of the education sector the government has been under considerable pressure to create employment, with the result that the public sector (local government central and parastatal organizations) between 1970-79 expanded by 71.6 per cent as compared to 37.9 per cent in the private sector.[3]

6.11 Causes of Unemployment in Kenya

It is important to observe at the outset that unemployment is not peculiar to Kenya as there are a lot of people in the world surviving under different systems without paid work or even an opportunity to earn an income.

However, the Presidential Committee on Unemployment (op.cit.) which addressed itself to this issue in 1982 identified the following factors associated with unemployment which was defined as lack of access to income earning opportunities whether in wage or self-employment.[4]

(a) Slow economic growth

Although the economy has been growing since independence it has been adversely affected by low prices of export commodities which has led to serious balance of payments problems and sluggish foreign investments, besides high oil prices.

(b) Growth of the labour force

There is a tendency towards poverty created by the fact that over 50 per cent of the population is below 15 years which creates huge dependency ratio on the employed labour force. This interferes with capital formation because of limited saving and investment power.

(c) Inappropriate technology

The choice of technology and production techniques has significant effect on employment creation. In Kenya, technology is foreign controlled through multinationals and is capital intensive. The dividends are

expatriated instead of being reinvested to create employment opportunities. This is confirmed by the table below:

Table XXV

Outflow of dividends 1967 - 1970 in Kenya

Outflow of dividends (million shillings)	1967	1968	1969	1970
	85,340	82,540	115,140	160,340
Ratio of foreign profits retained to total profits on foreign equity %	53	65	54	54

Source: I.L.O. Report (1972) p.136 op.cit.

(d) Seasonality of employment opportunities

Industries such as manufacturing, construction, tourism and agriculture are seasonal and the jobs created are not continuous sources of income and those taken on become unemployed for a good part of the year.

(e) Skill imbalance and low labour productivity

There is inability of the education system to equip the educational output with the skills required in the labour market.

Training facilities are expanded but not sufficiently coordinated to have necessary impact on growing demand since many local industries cannot expand due to shortage of skills. The result is that wages have tended to increase while the labour productivity has tended to decline due to overutilization of limited skills as well as an erosion of work ethics.

As can be seen from these combination of factors, self-employment by school leavers does not depend on the curriculum changes alone. It is influenced by the state of the economy, the financial ability of the individual to raise initial capital to purchase equipment to set up an enterprise and the attitude of the community to self-employment. Those

who try to be self-employed tend to be looked down upon[5] by those who have jobs in the modern sector unless they are in very lucrative business with substantial income.

Educational planning should take cognizance of these factors.

6.12 Educational planning and prospects for employment

In the 1966 Kenya Development Plan, the following observation was made:

> "In many developing countries, sound plans have foundered because of shortage of skilled manpower and failure to take the vigorous steps necessary to alleviate the shortage."[6]

This observation is valid to-day as it was immediately after independence but the situation has since changed. The days when graduates waited to fill up jobs vacated by the expatriates are gone and they have now to wait for the jobs to be created in the public service and in the private sector. By 1983 there was some evidence that the saturation of demand for high level (professional, mid and upper level manpower) employment had began to reach the University of Nairobi graduates.[7] This was established by Hughes who carried out a tracer study of the graduates who left university in 1970, 1975, 1979 and 1983. He noticed a growing tendency for graduates to accept positions unrelated to their fields of study and be offered positions requiring a university degree but needing less education to do the tasks involved in the job.[8] Bennell also discovered that the demand for highly specialized skills possessed by university graduates is very limited especially in engineering. This is because

> "Kenyan industry is typified by a dependence on imported technology and lack of local research and development. Preferred are personnel possessing operative skills, who can be responsible for the production lines supported by a handful of maintenance mechanics.[9]

The graduates who take up jobs which are unrelated to their qulifications are being underutilized and most of the chemistry and liberal arts

graduates are going into teaching as a stop gap measure. It has been observed that an educational system is regarded as efficient if it responds flexibly to changes in the labour market to ensure a continuing balance between demand and supply[10]; especially where high level manpower needs are concerned.

6.121 Manpower approach to educational planning in Kenya

The 8.4.4. system emphasises the training of high level manpower. This means that the overall economic production targets will continue to determine educational enrolments targets. This approach emphasizes training and education in particular skills and is based on wage employment in a formal sector. It tends to ignore social demand for education and concentrates on modern sector needs at the expense of rural sector needs.[11] With the employment prospects getting bleak, the system will either have to be cautiously used or deemphasized.

