

"EDUCATION AND DEVELOPMENT  
IN CENTRAL KENYA: PROBLEMS  
OF SPATIAL AND STRUCTURAL  
INEQUALITIES IN THE SCHOOL SYSTEM"

Ph.D thesis in accordance with the  
regulations relating to higher  
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#### ABSTRACT

Title: " Education and Development in Central Kenya: Problems of Spatial and Structural Inequalities in the School System. "

Massive and sustained expenditure on educational development has been a consistent feature of Kenyan government policy since independence. Education is seen as a means of promoting national unity, establishing political ideologies and, most importantly, as a catalyst of social change and economic development through the production of appropriate skills and attitudes. In the light of recent policy intentions to concentrate upon rural development it is pertinent to evaluate the efficacy of the education sector's contribution.

The thesis briefly documents the history of Kenyan education and examines influential research and reports within several disciplines in terms of their impact upon current educational policy. It is shown that, despite rapid growth and administrative changes, the present formal school system exhibits, in structure and direction, no fundamental departures from the inherited colonial framework; moreover, the informal sector's contribution, although specifically oriented to rural development, is far from significant.

Inequalities within the educational system, particularly between secondary schools of different type, grade and location, are identified and the implications of these inequalities for the development-priority educational policy are discussed. The field data were provided by a questionnaire survey of students in secondary schools in central Kenya. The information referred to students' socio-economic and educational backgrounds; occupational and educational aspirations; and their attitudes towards development, social class and elitism.

Analysis reveals that school standards are highly variable and that the system is still oriented to the urban/white-collar sector; access to this is rigidly restricted and biased towards students of high-graded Government schools serving the more affluent socio-economic groups. These findings are interpreted in terms of Kenya's political structure, ideologies and developing class relations. It is concluded that the educational system, far from generating an infrastructure conducive to rural development, acts to legitimize and reinforce elitism.

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Nevertheless, the analyses and opinions presented in the thesis are mine alone.

PREFACE

The geographer has traditionally been interested in Third World Development problems and planning, but, what precisely has been his contribution ? Too often, it seems, his approach has been overly environmental, descriptive, static in his concern with ' spatial organisation '. To a large extent the most interesting and relevant work has been produced by political economists, regional planners and economists and, the trouble is, once a geographer moves into research areas normally associated with other disciplines the criticism is made that ' this is not geography !

As an under-graduate at Cambridge I developed an interest in education, initially from an historical viewpoint, and as I furthered my commitment to development studies in human geography it seemed particularly useful to relate the two disciplines. In Kenya, for example, as in many black African states, almost 33% of G.N.P is devoted to current and development expenditure in education - more, in fact, than the proportions assigned to infrastructure, industry and agriculture. Therefore, involvement in this aspect of development should be fruitful and relevant.

However, the interest of geographers has been minimal although the educationalists, social anthropologists and economists have long realised the importance of this field. As a result, I was warned that, in researching the relationship between education and development in Kenya, I would be stepping beyond geography's disciplinary boundaries.

Nevertheless, I would argue that there is a distinct geographical approach in educational research. In Kenya, the educationalists at Kenyatta University College were, it seemed, too prepared to accept the current education system as ' given ' and conduct their analyses within that framework. The social anthropologists were, one might argue, overly interested in examining education in purely human terms while virtually ignoring the country's requirements of that education system. In contrast, the economist's approach in regarding education as an investment seemed too impersonal and distant.

The ' geographical ' approach, on the other hand, with its inherent ' verstehen ', inter-disciplinarianism and, perhaps, intuitive cynicism, was a particularly helpful one since it encompassed the totality of the relationship between education and Kenyan society and development objectives, not only in the descriptive and spatial senses, but also in temporal and analytical terms.

The main focus of the thesis is on educational inequalities and, of course, there have been a number of comprehensive studies concerned with this but none, as far as I know, have concentrated on structural and socio-economic in addition to ethnic and spatial inequalities and related these to historical development and the structures of politics and social class.

This is, however, not intended to be an advertisement for a kind of ' geography of education ' nor, indeed, a definitive recipe for such a subject, since the definition of the sub-

-discipline could only be made, one might argue, on methodological grounds and not in terms of research area.

Therefore, it is the methodology - the approach - which is uniquely geographical in this thesis. For some, it may be a little aspecific and too far-ranging in scope but education should not be considered in isolation from its place in development planning, the structure of society and political objectives. In examining education and development, a ' verstehen ' approach is the only valid one and this provides a deeper critique and analysis of the relationship.

INTRODUCTION

Research into the history of education has shown that it is a fallacy to treat an education system as independent of social, economic and political forces and conditions, as existing in a sort of societal vacuum. An education system, if it is an integrated one and controlled by the State or by a certain class, religious or ethnic group, is structured, sometimes overtly and sometimes unconsciously to perform particular roles defined by, and in the interests of, the controlling party. These roles are generally designed to preserve existing social, economic and political relations, and hence, stability, or, less frequently, to promote radical reform. Education may socialise, indoctrinate and control social mobility, in addition to the more obvious function of teaching knowledge and skills.

Kenya, for example, sees education as a fundamental agent of social change and development, and it is this particular function which interests the geographer. Indeed, Kenya is spending approximately 30% in the annual budget on recurrent and development expenditure in education and so, investment in education, is as worthy of research and analysis as investigation into the development of agricultural, industrial and infrastructural resources.

In this thesis, then, it was proposed to examine the formal education system in Kenya in the light of

current national development priorities and manpower requirements.

One of the effects of colonial education in Kenya was to generate a skilled, professional African cadre to assist in the running of the Civil Service, and an artisan class, while leaving the teaching of simple literacy and numeracy largely to the Mission schools in the rural districts. Since independence, the education system has expanded enormously but its essential characteristics, one may suggest, show little real change from the colonial period.

Formal education in Kenya is still largely academic, theoretical, highly competitive, examination oriented and based, to all intents and purposes, on British curricula, teaching methodology and organisation.

One might argue that the education has failed to take on a real 'African' character related to local conditions, problems and requirements. In addition, the system is just as highly selective and hierarchical. Entry from one stage to the next is controlled by national examinations which filter out about 90% of the candidates. Similarly, access to educational facilities and the higher stages of the system seems to be biased towards certain ethnic, regional and socio-economic groups and tends to create an elite not only in numerical terms but also in background and character.

The most significant development of the post-colonial

period was the rapid increase in the number of ' harambee ' ( self-help ) schools built and financed by local communities. Since education had become correlated with social mobility, the demand for schools was intense. Although the Government was heavily involved in developing State-run and assisted schools, the rate of increase, for the people, was not fast enough. The demand, which prompted the development of harambee schools also led to the establishment of profit-making private schools, and the result was that, although the junior secondary intake expanded enormously, much of the increase was accounted for by very inferior schools.

The development of the harambee movement has been virtually uncontrolled by the Government and, although it has been applauded as a tremendous example of local development initiative, one might argue that it is causing more problems than it solves.

The education system now comprises three types of school; government assisted or run, harambee, and private; and four grades; A, B, C and D. The qualities of facilities, teaching, students and standards vary enormously from one type to another. It would seem that all the advantages lie with the student at a high graded government school, and entry to senior secondary school and University would, therefore, be largely confined to students from these types of schools.

This would mean that students at low quality private and harambee schools are virtually certain to be leaving

school at the end of four years of junior secondary education. Although it could be argued that some education is better than none at all, the trouble is that their education has not been designed to prepare them for leaving school at this stage and finding employment.

The Harambee and private schools have followed the formal system pattern in curriculum, organisation and structure. As a result, the education offered is oriented towards selection to the next educational stage. One might expect the students, therefore, to have high occupational and educational aspirations which cannot be met in the rural areas. This may well promote a feeling of alienation from the local community and rural-urban migration. Invariably, aspirations would be modern sector, professional and urban located with a very high percentage of students likely to be disappointed and unemployed. Since the rate of increase in job opportunities in the modern sector is declining, the majority of junior secondary school leavers would eventually be absorbed into the rural/agricultural sector of the Economy.

In consequence, it would seem more appropriate to re-design the lower quality schools to cater for school leavers and teach skills appropriate and relevant to the local community. There have, in fact, been efforts to provide this sort of education. Adult literacy classes, Village Polytechnics, Harambee Institutes of

Technology, Youth Centres and Farmers Clubs all fall into this category of informal education. However, the informal sector is relatively insignificant and its overall contribution minimal since a far greater proportion of Kenyan students attend traditional schools.

A radical extensive reform of the education system in re-orientation to the requirements of the rural economies would, unfortunately, be extremely unpopular among parents and students for they tend to believe that admittance to junior secondary school guarantees an equal chance of progressing to higher stages and eventually acquiring a skilled, professional, modern sector job. However, there are regional and ethnic inequalities in educational provision but, perhaps, the most enduring and important inequalities are structural.

It is suggested that educational opportunity is highly correlated with school type and grade, and also that students at these variously typed and graded schools belong to significantly different strata of the socio-economic spectrum. The advantage would then lie with the wealthier student attending a top government school in a large urban area such as Nairobi.

Inequalities of this type effectively would demolish the concept of meritocracy with which Kenya's hierarchical, severely competitive and restrictive education system is defended. Therefore, if this argument holds true, one might argue that the expansion of facilities, particularly in harambee schools, has

done little to rectify the inequitable distribution of opportunities which developed in the colonial period, while, at the same time, encouraging the idea that access to the higher levels of the educational pyramid is purely dependent on intrinsic academic ability and that the object of education is to acquire an urban modern sector job. In this way, it is suggested that the harambee and private sector initiatives have been detrimental to the development of the rural areas and have only served to increase dissatisfaction and frustration among young individuals.

Finally, what are the prospects for change? There are continuing developments in the informal sector but, despite several radical proposals, there has been very little reform in formal schooling. It is important to relate this to Kenya's development priorities and its political and social structure.

It is argued in the thesis that educational planning and development in Kenya is an intense political matter at both local and national levels. Politics in Kenya are virtually determined by the country's relationship with international capitalism, its interpretation of 'African Socialism', and its class structure.

The examination of Kenyan society in terms of 'class' is still a contentious issue but there can be little doubt that the social structure is dominated by a political and economic bourgeois elite, alienated from a peasantry-

proletariat. The ' elite ' control local and national politics and their policies reflect their particular economic interests. In short, these could be summarised as a concern with increasing and protecting the formation and circulation of capital. It is suggested that this explains Kenya's pre-occupation with preserving warm relations with international capitalism and ensuring political stability.