6.122 Rates of return approach to educational planning in Kenya

The rate of return approaches tend to focus on social and private economic benefits to society and students. This approach tends to focus on students who are qualified and want higher education and the excessive emphasis placed on earnings suggests that the technique is viable where high income earners in the urban areas are concerned. It tends to regard the differences in earnings of more educated people as the benefit due to their additional schooling, although productivity might be totally unrelated to schooling. Besides, wages are not a valid measure of productivity since distortions in the labour market may create gaps between wages. At any rate, cost-benefit analysis depends on when the survey is carried out since private and social benefits fluctuate with economic situations in any country. For instance, the private rate of return for university education shown in Table XVII in

Chapter Five as 31.0 per cent in 1971 dropped to 14.3 per cent in 1984 following another survey in Kenya by Bigsten.[12]

Whatever planning techniques used by the educational planners in Kenya, the internal efficiency issues highlighted in chapter five make it necessary for special attention to be paid to wastage, cost effectiveness, teaching effectiveness and inequality. There is need to redress imbalances in the educational provision if the laudable aim of equity does not come unstuck.

6.2 Post-school training

6.21 Training of primary school leavers

In the past there were very few open access training institutions for primary school leavers. With the advent of 8.4.4. training will now take place in the former technical secondary schools and in the village polytechnics and eventually in harambee institutes of technology.

6.22 Village polytechnics

The main aim of vocational training is to develop practical skills and attitudes which will lead to income earning activities in the urban or rural areas through salaried employment or self-employment.[13]

As the name implies, a village polytechnic is a low cost training centre in a rural area, where, after training, the graduates are expected to look for money making opportunities within the community where the training centre is situated. They are primarily meant to bridge the gap between the increased opportunities for primary school education and the limited opportunities for further training and employment.[14] The graduates of these institutions are expected to play a part in the modern sector of the rural areas whether agricultural or industrial.

In 1986, there were 603 village polytechnics which have been re-designated as rural craft centres. 321 of them were assisted financially

by the government at a cost of K £ 36 million on salaries and K £ 2.6million on capital development while the rest were assisted by non-governmental organizations. The centres enrolled a total of 22,900 primary school leavers.[15]

The emphasis in the past has been on masonry, carpentry, joinery, tailoring but the curriculum is being diversified to include bee keeping, horticulture and accounting. The programmes are geared towards local work opportunities, and cover plumbing, metal work, tin smithing, bicycle repairing, leather work and mechanics.

A survey conducted in the first half of 1974 revealed that out of a total of 2491 leavers from 30 projects 80.75 per cent had been able to secure self-employment; paid employment or further training.[16] But in a more recent survey in 1981, the situation seems to be changing as Migot Adhola writes:

> "Individual village polytechnic graduates find it difficult to practise their trade other than through paid employment because of lack of initial capital even for the purchase of tools, and in many cases because demand for their skills is lacking; they have to sell their skills to an employer.[17] p.5

Ferguson and Barker who carried out a survey two years before Migot-Adhola observed that the role of polytechnics in promoting rural development is over ambitious since the success of the rural polytechnic tends to depend on the pre-existing level of rural prospects.[18]

The 1974 Evaluation Mission concluded that

> "the problems of poverty, unemployment and excessive internal migration can only be effectively met through an increase in the quality of life in the rural areas compared with urban ones.[19] p.4

It appears therefore that only those village polytechnic graduates who will find opportunities in the rural areas will work there and those who don't will have to seek their fortune in urban centres where opportunities in the construction industry for artisans are greater. The 8.4.4. system is less ambitious and aims at preparing children to live in the

rural as well as urban areas. The policy does not pretend to peg the youth in the rural areas.

6.23 Training of secondary school leavers

The information regarding the training opportunities in the public sector is made available to secondary schools every year. The Ministry of Education publishes a Careers booklet showing the courses available in various government and parastatal institutions, the duration of the courses, the number of places available, job designations and the salaries attached to the various jobs after successful training. Form four leavers are required to complete a careers form indicating their career choices. This information is processed and selection carried out through formal interviews. Some employment agencies advertise independently through the mass media and recruit trainees from the general pool of secondary school leavers. The table below shows the training opportunities available in one of the post-secondary training institutions in Agriculture at diploma level.

Table XXVI

Jomo Kenyatta College of Agriculture and Technology:
Diploma Courses.
1986/87

Code	Courses	Vacancies	Duration
231	Agricultural engineering	36	3 years
232	Food processing	20	3 years
233	Horticulture	30	3 years
234	Agricultural machinery	12	4 years
235	Construction plant	14	4 years
236	Motor vehicle mechanics	15	4½ years
237	Architectural technology	16	4 years
238	Building construction	16	4½ years
239	Irrigation	16	4 years
240	Electrical installation	16	4 years
241	Electronics	16	4 years

Source: Republic of Kenya: 1986
Careers Information Booklet, p.43.

With effect from 1989, students will be admitted to university after form four for a 4 year degree course. It appears as if a number of courses structured to last for four or more years at diploma level may need to be reviewed as the students are likely to opt for degree work rather than diploma work lasting the same period. Besides, as shown in figure 4 in chapter three, a form four who opts for a diploma course in agriculture, veterinary science or some aspect of medical training is expected to take four years training and may go to university for a 4 year degree training in the same field.

The opportunity cost of this kind of scheme and the content implications of the university vis-a-vis other post-secondary training institutions need to be looked into.

6.24 Teacher training

The table below shows the untrained teacher status in primary and secondary schools after the implementation of the 8.4.4. system.

Table XXVII

Untrained teacher status in primary and secondary schools in Kenya in 1986

Academic Level	Primary Education		Primary Teachers	Secondary Education		Secondary Teachers
	No. Untrained	%	142,807	No. Untrained	%	22,296
Graduate	-			1177	5.27	
Form 6	4840	3.38		6986	31.33	
Form 4	30302	21.21		355	1.59	
Form 2	8066	5.64		-		
Class 7	1829	1.28		-		
Others	198	0.13		515	2.30	
Total	45235	31.64		9033	40.49	

Source: Republic of Kenya (1987) Economic Survey. percentages are calculated on the data presented.

The untrained teacher status in secondary schools shows that 55 per cent of the teaching force is made up of university graduates who are either waiting to quit for greener pastures or may wish to go for post-graduate diplomas if they wish to make teaching their career.

1.6 per cent are teaching in the wrong sector on the basis of their academic qualifications, they should be in primary schools. 31 per cent are potential diploma teachers since 'A' level leavers have opportunities for a three year diploma in secondary teacher training colleges. One of the requirements for recruitment to diploma courses in teaching is that applicants must have stayed out for at least one year whether teaching or not. Priority should be given to holders of 'A' level certificates already teaching as an untrained teachers.

6.241 Training of primary school teachers

In order to implement the 8.4.4. system and in view of an added class in primary schools, the government recruited a number of form six and form four leavers as untrained teachers to augment the initial teaching force of both trained and untrained teachers. Potential teachers are recruited from among standard seven form two and form four leavers. In table XXVII this number makes up 40,197 potential teacher trainees. The current annual output from 16 teacher training colleges is 13,000 teachers who pass out after a two-year course.

The government was faced with two alternatives of either expanding the existing teacher training institutions and facilities or reorganizing teacher training strategies to economise on time and resources. It chose the latter, which involves training teachers through both full-time residential courses and part-time residential courses. Those selected for the latter programme, which is exclusively for untrained teachers in the primary schools, go for in-service in teacher training colleges during the vacation for a period of three weeks intensive residential

training and take three years before taking a primary teachers examination offered by the Kenya National Exams. Council. They sit for fewer subjects; 10 out of 13 subjects offered to full-time residential students. Their training is reinforced by correspondence courses, radio broadcasts and 'continuous assessment' whenever they are in college. Their teaching practice is assessed by college tutors as well as field officers.

6.242 Training of secondary school teachers

Teacher training for secondary institutions takes place in five teacher training colleges and at the Kenyatta University. The table shows enrollment at the university.

Table XXVIII

Kenyatta University students by course and sex in 1986/87

Courses	Male	Female	Total
B.Ed. (Arts)	655	866	1521
B.Ed. (Science)	615	220	835
B.A. (Fine Art)	8	8	16
B.Ed. (Home Economics)	20	126	146
B.A. (Music)	4	12	16
B.A.	80	36	116
B.Sc.	63	13	76
Special subjects	2	39	41
B.Ed. (Primary option)	34	6	40
Post Graduate	155	55	210
	1636	1381	3017

Source: Republic of Kenya Economic Survey, 1987, p.187.