It would not be surprising, then, if the education system was engineered to assist in guaranteeing this stability. It could do this by rigidly controlling social mobility, not only numerically but also in terms of socio-economic background, to efficiently absorb the educated elite into the political and economic bourgeoisie, while, at the same time, encouraging the notions of meritocracy and equity. The Government, it seems, believes that, if the well educated can be provided with opportunities which match their ambitions, this will go towards insuring against political instability.

Therefore, a genuine attempt to create a truly rural development orientated educational system involving precise manpower planning, and vocational and practical, as opposed to academic and theoretical, courses, may be circumscribed by the realisation that the present formal system is well suited to the entrenchment and perpetuation of social class relations, economic objectives and political stability.

The contribution of the thesis, then, is in;-

1. An examination of the formal education system's orientation towards current national development priorities and manpower requirements, and the effects of education on the aspirations and attitudes of the students.
2. An analysis of structural and urban-rural inequalities as opposed to ethnic and regional ones which have been well documented.
3. An interpretation of inequalities and the system's orientation in terms of social class relations and political and economic objectives.

Chapter 1 examines ' education for development ' and looks initially at the theoretical relationships between education and political, economic and social forces. Having established that an education system can only be understood in terms of its integration with societal relations and objectives, the development of the education system is described and the evolution of educational policy discussed. In order to understand points and arguments made later in the thesis, a detailed analysis of the present system is given, looking at both the formal and informal sectors. Finally, the chapter focusses on the new emphases in educational policy - that of manpower planning and the promotion of rural and agricultural development.

In the light of these objectives, Chapter 2 examines the problems of orientation and inequality in the education

system. It argues that formal schooling encourages urban, modern sector aspirations which are unlikely to be fulfilled, engendering rural to urban migration and producing unemployment. Inequalities are also considered and the chapter focusses on structural and socio-economic variables.

Chapters 3, 4 and 5 are concerned with the field research conducted in Kenya between October 1978 and August 1979. The objectives of the research were primarily to analyse inequalities and examine the question of orientation.

Chapter 3 describes the methodology and administration of the field research. Chapter 4 presents the data analysis and results concerned with spatial and structural inequalities. Chapter 5 considers student aspirations, attitudes, perceptions and values.

Chapter 6 contains a brief analysis of the relationships between social class, education and politics in Kenya. In particular, orientation and inequalities in the education system are interpreted in terms of political and economic objectives and the control of policy making by particular societal groups.

Finally, the strands of the argument are drawn together in the Conclusion, in which several recommendations for reform in the formal education system are made.

CHAPTER 1EDUCATION FOR DEVELOPMENTCHAPTER SUMMARY

1. Introduction
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  - (i) Colonial Policy
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CHAPTER IEDUCATION FOR DEVELOPMENT1. Introduction

In examining the educational system of Kenya and evaluating its role in the country's development, the geographer needs an understanding of what education is and what its effects can be. In this chapter we shall be describing the present-day Kenyan educational structure and policies in terms of their development from the first initiatives in the colonial period. In order to understand the current orientations of the system it is, at first, necessary to refer to the changing trends in philosophy and values which have influenced Kenyan educational policies particularly over the past twenty years.

It would be difficult for educationalists to agree upon a precise definition of education. Illich argues <sup>(1)</sup> that the primary function of education through a formal school system becomes the 'transmission of values' whereas it should, as Freire comments, be orientated to;-

"... becoming critically aware of one's reality in a manner which leads to effective action upon it." (2)

However, there is a general consensus that education is a much broader concept than schooling and should not be equated with those processes restricted to schools. <sup>(3)</sup> It is, rather, a many faceted process

embracing the intellectual, moral, spiritual and physical development of the individual whereby he is introduced to and amalgamated into Society.<sup>(4)</sup> In consequence, education as defined by and practiced through the school system may be severely criticised in terms of content, structure and its relationship to power, control and class in Society. Nevertheless, the traditional school system remains the fundamental agent of education and in evaluating Kenya's educational policies it is essential to examine the changing roles ascribed to school systems throughout Africa.

In the late 1950's the elitist school systems developed by the colonial powers in Africa came under increasing criticism and attention was turned towards education as an agent of national, as opposed to, individual development. Substantial investment<sup>(5)</sup> in educational infrastructure, it was suggested, would produce a literate, numerate workforce as required by the high technology, capital-intensive development projects popular at the time<sup>(6)</sup> and generate a 'development consciousness' and a sense of national identity, both considered essential to stable and sustained economic growth.<sup>(7)</sup>

This wave of enthusiasm sparked the development of educational facilities throughout Africa, often without planning for the products of the investment. During the mid-1960's these somewhat haphazard and

disorganised plans were restructured under the influence of economists such as Harbison, Vaizey and Schultz who proposed theoretically efficient schemes whereby investment in education would be controlled by estimates of the likely manpower requirements of the various sectors of the Economy.

Confidence in this econometric approach waned during the 1970's with the realisation that the development of the secondary and tertiary facilities was oriented to the production of manpower for the modern sector, which was not growing as fast as predicted, and, thereby, largely ignored school leavers at other levels. Educational systems were, therefore, geared towards the generation of a very small skilled professional cadre <sup>(8)</sup> therefore endorsing the elitism of the colonial period.

Interest then developed in designing more informal educational schemes aiming to provide skills of relevance to the development of the rural economies. Similarly, within the formal school systems plans to teach more vocational, agricultural and technical courses were constructed.

As a result of these changing values and emphases we find within the Kenyan educational system a complex mixture of the different conceptions of the place of schools in the overall plan of development. In Sections 2(i), 2(ii) and 2(iii) we shall be looking in greater depth at these policies as they relate to Africa as a

whole and outlining their main criticisms. In Sections 3(i) and 3(ii) the relationships between education, politics and society will be explored showing how educational policies are related not only to the prevailing educational philosophies but also to political ideologies. Section 4 is concerned with the history and evolution of government policy in Kenyan education. The present structure of the Kenyan system is described in Section 5 and the new orientations of current policy in Section 6.

2. Philosophical Frameworks

2(i) Colonial Policy

Colonial educational policy, throughout Africa, was to diffuse the mother language <sup>(9)</sup>, customs and values, develop a practical education adapted to the milieu and needs of the African peasant, thereby increasing rural productivity and appetities for colonial consumer goods and to create a carefully limited cadre of indigenous auxiliaries whose loyalty and competence would be beyond question. <sup>(10)</sup>

The colonial system reached only a small section of the population but openings in administrative and skilled occupations were largely restricted to those involved with it, producing a wide gap between the illiterate and the newly educated <sup>(11)</sup> not merely in terms of occupations and lifestyle but also in their values and politics. <sup>(12)</sup>

A survey by Wilson in 1954 showed that the African educated elite were more orientated towards personal advancement than the development of their countries (13), and it was suggested that this was the result of a highly pyramidal selection structure based on the examination of a curricula unrelated to indigenous cultural and physical background. (14)

After independence, educational developments and policies tended to mirror the colonial pattern. Despite the extension of school facilities the various systems, nevertheless, reproduced the hierarchical structures with their emphases on streaming, selection, Western curricula and examination methods. In the late 1950's in Uganda, for example, primary education was expanded to provide the basis for secondary expansion in the 1960's but by 1966 80,000 students were competing for 10,000 high school places. (15) A similar situation was recorded in Ghana where secondary enrollment was only 12.8% of the junior level and the Universities accepted only 5.1% of the secondary number. (16) Moreover, entry to higher education was heavily biased in favour of the skilled, professional and administrative cadre. Kiwanuka's research in Uganda suggested a strong link between home circumstances and an individual's academic progress. (17) In Ghana, the educational system continues to reflect the cultural, linguistic and historical divisions between tribes. It is an

advantage to come from an urban, literate, professional background and, therefore, from those tribes among which these characteristics are common. As Mc.Kown and Finlay concluded;-

" While education is open to those from non-literate and traditional economic backgrounds it is... predominantly enjoyed by those from elite or semi-elite families. " (18)

The elitist educational structure is also reflected in the attitudes and values of the students themselves. Clignet and Foster, in 1966, demonstrated that secondary school pupils in the Ivory Coast regarded education with much the same functional and utilitarian view as their predecessors before independence. (19)

For the majority of black African countries, then, post-colonial educational development has largely served to conserve and thereby legitimise the elitist and pyramidal structural legacy despite some re-orientations in curricula and examinations. It is interesting to speculate on the reasons for this in general since we will be examining the Kenyan situation in closer detail in Chapter 6.

P'Bitek, for example, argues that political power throughout much of Africa was apportioned amongst the educated elite at independence. (20) who then found it in their best interests to conserve the hierarchical nature of the education system to ensure control over selection to the elite cadre. Such a procedure is common in situations where a small, but powerful,

political elite is faced with a larger, uneducated and potentially ambitious population. The history of education is studded with examples such as the State takeover of education in Victorian England between 1830 and 1870. (21) In the African context, Pankhurst describes the educational system of occupied Ethiopia where the limited schooling offered the indigenous population emphasised rigid discipline and obedience to the new military and political leaders. (22)

During colonialism Africans became aware that education offered social mobility providing a passport out of the drudgery of the shamba to the towns and offices. Those fortunate enough to obtain secondary schooling were quickly absorbed by the rapidly growing administrative sector. Power became invested in the educated cadre and this elite has been reluctant to change a system which produced and reinforces their privileged position. The Kenyan author, Ngugi wa Thiong'o has observed this process in his books. In one, a village boy, Njoroge, passes for high school and comments that;-

" Yes.. that's what I want. And you know, I think Jacobo ( prominent local African ) is as rich as Mr. Howlands ( white settler ) because he got education. And that's why each takes his children to school because of course they have learned the value of it. " (23)

However, after independence, it became apparent that the ' fruits ' were not tasted by the common people but by those who ;-

" .. ran to the shelter of the schools and universities and administration. " (24)

The colonial educational efforts were arguably the most pervasive influence on educational development and policy in most of black Africa. It has been noted that very little has been done to re-organise the colonial structure. The suggestion that an explanation may be formulated in terms of political control will be discussed at greater length in Chapter 6. In Section 2(ii) the influence of the econometric paradigm is considered.

2(ii) The Influence of the Economists

During the early 1960's African development planning was largely based on Rostow's prescriptions for self-sustaining growth. It became increasingly clear, however, that the recipe required more than the economic pre-conditions set out by Rostow. In 1961, Galbraith suggested that before considering economic factors a developing nation required a substantial degree of literacy among the population, an educated elite of considerable size, a reliable apparatus of government and public administration and a clear and purposeful view of what development means. (25)

As a result, economists turned their attention to the education sector treating expenditures in training as investments in human capital yielding measurable returns in the form of increased productivity.