The table shows an imbalance in the training needs. In science, there are less women enrolling for science both at general degree level and B.Ed. Science option while in B.Ed. Arts degree more women than men take the option. This reinforces the observation made in chapter five that girls both in maintained and non maintained schools, tend to avoid science options. In the new 8.4.4. curriculum, Biological and physical sciences are compulsory. This provision might eventually correct the imbalance; perhaps at a considerable disadvantage for the girls. The registration of twenty male students in the Home Science class is an encouraging development since the subject has tended to be associated with women students.

From the foregoing analysis there are indications that the demand for skilled labour seems to be gravitating towards middle level technical and vocational skills rather than high level. Training, which is a process that is meant to bridge the needs of formal education and the needs of occupation and employment, should be carefully coordinated at the former level to avoid unemployment arising out of a mismatch between training skills and the labour market requirements. This is even more so given that a lot of sector training by the government ministries and parastatals goes on, and may lead to duplication or overproduction of skills which may extend beyond the immediate needs of the parastatal or the government ministry. The demand for high level manpower needs systematic monitoring to avoid underutilization or over-training both of which may be counter-productive given the current level of economic growth in the country.

FOOTNOTES

1. Makau, B.M. (1986) Educational planning and development in Kenya: The 8.4.4. school curriculum and its implications for self-employment Working Paper No. 433, Institute for Development Studies Nairobi.

2. Hughes, R. and Wahome, J.G. (1985) Higher Education and employment in Kenya: a Liberal interpretation of the literature. Institute of Development Studies, University of Nairobi.

3. ibid.

4. Republic of Kenya (1982/83) Presidential Committee on Unemployment, Government Printer, Nairobi.

5. Ogutu, G.E.M. (1985) Education and rural development: a study of the quality of secondary education and its relevance to self employment in the rural areas of Kenya, Bureau of Educational Research, Kenyatta University.

6. Republic of Kenya, Development plan 1966-70, p.44.

7. Hughes, R. (1985) Human capital; the wealth of nations or the drain on resources, Working Paper, No. 428, I.D.S. Nairobi University.

8. ibid.

9. Bennell, P. (1981) A quantitative assessment of the utilization of engineering manpower in Kenya. I.D.S. Working Paper No. 381, Nairobi University.

10. Godfrey, M. (1979) Training in Kenya: need versus effective demand in Comparative Education, Vol. 15, no. 2, June 1979.

11. See Little, A. (1986) Planning, education - Employment links: a brief guide to current methods in International Journal of Educational Development, vol. I, No. 2.

12. Bigsten, A. (1984) Education and income determination in Kenya, Gower.

13. See Objectives 4(ii) of technical and vocational training in appendix (i).

14. Migot-Adhola S.E. and Okoth, O. (1981) The village polytechnic and the family life training programmes: purpose progress and problems. Working Paper No. 387, I.D.S. Nairobi University.

15. Republic of Kenya, Economic Survey, 1987.

16. Ford, R.J.C. (1975) The village polytechnics programme in Kenya in International Labour, Review Volume III No. 4 April 1975.

17. Migot-Adhola and Okoth, O. (op.cit.)

18. Ferguson, E.G. and Barker, D. (1979) Village polytechnics in Central Kenya: progress problems and prospects Dec. 1979. I.D.S. Working Paper No. 359, University of Nairobi.

Chapter Seven

Conclusion

This study has been concerned with Human Resources development in Kenya in the aftermath of the launching of the new 8.4.4. educational system in the country. The emphasis is on formal education since no reforms have been proposed in the non-formal education sector.

The aim of the study has been to establish the extent to which the declared aims are likely to be achieved. This has been done by reference to Tanzania's and Zambia's experiences with similar educational reforms and through examination of the pre- and post-reform policies and practices in Kenya itself. The evidence available in this study tends to suggest that the reforms may only be marginally successful.

Formal institutions like schools have been known to be dysfunctional in bringing about change in society whether through structural functionist or revisionist theories examined in Chapter One.

In Tanzania, the hierarchical and authoritarian social organization of the school system proved to be at variance with the socialist intentions of changing pupils attitudes. In Kenya some of the noble aims of fostering creativity, problem-solving ability and citizenship training enunciated in the aims of the primary school programmes are considered secondary by the teachers whose main concern is with passing factual information to the pupils and drilling children to perform well in public primary leaving examinations against which society judges the effectiveness of a teacher. This is exemplified by the emphasis placed on covering the school syllabuses, even to the extent of utilizing pupils' holiday periods.