Lewis, therefore, distinguished between consumption education which does not yield a return in material output and investment education which generates increased productivity. (26) 1

Schultz and his colleagues conducted a series of empirical studies in the 1960's into investment in human capital reporting a powerful relationship between educational development and economic growth. (27)

Similarly, Psacharopoulos, researching in Hawaii, concluded that;-

".. improvements in the quality of labour between 1950 and 1960 in Hawaii have contributed to income growth ( about 20% ) almost as much as the increase in the number of persons employed. " (28)

Harbison was prepared to put this figure much higher. He argued that less than 33% of the growth in national incomes could be explained by quantitative inputs of the factors of production such as capital and labour whereas 67% was produced by qualitative improvements in the inputs - technology, more productive capital and more productive human resources. (29)

The most important outcome of the econometric approach to educational development was the policy of matching investment in educational resources to manpower goals. (30) The 1965 Ominde Commission Report, for example, argued for a more vocational orientated Kenyan

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An exponent of this form of analysis in the case of Nigeria was, NWOSU, S.N. 1971. Education and Economic Development. African Studies. 30(2).

education system. The Commission noted the falling demand for administrative personnel and the increasing requirements for industry and agriculture required less academic treatment of school subjects, a more relevant curriculum and the introduction of vocational courses for primary failures. (31)

Of secondary importance was the conceptualisation of the school as an agency of social change. Beeby, therefore, argued for further concentration upon the quality of education (32) while Adams emphasised the inculcation of values encouraging the adoption of innovatory goals and processes and developing a sense of national integration through the school system. (33) However, the economists saw African school systems mainly as manpower production units. Their job was to estimate the sectoral requirements of each level - the educationalist advising on feasibility and the optimum means of meeting these demands.

Investment, then, was mostly concentrated upon secondary and higher education. The Conference of African States on the Development of Education at Addis Ababa in 1961 recommended that the proportion of the eligible school-age population in secondary schools should be increased from an average of 3% in 1961 to 23% in 1981. (34) The purpose of elementary education was seen primarily to be the promotion of literacy and as a result;-

"... the cost of primary education must be kept down, otherwise it will consume most of the resources which are more urgently needed for secondary and higher education." (35)

Consequently, plans were required to maximize the strategic services of a very small group of more highly trained personnel for secondary and higher education and therefore the basic problem was;-

"... to find new technologies of primary education which can be utilized effectively by low-paid, poorly educated and unqualified teachers." (36)

Influential researchers such as Harbison, Schultz and Vaizey believed that their econometric approach to education as an investment in human resources would produce an efficient system maximising the teaching and infrastructural resources, minimizing wastage and repetition and meeting demands for manpower in each sector of the Economy.

Their prescriptions have been put to great effect in Tanzania where the Government set up a permanent Manpower Planning Division which conducted a survey of high and middle-level manpower requirements and resources between 1964/5 and 1968/9. Their Report suggested a technical and scientific bias to the secondary school curricula and investment in higher education only to the extent justified by the manpower needs of the country's development objectives. (37)

Although manpower planning remains important in higher education policies, enthusiasm with the econometric approach has waned since the late 1960's. The criticisms

have been;-

1. Economists have not agreed upon which education level generates the largest return on investment. The majority of researchers argued that developing nations should turn;-

".. greater attention.. to secondary education, on-the-job training and perhaps vocational training. " (38)

Psacharopoulos suggested for Hawaii that secondary schooling seemed to have contributed more to income growth than elementary or higher education. (39)

However, in 1962, Shoup found that the rates of return on investment in education in Venezuela were 80-130% for Primary, 17% for Secondary and 23% for University. (40) Peaslee advocated expansion of all education levels arguing, in particular, that high enrolment in primary schools is a requisite for significant economic growth. (41)

In practice, investment in primary education has proved more popular than the economists recommended, partly because of relative costings and partly due to political appeal. It was estimated that the average costs in 1961/2 per capita in Africa were \$ 1,471 at University level, \$ 261 at Secondary and \$24.5% for Primary. (42) In addition, it has been realised that education is a political issue and cannot be realistically be held to the minimum levels which might be defined by the manpower inputs necessary to meet development goals. Upon independence

African governments found it politically prudent to rapidly expand educational opportunities at all levels. Primary education was regarded not only as an indispensable preparation for further training but also as an important contributor to political stability and national integration and possibly the most effective means of influencing the attitudes of a large percentage of the population towards economic and social change. Also, investment in University education has proceeded at a greater pace than prescribed by the economists, in the majority of cases simply to promote national prestige.

2. Although the correlation between economic growth and educational development is undisputed the parameters of this relationship are unclear and education cannot be regarded as a sufficient pre-condition.<sup>1</sup>
3. The percentage of G.N.P. devoted to educational development is a contentious issue. There is no 'standard' or 'recommended' figure. The decision rests not so much on a social cost/

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1. See, ANOSIKE, B.J.O. 1977. Education and Economic Development in Nigeria: The Need for a New Paradigm. The African Studies Review. XX(2), 27-51. He argued that Nigeria's need for high level manpower was much exaggerated since there was no clear relationship between investment in education at these levels and economic development.

- benefit analysis but on the economic constraints of the Government budget. Beeby notes that the quality of education in terms of content, curricula and teaching methodology is controlled more by financial considerations than conscious policy. (43)
4. Manpower plans are useful but should not be treated as a fundamental guide outside higher education levels. Planning over a 5 year period inevitably leads to gross inaccuracies since the scale of current development is so small that minor changes lead to substantial restructuring of manpower policies.
  5. Concentration upon the secondary level merely reproduces the unbalanced structure of African educational systems, rigidly controlling access to high level occupations and thereby generating a small skilled educated elite cadre. However, it should be noted that African educationalists have realised the dangers in educating all the workforce at the same time encouraging occupational aspirations which the Economy cannot meet and creating a large, unemployable, literate and educated group.

For the majority of black African nations educational investment was given top priority in development planning. Manpower planning was employed most effectively at higher education levels. Improvement in educational infrastructure, facilities and opportunities,

however, did little to alter the serious inequalities in opportunity created in the colonial period. In addition, the curricula and teaching methodologies remained largely western-oriented.

In the 1970's research increasingly demonstrated that the emphasis on high level capital and technological investment policies in the urban/industrial sectors produced a form of neo-colonial dependence (44)

providing the conditions necessary for a subtle form of exploitation (45) which generated massive inequalities between urban and rural areas and individuals. (46)

The prescriptions suggested by Friedmann, Hirschmann and Rostow proved to have inherent faults which became apparent in the late 1960's. Development had not 'spread' or 'trickled down' from the urban-industrial growth centres to the rural peripheries to any substantial degree. Therefore, in situations where 90% or over of the population were engaged in some form of agricultural subsistence attention was turned to the development of the rural areas. As a result, educationalists came to re-consider their ideas and discussion was focussed on re-designing school curricula which had, up till then, largely ignored vocational training relevant to the agrarian sector of the Economy.

#### 2(iii) Education for Rural Development

In the pre-colonial and colonial periods, throughout Africa, several types of schools flourished designed

to promote skills and trades of relevance to the rural economies. Swinbanks outlines the history of rural trade schools in Uganda which trained primary school leavers in farming methods and skills such as mechanics, bricklaying and carpentry. (47) Scanlon describes the tribal 'bush' schools which were intended to introduce the young to all aspects of the social, religious, economic and political forces of the tribe. (48) In Tanganyika the middle school syllabus emphasised rural science and was specifically related to local agricultural problems and practices. (49)

The spread of colonial formal secondary school education with the potential opportunities for Africans to procure more lucrative white-collar employment resulted in the disintegration of the rural oriented schools by creating the suspicion that efforts to keep Africans on the land were designed to perpetuate discrimination and the prevailing structure of social relations.

In his study of the colonial education system in Nyasaland, Kandawire, for example, argued that rural development and the associated educational policies were not intended to raise the living standards of Africans to the European level but only part of a wider administrative policy aimed at maintaining control and levying tax more efficiently, suggesting that;-

" The purpose of the dominant group in this society was that education should sustain an inegalitarian social system. " (50)

Since the formal colonial education became associated with rapid social mobility there has been a consistent pattern of refusal on the part of Africans to tolerate technical and agricultural schools simply because they provided inferior opportunities for personal advancement. As Marvin argued in his study of the Busoga Community in eastern Uganda;-

" So long as high wages are paid for formal employment in the city while farmers receive only nominal rewards for their efforts it is obvious that parents will favour the type of education which prepares a child for employment in the modern sector. " (51)

Indeed, politicians have been reluctant to endorse policies promoting ' relevant ' education, fearing that their unpopularity will result in lost votes. (52)

However, the elitism of the African education systems inherited from the colonial framework came under attack in the 1970's for two basic reasons. Firstly, it became apparent that the system produced an educated elite committed to preserving the colonial social and economic relationships after independence. Western-type education, it was argued, encouraged;-

" Western-Educated Africans to emulate the practical manifestations of this so-called superior culture which was presented in the European's judicial decisions, educational policy, religious attitudes and patterns of behaviour, and then using them as a standard-setting elite for the rest of the colonial population. " (53)

This process, it was further suggested, would ensure the continuation of development policies favourable to Western interests but which had proved unsuccessful in generating adequate and equitable economic growth

in the 1960's.

In addition, it was clear that the education systems were encouraging individualist, competitive and acquisitive attitudes considered contrary to the traditional norms of kinship loyalty and solidarity. As a result, African economies were unable to accommodate the demand for higher level employment leading to a gradually worsening educated unemployment situation, engendering a qualification escalation spiral and greater pressure for further expenditure and expansion of educational facilities.

Secondly, in apposition to the Rostow development-paradigm, rural development programmes were being explored and the conclusions of this research were enthusiastic in their evaluation of this form of investment as a promising strategy for generating self-sustained and equitable growth throughout the rural/agricultural sector. (54) Several researchers indicated that the traditional knowledge of the rural economies - 'village science' - had enormous, virtually untapped, potential in forming the basis of agricultural and educational schemes. (55) Analysis suggested that small-scale rural educational schemes devoted to promoting literacy and knowledge of technical and agricultural skills were economically feasible (56) and, indeed, essential for the success of rural development programmes. (57)

However, the policy of rural development has received only token support in the majority of African countries and re-orientation of the education systems to meet the needs of this sector has only taken place to a significant degree in socialist states. The Frelimo Government of Mozambique, for example, inherited, in 1975, a Portuguese education system with 90% of the population illiterate and innumerate. They initiated an entirely new structure based on ' grass-roots relevant ' education with curricula wholly committed to the study of socio-economic problems and students expected to participate in development projects as part of their education. (58)

In Tanzania a programme to set up ' Operation Planned Villages ' was initiated in 1974 to amalgamate familial units into a workable economic system. (59) The plan drew heavily on Chinese experience and aimed to prevent overurbanisation and urban unemployment while bringing prosperity and development to the rural communities. (60) Education within the villages was planned to emphasise technical and agricultural training, include adults as well as children, be practically rather than academically based and would be related to local development issues. (61)

Rural oriented education is still in the embryo stage throughout Africa. The two most enthusiastic subscribers to these policies, Tanzania and

Mozambique, have, of course, exhibited no signs of substantial development in recent years and this has not helped to promote their ideas. Most African countries including Kenya are attempting, in a somewhat half-hearted manner, to establish and operationalise educational schemes on similar lines, but, in addition to and outside of the formal school system. As a result, agricultural, technical and vocational training is still seen as something of a second-best alternative.<sup>1</sup>

Nevertheless, this educational strategy is making headway and, in understanding current Kenyan policy, it is an important consideration.

The colonial, econometric and rural-oriented educational philosophies described in the previous sections provide the framework with which to examine the present-day

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1. Sifuna has noted, for example, in Kenya that the Report of the Agricultural Education Commission in 1967 did not favour a special course in agriculture in primary schools whereas the Curriculum Development Commission of 1972 strongly advocated such a course. This clearly shows the change in attitude between these years but as Sifuna comments;-

" As a result of these conflicting policies, agriculture has not had much place in the school system. Generally, agricultural schemes are haphazard, particularly at the primary school level. A few secondary schools have fairly articulated agricultural programmes but these have been introduced largely due to self-sufficiency.. .. Vocational subjects have no place in the ordinary secondary school curriculum. "

SIFUNA, D.N. 1976. Vocational Education in Schools: A Historical Survey of Kenya and Tanzania.  
East African Literature Bureau. 159.

structure and policies of Kenyan education. However, in fully understanding the role of education it is essential to consider the relationships between the education system and political and social relations in any Society. The two following sections examine some of these relationships and evaluate their importance in understanding current Kenyan educational policy.

2(iv) Education and Politics

It has been quite common practice in educational research to dissociate the education system from its political and societal relationships and consider it as existing in a form of vacuum. In evaluating the role of education in the economic development of a country no other methodology could be more fallacious, for as Evetts argues;-

" An education system is ultimately defined by its historical and political contexts. It is from these contexts that the problems of organisation and structure, curriculum and content, derive their meaning... social and political values play a very pervasive role in education through the management of knowledge and the institutionalisation of intellectual styles. By defining success and failure, conformity and deviance, the educational system is selecting those to be rewarded with wealth, status and power. " (62)

In situations where the education system is outside communal control education may be used to achieve political ends through socialisation, indoctrination and control of research and social mobility mechanisms.

The inculcation of values and ideologies which socialise individuals into the acceptance of designated political, economic and social ' norms ' is considered, for the

most part, a valid and primary function of school education. Durkheim, for example, saw education essentially as a 'matter of authority' consisting of a 'methodical socialisation of the young generation' in order to 'bring us to overcome our original nature'. (63)

In a similar vein, Mannheim, who viewed the control of education as a 'social technique', contended that;-

"... by becoming society conscious we no longer formulate the needs of Youth in the abstract - but always with reference to the needs and purposes of a given society." (64)

School education is, of course, important in introducing the young to accepted societal conventions such as law and order, thereby ensuring the continuation of that Society. However, in addition, school curricula and teaching methodology may function, not only to inform, but also to indoctrinate certain political ideologies to guarantee the reproduction of economic, social and political relations within Society. As Cohn puts it;-

"The effect of education on political socialisation goes beyond providing additional information about a particular government. As a formal institution operating within the context of the state it reinforces basic commitments to the political regime." (65)

Rousseau, for example, was particularly concerned with the promotion of national unity, integration and identity through educational means arguing that;-

"It is education that must give souls a national formation, and direct their opinions and tastes in such a way that they will be patriotic by inclination, by passion, by necessity." (66)

In the African context, Tanzania has consciously attempted to re-direct the function of education towards

societal goals as opposed to individual development and elevation. Noting that Tanzania's pre-independence education system produced a tendency to regard education simply as a means of personal advancement, Omari has suggested that such an evaluation should be actively suppressed, replaced by;-

" .. deliberate guidance efforts to direct individuals to the national manpower priorities. The process of guidance should make students capable of making realistic choices especially in the setting of career goals. It should make them able to work purposefully towards the achievement of goals; to help them feel confident about themselves; and make them convinced about the supremacy of societal goals over egoistic choices. " (67)

Educational systems are also employed to control social mobility, restricting entry to the political and economic elites on the basis of race, religion or class. In Uganda, for example, before the Amin regime, an increasingly exclusive elite emerged in both government and business and the highly selective and hierarchical education system , Mujanju argues, ensured that promotion to elite positions could be controlled numerically and qualitatively. (68)

Certainly, there have been very few developments designed to re-orientate Uganda's education system and this has been a consistent feature throughout Africa. One of the effects of colonial schooling was to undermine traditional educational training, tribal languages and culture and this tended to generate an elite class which identified more with Western interests than with their own people and, therefore, acted to affirm and re-trench the structural inequalities left at independence. (69)

It is interesting to note that the African single-party political systems, which often emerged out of national liberation movements, defend their intolerance of competition and criticism as necessary in developing an awareness of nationhood - fusing integration out of diverse, antagonistic and geographically isolated communities and tribes. (70) It is precisely this call for national unity which is given first priority in the political socialisation of the young through school education, with Tanzania providing the best example. (71)

The third means of political control in education is the orientation of research in science and in humanities in designated directions. It is pertinent to note that research into sensitive fields such as politics in most black African countries is largely restricted to citizens whose conclusions are open to direction and control. (72)

The dilemma of the intellectual has been summarised by Mburu as follows;-

" African scholars, not unlike the media, are prone to whims of the political elite of the day. Scholars have to defend two related fronts: firstly, freedom to make independent observations and to freely analyse the results; and secondly, freedom to be or not be committed to any contemporary ideologies... What all this amounts to is that the intellectual with an eye for a thorough exposition of society's problems and needs is in danger of being rated capriciously not only by those in power, but also by those working to command the political rostrum when their time comes. Unfortunately, the intellectual cannot please both camps at the same time all the time. " (73)

In addition, Ochieng makes the observation that research in developing countries is sometimes subtly controlled by neo-colonial paradigms, methodologies and interests,

circumscribing indigenous and innovatory analyses of local problems. (74) Political control of high-level research is also reflected in the curricula and teaching methodologies of the school system and should, therefore, be included in an evaluation of the function of formal schooling.

This section, briefly outlining the relationships between education and politics, clearly indicates that education may be a motivator of social change or a technique to guarantee the continuation of societal, political and economic relations within a society. However, as Curle puts it;-

" .. in most societies for most of recorded time education has been a reactionary force rather than a progressive one. Education... has tended rather to hallow antiquity than to promote innovation. " (75)

Freire, for example, demonstrated the ' domestication ' of the peasants in north-east Brazil through a rigidly controlled education system. (76) The peasants perceived the oppressive social relations as all pervasive and immutable but Freire's revolutionary literacy programmes involving a;-

"... permanent critical approach to reality in order to discover it and discover the myths that deceive .. and help to maintain the oppressing dehumanizing structures. " (77)

.. succeeded in de-conditioning the peasants, eventually leading to concerted and effective political action on their part. (78)

The political function of schooling is overtly recognised in socialist countries and it is claimed that education,

by providing an awareness of economic, social and political ' reality ', contributes to the ' freedom ' of the individual. (79) In Mozambique, for example, education is reportedly based on rural development in conjunction with a concentrated programme of political and ideological teaching. Discussions of school, community and cultural problems between students, student leaders and teachers are a prominent feature of the curriculum. Student participation is encouraged by the system and teaching is based on dialogue rather than instruction. This procedure aims to develop awareness of community problems while inculcating the political ideologies considered appropriate to the solution of those problems. (80) Similarly, in Tanzania, political education is seen as an essential part of the curriculum, the objective being to produce students who understand and believe in the ideologies of socialism, democracy and self-reliance and regard themselves as Tanzanian above their tribal identities. (81)

Educational policies in Africa are shaped partly according to political ideologies, needs and objectives. Overt political indoctrination through the school is uncommon outside the Marxist-Socialist countries but control is exercised over the curricula, teaching and structure of the education system to generate a sense of nationalism and commitment to the regime, an endorsement of social relations and, by defining the academic requirements for success, effectively managing the selection of individuals to elite positions.

Education is not only functional in supporting political regimes and ideologies. In many ways, some overt and some subtle, a formal education system mirrors and re-produces the cultural and societal bases of Society, thereby turning out young individuals attuned to accept and endorse those relations. Education is, therefore, overwhelmingly conservative and this function is discussed in the following section.

2(v) Education and Society

It has been argued by Bourdieu that the specific role of the sociology of education is to;-

"... determine the contribution made by the educational system to the reproduction of the structure of power relationships and symbolic relationships between classes by contributing to the reproduction of the structure of the distribution of cultural capital among these classes." (82)

For Bourdieu, an education system is designed to reproduce and regenerate societal and cultural values and relationships which provide the framework upon which Society's political, economic and social structure is based. He, therefore, follows Durkheim in setting the objective of education as the;-

"... conservation of a culture inherited from the part." (83)

Considerable research has focussed on the preservation of cultural and societal values throughout history and how these are defined by power groups within society in order to re-produce the conditions necessary for their continuation. (84) Marxists have concentrated their analyses upon these power relations and the mechanisms

through which individuals are made subservient to the social and economic relations inherent in the mode of production. (85) As Marx himself put it in the 'German Ideology' :-

" The ruling ideas are nothing more than the ideal expression of the dominant natural relationships, the dominant material relationships grasped as ideas. " (86)

The ' ruling ideas ' are disseminated, of course, through the formal education system. Once the power structures have been located one must identify the specific strategies used to control knowledge (87) and the most obvious technique is curricula design, orientation and control.

As Williams argued, school curricula is;-

".. but a selection and organisation of the available knowledge at particular time, which involves conscious or unconscious choices. " (88)

Conservative educationalists have regarded the conventional curriculum as somehow immutable and politically neutral but it is clear that, in situations where the education system is state administered, educational structures, teaching methodologies and curricula will reflect societal values, needs and objectives. In particular, control of the curricula defines the type of knowledge and information available to students, generates occupational preferences in accordance with economic and social requirements through subject choices and allows the indoctrination of appropriate values and ideologies. (89)

There are wide differences in curricula evaluation across the political spectrum. The Marxist left, for example, criticises contemporary curricula for ' mystifying the

students ' , ' fragmenting knowledge into compartments ' and thus, by denying students the opportunity to understand society as a totality, acting as effective agents of social conservation. (90) By establishing a national examination structure and defining the curricula, the system, therefore, determines the ' intelligent ' on the basis of conformation with prescribed standards defined by the curricula. In a situation where social mobility is largely determined by academic achievement - access to political, social and economic elite positions is, as a result, largely restricted to those who pass through and accept the conventional education system. Considerable attention has, therefore, been turned to intelligence tests in demonstrating them to be more ideological than scientific.