Besides,the new syllabuses have general and specific objectives of all content units in both primary and secondary education. The teachers are likely to fail to notice the required changes or to be disproportionately pre-occupied with trying to ascertain the presence of certain behaviours among pupils in the course of instruction. What seems to have been overlooked is the fact that a student responding in a certain way prescribed in the syllabus does not necessarily mean that he has understood what he has been taught. Children have subtle ways of responding to instruction in such a way that what matters is being exposed to a learning experience and not being expected to display a certain behaviour. This preoccupation with objectives may lead to unanticipated outcomes receiving minimum attention.

Besides, the aim of imparting literacy and numeracy may eventually be defeated by the wastage rate in the school system. Drop out rates are more pronounced in the primary school during the transition from class one to two, from lower primary to upper primary (IV-V) and from class seven to eight as shown in figures 6 to 8 in chapter Five. Children seem to drop out on economic, cultural and psychological grounds and there is need for further research in this area but the kids who revert to illiteracy after one year at primary education entail adult education programmes which require resources outside the school system. If children do not complete the stipulated duration in various cycles then the intention of the programme may be defeated. This is also true of people who take longer to go through prescribed programmes through repetition in the school system. This tendency increases unit costs and raises psychological problems for the learner relative to his peers. The evidence presented in this study shows that some districts in the country seem to be encouraging high incidences of repetition in the final grade in the primary school than others.

Talking about unit costs in educational expenditure, the evidence in this study indicates a worrying degree of disarray in the manner in which expenditure seems to be getting out of control. Education is the highest spender of all government services. This rate of expenditure far exceeds the revenue growth rate of the monetary economy, a factor compounded by the fact that deficit financing has to be done through domestic and external borrowing which increases interest charges and leaves very little disposable revenue to be spent on improving the quality of other services.

As a substantial part of the financial allocation to the primary sector is spent on teachers salaries, very little goes into direct learning resources for the pupils with the result that quality tends to be low.

This low quality has adverse effect on the accumulation of practical skills; especially in agriculture, craft and home science. As shown in Table VIa in Chapter Four, home science is being emphasized at the expense of agriculture and crafts although the skills to be acquired in home science are unlikely to make school leavers self-reliant in the rural and urban areas. The teaching of agriculture through a school farm was tried in pre-independence days using composit manure as a major agricultural input, in the new syllabus, the emphasis is placed on the use of fertilizers, pesticides and insecticides, museums and demonstration plots and pupils are encouraged to engage in dairy farming, poultry keeping and others, which have financial resource implications. Given the low resource bases of the majority of primary schools in the country, this emphasis is likely to prove counter productive, especially given that the success of the programme depends on the agriculture teachers. There are very few people trained to teach agriculture in primary schools partly because the subject is

optional in the teacher Training Colleges. Art, craft and home science are also optional subjects.

If the psychomotor prevocational skills are not adequately mastered because of the dearth of human and material resources, the background for post-primary training will be weak while the majority who will fail to secure access to post secondary training will not be able to be self-employed. Despite the efforts made to expand village polytechnics the participation level in these institutions was as low as 22,900 in 1986. The post-primary training programes have already begun showing signs of unpopularity. In the former secondary technical schools less than two hundred and fifty pupils were enrolled in them in 1987. This limited response to a facility created by the government to alleviate unemployment of the primary school leavers is a pointer to the fact that the artisan programmes for primary school leavers are not popular with the masses. It would appear the faith of the population is still pinned on the efficacy of academic programmes as means to social mobility. This is a mentality that seems to be engendered by the country's response to expansion of post-primary secondary education as a response to pressure from universal primary education.

In secondary education, the evidence from Columbia, Tanzania and Kenya itself suggests that diversified prevocational programmes will not lead to self employment and may only have limited success in wage employment, but given the factors which explain the unemployment situation in Kenya discussed in Chapter Six, this possibility is remote.

The strategy of solving unemployment by assigning training responsibilities to formal general education institutions as intended in Kenya means that the goals of self-employment for primary and secondary school leavers will remain elusive for quite some time. This is in

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The strategy of solving unemployment by assigning training responsibilities to formal general education institutions as intended in Kenya means that the goals of self-employment for primary and secondary school leavers will remain elusive for quite some time. This is in

view of the limited demand for practical skills in the rural areas and cut-throat competition for entrepreneural activities in the informal sector in the urban centres.

As more and more people try to respond to demand for further education the issue of equity becomes crucial in Kenya. The method of funding education through self-help initiative tends to create disparities in the quality of education in view of the unequitable distribution of income in the country. This policy is likely to be counter productive. The manpower approach to educational planning which is emphasized in the reform is directed towards modern sector wage employment. When educational disparities abound, those advantaged regions tend to take advantage of the opportunities offered and inequalities tend to be perpetuated. Equality of educational opportunities may also become an elusive goal in these circumstances.

So in fact the educational reforms in Kenya have only a marginal chance of success. This is in view of the government's efforts to create income-generating activities in the rural areas through Kenya's industrial and non-governmental organizations.

Appendix (i)

GOALS AND OBJECTIVES OF EDUCATION IN KENYA

National Objectives of Education

(a) Education must serve to foster national unity.

(b) Education must serve the needs of national development.

(c) Education must prepare and equip the youth of Kenya with the knowledge, skills and expertise necessary to enable them collectively, to play an effective role in the life of the nation whilst ensuring that opportunities are provided for the full development of individual talents and personality.

(d) Education must promote social justice and morality by instilling the right attitudes necessary for the training in social obligations and responsibilities.

(e) Education must foster, develop and communicate the rich and varied cultures of Kenya.

(f) Kenya is a member of the international community and hence its education system must foster positive attitudes and consciousness towards other nations.

Source: Republic of Kenya: Second University in Kenya: Report of the Presidential Working Party (1981) Government Printer, p.7, Nairobi.

1. Objectives of Primary Education

To provide learning opportunities which will enable pupils to:

(i) Acquire literacy, numeracy and manipulative skills.

(ii) Develop self expression, self-discipline, self reliance and full utilization of a childs senses.

(iii) Develop ability for clear logical thought and critical judgement.

(iv) Experience a meaningful course of study which will lead to enjoyment and successful learning and a desire to continue learning.

(v) Acquire a suitable basic foundation for the world of work in the context of economic and manpower needs.

(vi) Appreciate and respect the dignity of labour.

(vii) Develop desirable social standards and attitudes.

(viii) Grow into a strong and healthy person.

(ix) Develop a constructive and adaptive attitude to life based on moral and religious values and responsibilities to the community and the nation.

(x) Appreciate ones own as well as other peoples' cultural heritage, develop aesthetic values and make good use of leisure time.

(xi) Grow towards maturity and self-fulfilment as a useful and well adjusted member of society.

2. Objectives of Secondary Education

Secondary Education will -

(i) lead to all round mental, social, moral and spiritual development of the learner;

(ii) prepare the learner to make positive contribution to the development of society;

(iii) enable the learner to choose with confidence and cope with vocational education after school;

(iv) build a firm foundation for further education;

(v) ensure parity in the cognitive, psychomotor and affective skills for all students at this level in the country.

(vi) lead to the acquisition of attitudes of national patriotism, self respect, self-reliance, cooperations, adaptability, sense of purpose, integrity and self-discipline, respect and consideration for others, loyalty and service to home, society and the nation.

3. Objectives of Technical Education

The aims of the technical education and training at post-primary and post-secondary level are to:

(i) provide increased training opportunities for school leavers that will enable them to be self-supporting;

(ii) develop practical skills and attitudes which will lead to income earning activities in the urban or rural areas through salaried employment or self-employment;

(iii) provide technical knowledge and vocational skills necessary for the growth of agricultural, industrial and commercial development;

(iv) produce people who can apply scientific knowledge for the solution of environmental problems.

4. Objectives of University Education

(i) produce mature and conscientious graduates with ability and desire to contribute to the development of the country;

(ii) provide for national service and development which reflects the National Cultural Heritage;

(iii) develop and transmit knowledge and skills through research and training at undergraduate and postgraduate levels;