' Intelligence ' has been employed as an explanation of differences of status between people despite the lack of any precise definition of it other than ' that which intelligence tests measure '. I.Q has tended to divide individuals into groups according to social class and the majority of sociologists have not questioned the viability of this model.

Henderson, on the other hand, suggests that intelligence tests were designed to faithfully reproduce the judgements and estimations of the middle class as to what precisely constituted true ability. (91) Therefore, the conception of intelligence adhered to in a society acts as a mechanism of control over social mobility and as a legitimisation of the allocation of high status positions. By defining

intelligence in terms of dominant stratum rather than core values the behaviour, values and aptitudes of successful entrants to high prestige occupations replicate those of long standing members.

Karier, in describing the growth of the corporate liberal state in the U.S.A, argues that to survive it needed a co-operate alliance with labour, government and corporate wealth for efficient development of both production and consumption of goods and services, necessitating the development of a;-

" ... new scientific management in order to socially engineer for control and order. " (92)

He therefore provides the link between economic power groups and political control over the education system missing in Henderson's analysis. Karier goes on to demonstrate how the I.Q tests designed by Goddard, Terman and Thorndike were based on a genetic-hereditary conceptualisation of intelligence. The tests were implicitly based on the contemporary occupational hierarchy and social order, reflecting conventional middle-class morals and values and therefore discriminating against individuals of certain race, creed and socio-economic background.

This evaluation of intelligence has not changed much in conventional circles since the development of the Binet Scale in the 1920's. It is therefore, as the Marxist left argues, an ideological process in rationalising the social divisions of labour on a scientific

basis, reinforcing the myth of meritocracy and screening the political relationships involved. (93)

In addition to defining intelligence and manipulating social mobility, the education system may be used to eliminate certain values and promote others considered detrimental or essential to the survival of the social structure. In the previous section, political indoctrination and socialisation were considered. Here, the internalisation of ideologies associated with and supportive of the social and economic relations related to the mode of production, are discussed.

Karier, for example, describes how school organisation, structure and curricula in the U.S.A came to reflect the ' Puritan Ethic ', an ideology fostered by the American business community and the capitalist mode of production. (94)

Bourdieu further notes that teaching language, methodology, curricula and materials ( as well as the teachers themselves ) were structured according to a ' middle-class ethos ' thereby acting to conserve this pervasive element in American society and select individuals for advancement according to conformation with it. (95)

In addition, Karier argues that with the development of corporate managerialism, of scientifically organised bureaucracy and computer-managed bureaucracy, American education has become increasingly oriented to adjust citizens to the needs and processes of industrial society and accept the authority of the emerging corporate society. He relates this development to the

growing welfare liberalism in America which stresses stability, predictability and a controlled rational process of social change. <sup>(96)</sup> Kanter has even attempted to identify and demonstrate this process in the nursery school. <sup>(97)</sup> He argues that the school consciously and unconsciously organises young childrens' experience to conform with and relate to the bureaucratic world through the orientation of study to organisational reality, the routinisation of play, the discouragement of personal responsibility and the maintenance of ascendancy.

In conclusion, then, in situations where an education system is administered and managed by the State, control of infrastructure, organisation, examination systems, curricula, teachers and teaching is allocated to economic and social power groups holding positions of political responsibility within society. Many sociologists would now argue that educational research cannot be divorced from political and socio-economic relations within society. This section has shown that the education system may be designed to control social mobility and individuals' values to conform with societal needs and objectives. By defining 'intelligence' in relation to the prevalent socio-economic relations and assigning prestige and status according to academic achievement, the continuation of the status quo is guaranteed. Similarly, the indoctrination or socialisation of ideologies promote acceptance of these conditions. As Gintis puts it;-

" .. the social relations of education produce and reinforce those values, attitudes, and affective capacities which allow individuals to move smoothly into a class stratified and alienated society. " (98)

Marxists would argue that education must be studied in conjunction with the political and socio-economic structure of society since an education system is administered to re-produce the class structure from one generation from one generation to the next. Gintis therefore suggests that research should focus on the basic economic institutions of the capitalist mode of production and how these prerequisites necessitated the control of the workforce through the educational process. In the same way, Bowles advocates concentration on the identification of educational inequalities and how they may be related, not to the administrative, but to the political sphere, since;-

"... unequal education has its roots in the very class structure which it serves to legitimise and reproduce. Inequalities in education are part of the web of capitalist society, and are likely to persist as long as capitalism survives. (99)

In understanding the function of schooling and educational policy in Kenya it is essential to consider the philosophical bases underpinning the conceptualisation of education as an agent of social change or status quo. The role of education in promoting development cannot be evaluated in isolation from its political, economic and social relationships. In this section an attempt has been made to develop an awareness of these relations although the literature used was by no means exhaustive.

In the following section the influence of the colonialists, economists and rural development strategists on educational policy and development, considered here in general, will be examined in the Kenyan context. The relationships between the education system and Kenya's socio-economic structure and political objectives will be discussed in Chapter 6 in the light of the general observations made in 1(iv) and 1(v).

3. The Development of Education in Kenya

3(i) Historical Development

In order to fully understand the evolution of educational policy in Kenya it is essential to be aware of the major historical developments since the first colonial initiatives. No more than a brief outline is given in this section since the subject has been treated much more exhaustively and comprehensively by Alexander, Anderson and Sheffield. (100)

The first educational efforts in Kenya were initiated by the Missions. Johann Krapf established a small school at Rabai near Mombasa in 1844 and missionary education then spread inland aiming primarily to gain converts and train catechists who could both preach and teach but literacy soon became a basic concern. (101) In addition, most missions broadened their curricula to include manual training. Even after the colonial administration assumed responsibility for the education system in 1911, and despite the lack of centralised control over standards or policy, the missions laid the foundations for future

educational development in Kenya. (102)

The colonial Education Department was set up in 1911. By 1919 with only 30,000 Africans out of an estimated 2.7 million population attending 410 mission schools, the Department's budget was fixed at £ 636. (103) However, seeing education as a means of investment for the future, the Director of Education, J.R. Orr, made a plea for increased funds;-

" I would therefore impress upon all who have the control of education: (1) that the most thoughtfully educated nation will in the future rule the world (2) that the physical, moral and intellectual and vocational training of every boy and girl throughout the Protectorate increases the manpower and resources of the Empire. " (104)

Accordingly, in 1922 the Education Department began a grants-in-aid scheme whereby mission schools judged to reach certain standards received financial aid. This system received further support from the Commissions of the Phelps-Stokes Fund in 1919 and 1924 which focussed attention on the poor state of education for Africans from both quantitative and qualitative viewpoints. The Phelps-Stokes Reports defined a policy of adapting Western academic systems to African needs so as to;-

"... draw out the powers of the Native African and fit him to meet the specific problems and needs of his individual and community life. " (105)

The Reports made a major contribution to the formation of colonial policy by drawing together a developing awareness of the problems. However, by their emphasis on adaption of European education it assumed the continuation of an essentially static peasant society in a permanently inferior

position and one of the objectives seemed to be to develop;-

" .. a responsible elite through a literary education in residential schools, and at the same time raise the level of the mass through a more practical education related to life on the land. " (106)

The Commissions divided the African community into three distinct groups;-

1. Africans in Native Reserves living in villages and off the land
2. Artisans and craftsmen
3. Skilled professionals required by State and Commerce

In consequence, there emerged;-

" .. three distinct educational systems within the African system tailored for each class. " (107)

In 1925 the Colonial Office established a permanent Advisory Committee on Education. The first report drew heavily on the Phelps-Stokes recommendations producing an official policy statement - the 1925 Memorandum - outlining 13 broad principles which became the basic structure upon which subsequent educational proposals were built.

The statement led to racist stratification of the education system. In 1926 the Education Department outlayed \$ 180.5 per European pupil in state and state-aided schools, \$ 37.0 for Asians and \$ 33.4 for Africans. (108)

The African school system was stratified in a similar way. Alliance High School, for example, founded in 1926 at Kikuyu, aimed at producing Africans for high-level

administrative and professional positions. Artisans and craftsmen were trained at Machakos Technical School and the Native Industrial Training Depot at Kabete established in 1925. Further Advisory Committee Memoranda in 1935 and 1943 stressed the inter-relationship of the schools with other aspects of community life such as adult education, health and agriculture but, in essence, they supported the racist and 3-tier system of school education.

It was inevitable that political agitation for more African control over education developed in the 1920's and 1930's. The local Native Councils attempted to widen access to educational opportunities in opposition to the Missions who saw this as a challenge to their virtual monopoly in the field. (109) One of the most significant developments was the formation of a pressure group - the Young Kikuyu Association ( Y.K.A ) - lead by Harry Thuku, in 1921. Despite growing splits within the African political movement which developed over the years, better educational facilities became a universal demand of all the factions.

The Kikuyu established the Kikuyu Independent Schools' Association ( K.I.S.A ) in 1929 and by 1936 approximately 5% of the total student population were in independent schools. However, in 1937, in their agreement to use the Government syllabus, an Inspector of Schools was appointed for the independent schools. Nevertheless, the movement forced a reassessment of colonial policy. Mere paternalism would no longer be tolerated. The

Africans demanded an increasing share in the running of schools and Mission education came under increasing criticism from both African and European educators.

The further development of the system during the 1950's took place within the framework set by the Beecher Report - ' A Ten Year Plan for the Development of African Education ' - published in 1949. The Report brought changes in educational administration and introduced a 4-4-4 system of primary, intermediate and secondary schooling to replace the previous 6-2-4 organisation but, in essence, it reaffirmed the basic objectives of African education evolving prior to 1948. Independent schools became ' voluntary agencies ' qualifying for the grants-in-aid system. The Report then argued that the system needed to be related to the manpower requirements of Kenyan society. Top-level jobs were reserved for Europeans and so there was little demand for Africans educated beyond primary level, suggesting that only 23% of primary children were suitable for secondary education. (110)

This effectively retrenched and legitimised the hierarchical structure of education which persists up to the present day. As Mutua put it;-

" The administration decided on the number of people to be absorbed into these post-primary sectors of the educational system but it did not seem to be important to find out what percentage these formed of those who had initially entered it. " (111)

The Binns Report of 1952 criticised the Beecher Report's

proposals for a rigidly hierarchical system but of greater importance was the recognition that the planning of educational development must be closely integrated with overall territorial development. Since they believed that the economic development of Kenya would for some time to come be based upon agricultural production, the Binns Report advocated directing education towards increasing the productivity of the rural sector. (112)

Most significantly the Beecher, Binns and Cambridge Conference Reports ( 1952 ) had decided that Britain should play a more positive role in African education - partnership rather than trusteeship - but neglected to consider the possibility of the decline and eventual abolition of the colonial system. Accordingly, despite the Emergency and the subsequent closure of the independent schools, the Development Plan of 1957-1960 aimed to raise educational standards throughout the system but, in practice, allocated 19% of funds to the European community ( only 1% of the population ), 28% to the Asian schools ( 3% of the population ) and 53% to the African schools (113), and at the same time, supporting the Beecher recommendations.

During this period the demand for education became so intense that by 1960 the number of African primary schools was more than twice that forecast in the Beecher Report with three times as many intermediate and secondary schools. The tremendous increase in places is demonstrated in Table 1. The number of primary

TABLE 1

Educational Development 1954 - 1963

	PRIMARY		SECONDARY	
	SCHOOLS	ENROLMENT	SCHOOLS	ENROLMENT
1954	3,390	386,311	50	9,132
1955	3,588	432,628	51	9,997
1956	3,680	486,937	55	10,856
1957	4,064	547,989	62	11,265
1958	4,691	651,758	78	15,142
1959	4,876	719,510	94	17,950
1960	5,206	781,295	91	19,445
1961	7,725	870,448	104	21,369
1962	6,198	935,766	141	25,903
1963	6,058	891,553	150	28,764

## Notes:

1. Figures from Economic Survey (1964)

schools was increasing at an average annual rate of 8.7%, primary enrolment at 14.5%, secondary schools at 22.2% and secondary enrolment at 23.9%.

As the colonial administration attempted to cater for this demand ( by re-opening the K.I.S.A schools, for instance ) increasing attention was given to the problem of relating education to specific manpower priorities stimulated by the Ashby Report on Nigeria. Subsequently, in order to turn out Africans qualified to take over the professional, academic and administrative sectors, the Royal Technical College in Nairobi was re-organised as a federated University College within the East African University between 1958 and 1962.

There is clear evidence that the Colonial Education Department was beginning to turn away from the formal, academic, severely hierarchical and competitive system but by this time the responsibility for educational development was assumed by the new Ministry of Education led by a Kenyan Minister and colonial policy was re-assessed in the context of forthcoming independence. The effects of colonial education, which were by no means entirely negative for Kenyan development, will become clearer in subsequent sections particularly in the following discussion of the evolution of post-colonial educational policy.

3(ii) The Evolution of Educational Policy

In 1961, the Minister of Education, Ronald Ngala, proposed;-

".. a formal enquiry into our education policy with a view to formulating a plan for the next 8 years which will be within the expected financial resources of the country. " (114)

Colonial policy, based on the Beecher Report, was rejected by the new Ministry since, they argued, it had aimed to keep Africans in an inferior position while creating elites and to destroy and denigrate African culture and personality.

As Mutua put it;-

" The whole of the administration practice was geared towards the perpetuation of white interests and a subtle but utterly complete assimilation of the African into the British way of life. To succeed, this process had to be accompanied by just as subtle and just as complete destruction of the African personality. The resulting individual could then be moulded into any shape and mentality that served best the interests of the colonialists. " (115)

Indeed, the Phelps-Stokes Commission;-

" .. saw an educational system which divorced the African from his physical and social environment and offered in return service to the white man's religion and to his occupational demands. " (116)

In addition, the elite African produced by this sort of education has been described by Urch;-

" His view of education was not that of an Africanised curriculum geared to help solve the problems of his local community, but rather one that helped prepare him for a western way of life and gave him both financial reward and social prestige. " (117)

Educational policy in the 1960's owed much to the Conference of African States on the Development of Education, which met at Addis Ababa in May, 1961. The Report stressed academic reform, an Africanised curriculum, and the importance of meeting the high-level manpower requirements of emerging nations - therefore, arguing for the priority of secondary and higher education.

The Conference, then, expressed the growing recognition;-

" ..of education as an investment in any program of economic and social development, and the need for a close link between educational planning and over-all development planning. " (118)

In relation to Kenya, V.L Griffiths produced a report in 1962 in which he clearly perceived the political objectives of education - creating national identity and achieving national integration. He stressed the need to introduce a strong Kenyan flavour to teaching and the curriculum, but conceded that expansion was limited by the budget. Education could not, therefore, be treated as a social service but as an investment.

The Hunter Report of 1962 - ' Education for a Developing Region ' - examined the potential for economic growth in East Africa and the optimum role to be played by education. The paper endorsed the conclusions of the Addis Ababa Conference in emphasising the expansion of secondary schooling as the key to the problem of generating sufficient high-level manpower. However, Hunter did perceive the danger of an uncontrolled expansion of the educational system not only because of the financial burden but because of the political agitation which may result. In saying this, Hunter recommended a close control of educational development at higher levels in accordance with the economic development of the country.

The most important report of this period was that produced by the Ominde Commission set up in 1964 and

headed by Dr. Simeon Ominde. The report aimed at examining all aspects of education stressing its role in promoting national unity through emphasis on cultural and social values and its integration with overall economic development planning. Part I of the report, completed in 1964, dealt with questions of policy of which the three most important items are discussed below.

1. Racial Segregation

Racist segregation was banned but it was recognised that the implementation of this policy would be a slow task. As the report put it;-

" It is, therefore, our belief that the right long-term policy is a policy of equal fees throughout the public secondary schools of Kenya. Unfortunately, the cost of such equalisation is prohibitive in the short term, in view of other urgent educational objectives. " (119)

In consequence, the racist system effectively persists in the grading of schools in the present day. In 1970-71 the fees at former European schools were K. 546 Shs. , K. 182 Shs. at former Asian schools and K. 72 Shs. at African schools. Racialism has been replaced by socio-economic differences. (120)

2. Curriculum

The report recognised Kenya's emergence as a modern country but believed that the best elements of traditional African culture should be maintained and incorporated into the educational system. Teaching and the curricula were to be given an ' African character ', (121) Considerable attention

was paid to curriculum reform as a means of promoting greater knowledge and appreciation of Kenya's history and culture, and teachers were expected to be ' convinced exponents ' of national unity. As Odhiambo argued;-

" I believe that it is essential that throughout our educational system, the spirit of nationalism, both Kenyan and Pan-African, must penetrate... the nation must be given a purpose to work for.. this must be the pride in building a Kenya nation and an ultimate African nation. The whole educational system must be used in inculcating this spirit. " (122)

In addition, the curriculum was expected to reflect Kenya's needs for various manpower categories.

### 3. Manpower Planning

The report noted that the 1966-1970 Development Plan estimated that the production of non-agricultural employment would run at about 15,000 jobs per year and, therefore, a major priority would be the re-orientation of the aspirations and interests of most of the young people passing through the system. As the report commented;-

" ..it remains true that to supply the real needs of Kenya a much more positive attitude towards practical and especially agrarian occupations is necessary. " (123)

It was recommended that schools introduce more vocational and practical courses to supply this demand;-

" .. we wish to argue for a broadening of the concept of secondary education in two respects. First, we would like to see a development of certain types of post-primary education which are designed to provide an outlet not, as hitherto, primarily into the University, the

professions and various white-collar occupations , but into the production side of industry including agriculture.. we would like to see a wider range of options in the established secondary schools and a less academic treatment of subjects. (124)

The Hutasoit-Prator Report, published in 1965, also had important effect on the further development of the education system in recommending the maintenance of English as the medium of instruction with the vernacular as a compulsory subject of secondary importance.

The advantages were seen as the common use of English as the lingua franca and language of science and commerce, and as a means of integrating the diverse ethnic groups. (125). However, the first three years of primary school education are conducted in the vernacular at present.

In 1966, University College Nairobi, with the full support of the Kenya Government, sponsored an international conference at Kericho to examine the inter-related issues of education, employment and rural development. Participants were drawn from a variety of fields including agriculture, education, economic planning and labour relations, thereby emphasising the necessity for seeing education as part of an integrated strategy in promoting rural development.

The main theme of the Conference was the primary-school leaver problem but it concluded that the most urgent educational need lay outside the formal school sector and that adult education offered the greatest potential for providing productive employment for the majority.

The participants also recognised that the Government's continued commitment to the rapid expansion of the school system severely limited the financial resources available for any new approaches and agreed on the need for such approaches to have low cost units and on the importance of re-directing the impressive popular enthusiasm for education away from its academic orientation towards a more practical, rurally-oriented type of schooling.

Accordingly, in 1966 the Government established the Board of Adult Education and in 1967 a widespread literacy campaign was conducted with the assistance of UNESCO amongst adults in 31 of Kenya's 41 Districts.

A further influential report appeared in 1965, published by the Ministry of Economic Planning and Development, on ' High-Level Manpower Requirements and Resources in Kenya, 1964-1970. ' The document pointed out that 90% of students failed to progress beyond primary level and, in consequence;-

" A heavy responsibility .. was placed on education to orient the aspirations and interests of the students towards agriculture... ( The Commission ) felt that a solution could be developed through an Africanised curriculum which made the student aware of his surroundings. Through this new curriculum, attitudes could be organised which would give status to farming and indoctrinate the young students in the importance of modern agriculture to the development of the nation. " (126)

These conclusions were endorsed by the ' Family Planning in Kenya ' Report of 1967 which argued that with a population growth of 3.5% p.a neither educational development nor economic growth would be able to keep

pace with demand and it was essential that education be biased towards agricultural and rural development. (127)

Despite these recommendations the Ministry of Education concentrated upon the expansion of facilities at both primary and secondary levels with, it seemed, little indication of a concerted effort to re-orient the curricula and direction of school education. Expansion continued to be the policy in the 1970-1974 Development Plan.

The Government assigned ' high priority ' to universal primary education. Despite its already heavy educational expenditure the Plan proposed to increase the enrolment from an estimated 61% in 1968 to 75% in 1974. The Government clearly realised the political capital to be gained from this policy and, of course, KANU, the ruling Party, had made this a major item in its manifestoes.