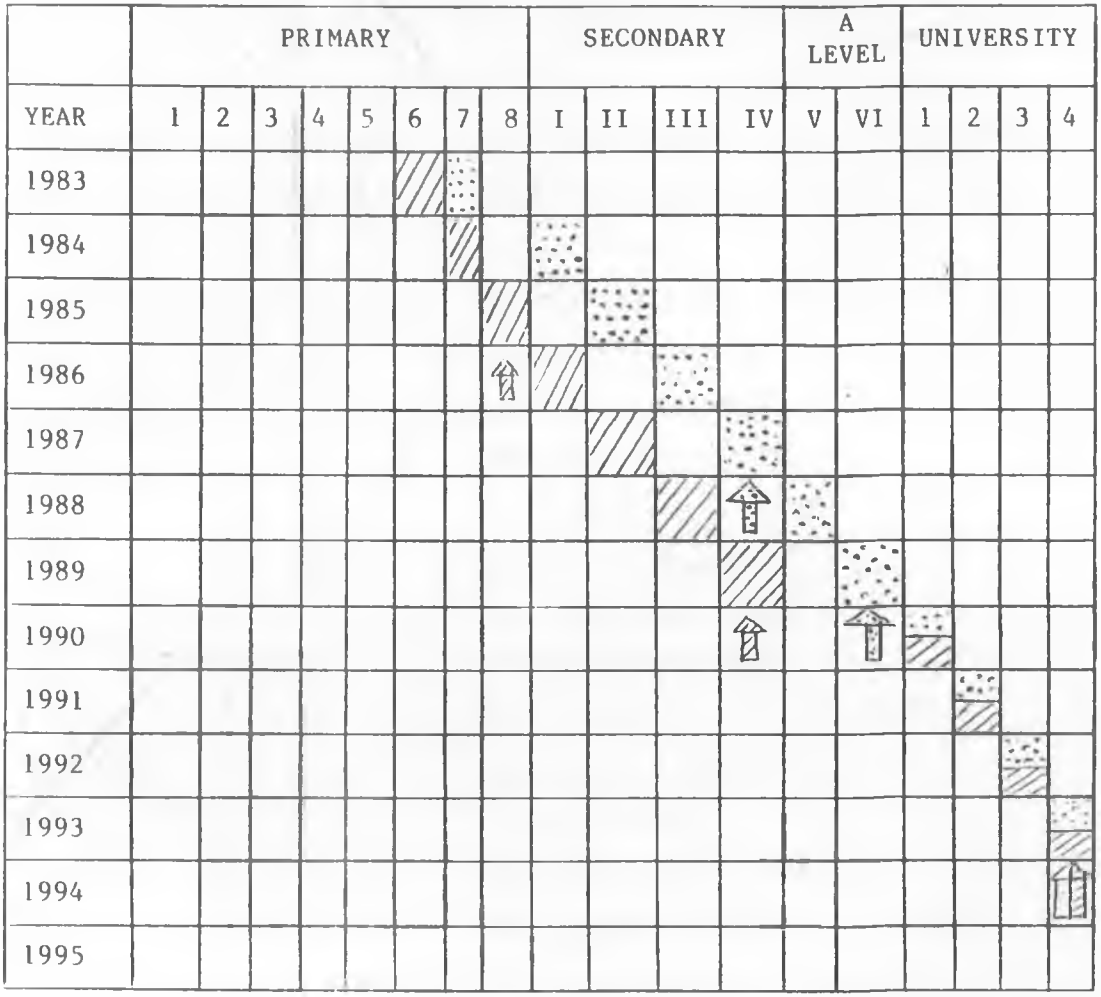
(iv) foster national conscientiousness and unity.

(v) preserve knowledge and stimulate the intellectual life and cultural development of the country. The university will continue with the task of producing high level manpower in the various, scientific, technological fields to meet the social, cultural and economic development needs of the nation.

Source: Republic of Kenya (1984) 8.4.4. System of Education Ministry of Education Science and Technology, Government Printer, Nairobi.

APPENDIX (ii)

The Proposed progression of Students from Primary to University 1983 - 1994 UNDER THE OLD & NEW SYSTEMS



Source: Republic of Kenya 8.4.4. System of Education, Ministry of Education Science and Technology, 1985, Government Printer, Nairobi.

KEY

The old 7.4.2.3. system being replaced

The new 8.4.4. system of education

Students of the old and new education systems meet for 4 year university programme

Examination for the new 8.4.4. system

Examination for the old 7.4.2.3. system

Common university exam. for the two systems.