In addition, the development of secondary education was accorded similar priority;-

" The Government's policy for secondary education has two main objectives. The first is to expand enrolments at all levels to meet the social and economic needs of society for its general development. The second is to make adequate provision to meet the demands of qualified individuals for their personal development and self-fulfilment. " (129)

Nevertheless, the Plan emphasised the ' strategy of rural development as the route of national development ' (130) and was committed to the generation of employment opportunities in the rural/agricultural sector;-

" The Government believes that it is only through an accelerated development of the rural areas that balanced economic development can be achieved, that the necessary growth of employment opportunities can be generated and that the people as a whole can participate in the development process. " (131)

Therefore, to accompany the plans to promote rural development, a large capital programme assisted by the World Bank was proposed to construct and equip many more agricultural, home science and industrial arts workshops and to provide equipment for teaching commercial subjects in 30 schools. (132) However, it was apparent that the efforts to re-orientate the system in conjunction with the rural development programme were largely insubstantial and outside the formal school system.

By 1974 the Kenya Government publicised the following list of achievements in the field of education;-

1. The rapid expansion of educational opportunities at the primary and secondary levels in the rural areas
2. The removal of racial segregation
3. The localisation of syllabi at all levels
4. The production of local teaching material
5. Establishment of secondary teacher education programmes at K.U.C, Kenya Science Teachers College and Nairobi University Faculty of Education
6. Introduction of applied subjects into secondary schools
7. Introduction of a supervisory service for primary education
8. Major advances and rapid expansion in technical and tertiary education. (133)

Nevertheless, most of the changes which had occurred since the 1960's had been in the direction of quantitative expansion within the inherited framework. Economic development was still biased towards the modern sector

and;-

" .. the structure and content of the formal educational system has reinforced this pattern. " (134)

The system was still highly selective and hierarchical stressing academic rather than vocational, technical and agricultural subjects. The 1974-1978 Development Plan, therefore, aimed at;-

1. Influencing the pattern as well as the rate of economic growth to redress the disparity of development between the rural and urban areas by creating new opportunities in the countryside. (135)
2. Creating new means for individuals to acquire relevant skills and abilities required by the rural economy by supporting second-chance institutions running parallel to the structure and content of the formal system of education. (136)

In these objectives the Plan drew heavily from the Ministry of Education's ' Study of Curriculum Development in Kenya ' which published its findings in 1972. The report surveyed two areas in Kenya with contrasting educational problems (137) and evaluated the means and estimated the potential results of re-orienting the curricula and examination procedures to prepare the students for existing employment opportunities.

The study denied that education, by generating inappropriate occupational aspirations, was directly responsible for producing unemployment but strongly favoured gearing the system to the nation's manpower needs;-

".. the mission does not accept the widely-held view that the expansion of education has been a cause of unemployment. We recognise that education has done much to bring the problem into the open, mainly by offering a route whereby those unlikely to earn a reasonable living in the subsistence sector of rural society may find their way into the modern wage-earning sector. " (138)

The report was also highly critical of examination procedures. The system was, and still is, severely pyramidal and the examinations coming at the end of each stage were based on narrow syllabi and teaching techniques, and confined to easily tested knowledge or methods. (139)

The Mission recommended that the examinations should be re-organised to place less of a premium upon factual knowledge and be related to local community development issues and problems. (140) Similarly, the curricula, they argued, should include more agricultural and vocational subjects, noting that, even in rural areas, topics such as gardening, soil chemistry, climatology, agronomy, housecraft and so on, were rarely taught. As the Commission put it;-

" Agriculture being a mainstay of the Kenyan economy, a substantial part of the curriculum should provide experience in rural crafts and sciences. " (141)

The report went on to recommend far greater emphasis on science and technical subjects and that;-

"..in all rural schools two double periods a week be set aside for boys and girls for work in science related to agriculture... and to provide older boys and girls with an understanding of scientific principles and an experience on a small scale of personal management of crops and animals. " (142)

Very few of the specific recommendations were implemented during the 1974-1978 Plan period but the spirit of the

report significantly influenced the policy proposals.

The Plan recognised that;-

" The most significant set of training problems arises from the concentration of the rewards of economic progress in the modern urbanised part of the economy. "

..and therefore;-

" The keynote strategy for this plan period will be to create opportunities for employment and skill development within the rural setting. " (143)

Accordingly, the Ministry of Education stated its intention to establish a ' National Commission on Education Objectives and Policies ', to evaluate the present system , define a new set of educational goals and formulate a plan of implementation. (144) In the context of a tightened budget the Ministry, therefore, aimed to offer increased opportunities for technical education at the secondary level without a significant increase in facilities or costs and to provide further financial aid to parallel agricultural and vocational training schemes. However, it was apparent that significant re-orientation of the formal system would await the ' National Commission's ' Report and over the plan period the Government effectively concentrated upon increasing the assistance to unaided schools and consolidation of the aided schools and generally raising standards and the quality of teaching.

The ' National Committee on Education Objectives and Policies ', chaired by the Ministry of Education's Permanent Secretary, Mr. P. Gichathi, began its work in December 1975 and reported in June 1977. Although it

gave 350 recommendations there were three main proposals;-

1. The current system of Primary schooling from Standards I-VII and Secondary education from Forms I-VI should be replaced by a 9 year basic compulsory education with secondary school starting at the present Form III.
2. All unaided schools should be taken over to provide facilities for junior secondary school, Standards VII to Form II.
3. The two extra years of primary education should be devoted to the development of basic skills for industrial, agricultural and commercial jobs. The report therefore suggested that a ' Primary Progressive Examination ' ( P.P.E ) should replace the current ' Certificate of Primary Education ' ( C.P.E ) by 1985.

The Commission noted that the education system had expanded at the expense of quality and relevance to Kenya's needs and, therefore, called for an orientation of national development towards employment generating areas. It stressed the promotion of national unity through the removal of social and regional inequalities and the importance of traditional ' African ' values.

The report pointed out that;-

" ... more could have been done towards the growth of self employment in the rural areas in agriculture and commerce and the setting up of more industries in these areas. " (145)

Also, in accordance with the 1974-1978 Development Plan, proposals to tighten the educational capital allocation

were recommended by the Commission, setting expenditure at 29% of the national recurrent budget.

In terms of the changes it proposed, the Gichathi Report was the most radical of the post-colonial period.

However, if one examines the 1979-1983 Development Plan, once again there is little suggestion that the recommendations will be quickly implemented. The Plan did propose to direct the curriculum more towards preparation for employment at the end of the Primary stage. (146)

And, in terms of post-primary education;-

"At all levels, secondary, higher and tertiary the policy will be to bring programmes more into harmony with the nation's needs and aspirations. To this end there will be a redirection of education towards more technical and vocational skills." (147)

However, the proposal to increase the primary stage from 7 to 9 years and replace the C.P.E. seems to have been shelved for the moment.

The consistent theme running through the various official reports on education since the Ominde Commission of 1964 is that the system is unrelated to Kenya's specific manpower requirements, and community and development problems. Despite the Kenya Government's recent interest in rural development the education system has remained essentially unaltered. There have been minor efforts to promote more relevant subjects to the curricula but the most important developments in vocational, commercial, technical and agricultural education have been implemented outside the formal school system.

In the following section the structure of the present educational system is described and discussed, to provide the basis of understanding its problems of relevance and inequality.

4. The Structure of Education in Kenya

4(i) The Formal Sector

The formal sector comprises the traditional school system and University. The Government, of course, finances institutions outside the formal system ( partly or wholly ) and, similarly, certain institutions inside the formal sector receive no government assistance. However, the majority of the budget is allocated to the formal sector. Expenditure on education has always been heavy. Over 35% of the annual budget was devoted to education in the early 1970's and it was noted in the 1974-1978 Development Plan that if the present trend continued the figure would be over 80% by 1990. <sup>(148)</sup> Expenditure was stabilised during that plan period and the Gichathi Report further recommended a reduction to 29% of the national recurrent budget. <sup>(149)</sup> In the 1979-1983 Plan education is allocated only 25.6% of the recurrent expenditure and 2.6% of the development budget. The trend in government expenditure between 1967 and 1979 is shown in Table 2.

The formal system is comprised of 7 years primary education , 4 years of junior secondary and 2 years senior secondary schooling, leading to University, College

TABLE 2.Government Expenditure on Education 1967-79

	Recurrent Expenditure K£ '000s	Development Expenditure K£ '000s	Total Expenditure K£ '000s	% Increase (Total)	% Increase Average Yearly
1967/68	6,699	1,886	8,585		
1970/71	21,116	1,443	22,559	162.8	54.3
1973/74	41,901	2,738	44,639	97.9	32.6
1976/77	72,430	5,684	78,114	75.0	25.0
1978/79	94,551	5,645	100,196	28.3	14.2

## Notes:

1. Figures from CENTRAL BUREAU OF STATISTICS, 1977.  
Economic Survey 1977 Ministry of Finance and Planning 157.  
and CENTRAL BUREAU OF STATISTICS 1975.  
Economic Survey 1975 Ministry of Finance and Planning 175  
and REPUBLIC OF KENYA 1979.  
Development Plan, 1979-1983, Government Printer 173

TABLE 3

The Educational Pyramid - Enrolment, 1965 - 1978

Year	Primary Enrolment	Junior Secondary Enrolment	% of Previous Level	Senior Secondary Enrolment	% of Previous Level	University of Nairobi	% of Previous Level
1965	1,042,146	46,125	4.4	1,851	4.0	926	50.0
1968	1,209,680	98,203	8.1	3,158	3.2	1,779	56.3
1969	1,282,297	111,576	8.7	3,670	3.3	2,240	61.0
1970	1,427,589	122,239	8.6	4,616	3.8	2,786	60.4
1971	1,525,498	135,150	8.9	5,572	4.1	3,443	61.8
1972	1,675,900	155,220	9.3	6,690	4.3	3,842	57.4
1973	1,816,000	167,590	9.2	7,177	4.3	4,620	64.4
1974	2,734,400	186,983	6.8	8,796	4.7	5,324	60.5
1975	2,881,195	No data	-	No data	-	5,006	-
1976	2,994,617	270,557	9.0	9,831	3.6	5,250	53.4
1977	2,971,200	309,659	10.4	10,323	3.3	5,283	51.2
1978	2,941,700	349,456	11.9	12,569	3.6	5,942	47.3

## Notes:

1. Figures from Central Bureau of Statistics, Economic Survey 1965 - 1979.
2. In addition to Nairobi University students are taken at the Polytechnics and training colleges. For example in 1976, 1,103 were enrolled at Kenyatta University College, 1713 at the Kenya Polytechnic, 814 at the Mombasa Polytechnic, 519 at the Kenya Science Teacher's College and 123 at the Kenya Technical Teacher's College - a total of 9,522 students at institutions of higher education - MINISTRY OF EDUCATION 1978. Annual Report 1976. Government Printer. 64-66

and Polytechnic. Entry from one stage to the next is highly competitive. Table 3 shows that in 1978 junior secondary enrolment was only 11.9% of the primary level and this statistic has only marginally improved since 1969. Similarly, in 1978 senior secondary enrolment was 3.6% of the previous level and this figure has fallen from 4.0% in 1965.