Appendix (iii)

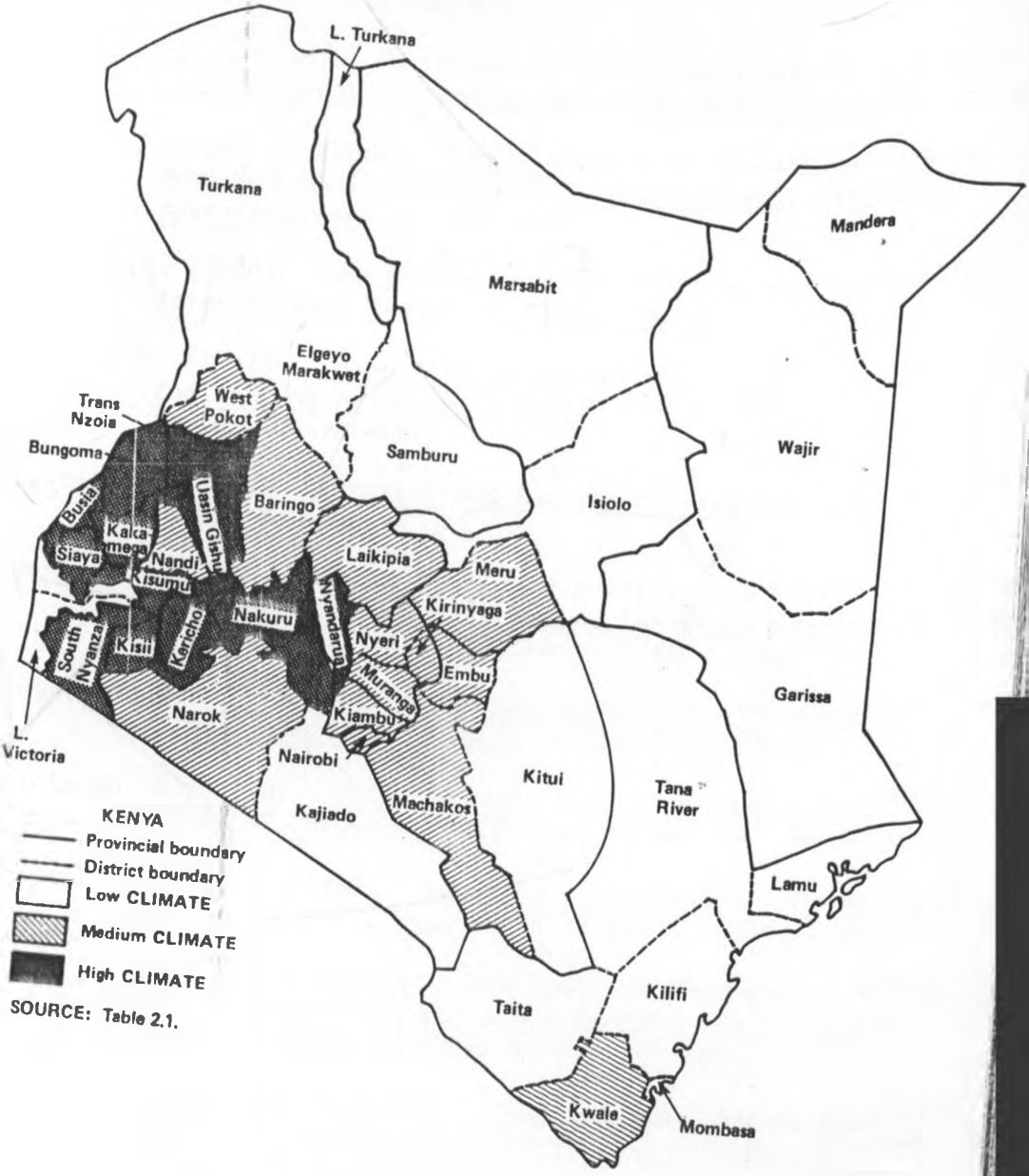
World-Bank IDA Education Projects

KENYA 1967 - 1978 in millions US $

Project	Fiscal Year	Main Purpose	Total cost	World Bank IDA
I	1967	Secondary general, technical and Teacher Training	9.7	7.0
II	1970	Secondary technical, University agricultural and adult and teacher training (T.A.)	9.3	6.1
III	1976	Primary Teacher Training, educational Broadcasting, mobile Unit (T.A.)	18.0	10.0
IV	1978	Agricultural Education, Primary, rural training, curriculum development (T.A.)	31.0	23.0

Source: Education Sector, policy paper, World Bank, April 1980.

Map Average climate potential of agricultural land (CLIMATE) by district (high, medium, low).



SOURCE: Table 2.1.

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