4(i)a Primary Education

Primary education is not strictly compulsory and some remote and nomadic tribes such as the Pokot, Maasai, Turkana and Samburu are reluctant to send their children to school. Nevertheless, enrolment has increased from 55% of the 6-12 cohort in 1965 to 86% in 1978 and it is hoped to achieve 95% enrolment by 1983. (150) The demand for primary education is intense among the more enlightened tribes and enrolment has been increasing at an average rate of 14.0% p.a between 1965 and 1978.

Primary schooling is now organised in 7 Standards from I to VII. The picture is somewhat complicated, however, by the rates of repetition and wastage. A considerable percentage of children re-enter the system, generally in the higher standards after C.P.E failure or enforced absence through home circumstances. The rate of wastage is significantly higher. Children tend to drop out at higher levels where fees are payable or they are old enough to be employed on the shamba. The rates of wastage for 1974 and 1978 are shown in Table 4. Almost 50% of those students completing Standard 1 are lost by

TABLE 4  
Wastage Rate in Primary Schools  
1974 and 1978

ENROLLMENT	1974	1978
Standard I	450,000	600,000
Standard II	382,000	553,000
Standard III	334,000	526,000
Standard IV	270,000	460,000
Standard V	234,000	378,000
Standard VI	216,000	358,000
Standard VII	230,000	357,000
TOTALS	2,116,000	3,232,000
Wastage Rate I - VII	48.9%	40.5%

Notes:

1. Figures from REPUBLIC OF KENYA 1974  
Development Plan, 1974-1978 Part 1, Government  
 Printer. 410
2. Figures are estimated.

Standard VII.

Fees were paid in all Standards up to 1974 when President Kenyatta abolished Standards I to IV payments. As a result, primary enrolment increased by 50.6% in one year. Kenyatta subsequently waived Standard V fees from 1977 and Standard VI payments were abolished by President Moi on Jamhuri Day, 1978.

Although Standard VII fees are scheduled to be waived in 1980, primary education is not strictly 'free'. There are other charges imposed such as building, equipment and uniform fees, most of which have been considerably inflated since tuition fees were suspended.

Standards vary enormously in primary schools. At one end of the spectrum are the Nairobi private schools such as Consolata, Loreto Convent, Hillcrest, Banda and Braeburn which cater for ex-patriate and Asian as well as African children. The fees are very high but the staff are usually well qualified and recruited from overseas and the equipment and buildings are generally of high standard. At the other end are rural schools such as Gathathi-ini Primary in Nyeri District <sup>(151)</sup> which consists of three long wooden buildings with small hatches for windows and walls not quite reaching the rafters. The rooms are dark, cool and smoky and, in heavy rains, students are unable to hear the teacher through the noise on the corrugated iron roofs and the classrooms become plastered in mud. There is no

electricity, running water, science equipment or an adequate provision of books. Teaching standards are low since the staff have usually been educated only up to Form IV and are inadequate in language and basic general and technical knowledge with a deep-rooted traditional approach to education. As a result, the out-dated syllabi are not replaced by innovatory methods and subjects.

At Standard VII, students sit the crucial C.P.E ( which replaced the Kenya Primary Examination ) - a multiple-choice, computer marked examination ( with the exception of the English Composition Paper ) consisting of Mathematics, English and General Knowledge papers. All students completing the 7 year primary course receive some recognition of their achievement but the examination is still fundamentally a filter for secondary education and its importance has not diminished over the years.

4(i)b Secondary Education

The increase in secondary enrolment since independence has been quite remarkable. Table 5 shows that enrolment in junior secondary education, from Form I to Form IV, has increased at an average annual rate of 64.1% between 1963 and 1976. The figure for senior secondary schooling, from Form V to Form VI, 60.3%, is equally impressive. This compares with 17.3% for primary enrolment over the same period.

Nevertheless, as Table 3 demonstrated, the characteristics of the educational pyramid have undergone only minor

TABLE 5Enrolment Increase 1963 - 1976

Education Level	Enrolment 1963	Enrolment 1976	% increase (Total)	Average Annual % increase
Primary	891,474	2,894,617	224.7	17.3
Junior Secondary	29,008	270,557	832.7	64.1
Senior Secondary	1,112	9,831	784.1	60.3

## Notes:

1. Figures from MINISTRY OF EDUCATION 1978  
Annual Report 1976, Government Printer, 27,54.

change.

In 1970 the Kenya Junior Secondary Examination ( K.J.S.E ) was introduced for unaided schools at Form II since many schools of this type only offer a two year programme and a good result may enable a student to join a government school for Forms III and IV.

However, the most important goal of junior secondary education is the East African Certificate of Education examination ( E.A.C.E ) taken at Form IV and considered equivalent to ' O-Levels '. The majority of E.A.C.E candidates will not obtain high enough grades to attend senior secondary school and the annual E.A.C.E results are so important that schools are essentially classified on this basis.

Forms V and VI courses are mainly restricted to top government and some private schools. Those students who obtain a Division 1 or, possibly, a Division 2 pass at E.A.C.E and are selected for senior secondary school invariably have to change schools and move away from home, sometimes to the other end of the country. The majority of schools offering courses up to Form VI, therefore, are boarding and multi-tribal.

Students take the East African Advanced Certificate of Education ( E.A.A.C.E ) at Form VI, consisting of up to 3 Principal subjects and up to 3 Subsidiary subjects. There were only 104 schools conducting E.A.C.E examinations in 1978, only 7.2% of the total of 1,444

schools offering E.A.C.E courses. (152)

Fees are paid throughout Forms I to VI. There are some bursaries available to needy and talented pupils and a highly respected charitable school in Nairobi, Starehe, for poor and rootless children. However, there is no concerted programme to assist students unable to pay the fees and outside the government system the schools are entitled to charge whatever fees they like.

Secondary schools are classified into grades by the Ministry of Education Inspectorate. In 1978, there were 128 grade 'A' schools ( 8.9% ), 165 grade 'B' ( 11.4% ), 287 grade 'C' ( 19.9% ) and 864 grade 'D' ( 59.8% ) schools out of a total of 1444 in Kenya.

All fully registered secondary schools automatically receive a grade 'D'. The receipt of this grade depends on the possession of a full registration certificate which is obtained on application to the Ministry of Education. Up-gradation depends on a visit by a School Inspector and the approval of his recommendations by the Chief Inspector but it appears to be a somewhat arbitrary process. The criteria for the various grades - 'adequate provision of teaching staff', 'adequate laboratory facilities and science equipment' - and so on, are rather vague.

Secondary schools may also be categorised according to type. There are government and government assisted schools, unaided ( harambee ) and private schools.

Some of their important features are described below.

1. Government Schools

The majority of the top government schools especially in Nairobi were originally designated European and Asian schools. Nairobi School, for example, was founded in 1931 as the Prince of Wales School and the first African students were admitted in 1961, changing its name in 1965. <sup>(153)</sup> Lenana School, also in Nairobi, was founded in 1949 as the Duke of York School, with the first Africans admitted in 1961, changing its name in 1967. <sup>(154)</sup> Jamhuri High School was founded in 1920 as the Duke of Gloucester School for Asian pupils, changing its name in 1965.

On the other hand, Alliance High School, founded in 1926, was originally intended for the education of Africans and most of the rural government schools were developed in the 1950's and 1960's with the initial assistance of a Mission and gradual funding by the Kenya Government. Ngandu High School in Nyeri District started in 1964 with the help of the Consolata Missionaries. Kangaru School in Embu was set up in 1947 by the colonial government and continued this financial arrangement after independence.

Grade A government schools may be designated National or Provincial. A National school such as Lenana, Kenya High or Alliance High is required to accept students from all Kenya's provinces on a quota basis. At Kenya High, in

1979, 61% of the Form I intake originated from Nairobi and Central Province. The remaining places were shared between the other 6 Provinces. Similarly, at Lenana School, 115 of the 195 Form I places were allocated to students from Nairobi primary schools. The Provincial schools, such as Kagumo High and Nyeri High in Central Province and Kangaru School in Eastern Province, are expected to recruit as equally as possible from all the Districts comprising the Province. In practice, however, more pupils are admitted from the local District. All other government schools may admit students from any area but, unless they are boarding, the majority of pupils tend to originate from the immediate area.

The Government is responsible for the schools' development and recurrent expenditure, inspection, and the recruitment and salaries of teachers through the Teachers Service Commission. Fees are not entirely standardised but it is recommended that they should fall below a K 1,500 Shs ceiling ( about £88 ) per year. Individual schools may charge tuition fees specific to particular courses and building, uniform and equipment payments. However, government schools are the cheapest in the system and there is less likelihood of inflation and corruption.

Until recently the Government has pursued a policy of assistance to unaided schools by taking over a Form I class each year until the school is State

financed. In some cases a government stream may operate parallel to an unaided stream in the same school with the concomitant differences in standards and fees. Assistance may also take the form of allocation of state qualified teachers and equipment and this form of aid will be more common during the 1979-1983 Plan period.

## 2. Harambee Schools

The most significant and the most researched feature of post colonial secondary educational development has been the ' Harambee ' ( self-help ) movement which aimed at widening access to educational opportunity by building, equipping, staffing and financing local schools.

The movement had its roots in the political agitation during the colonial period as articulated, for example, in the Kikuyu K.I.S.A <sup>(155)</sup> and the Abaluhya local educational efforts. <sup>(156)</sup> Although the slogan ' harambee ' ( meaning literally ' lets all pull together ! ) was chosen by K.A.N.U upon independence it is not a new concept. Hill, for example, has demonstrated that harambee effort in Kitui, Eastern Province, developed from the village ' myethya ' ( work-party ) system. <sup>(157)</sup>

The process of harambee has been well documented at all levels; nursery, primary and secondary, and throughout Kenya. <sup>(158)</sup> In most harambee efforts local people form a committee which formulates objectives and

organises a fund-raising ' baraza ' in which people give money, land or possessions, and buy a suitable plot ( or acquire Mission or Council land through donation ) on which to build a school, teachers' houses, latrines, store, office and staffroom. Additional money is used to pay teachers, who are appointed by the committee, and equipment. A considerable amount of money can be raised through these meetings (159) particularly if prominent politicians and officials agree to attend. (160)

The development of the harambee movement has been rapid. In 1965 there were 100 harambee secondary schools but 206 by 1967 ( compared to 336 aided schools ) and 369 in 1968. (161) By 1970 harambee schools constituted 62% of the secondary total and the proportion remained 63% in 1978 with 700 unaided and 420 aided schools. (162)

In terms of enrolment, Table 6 shows that whereas aided schools accounted for 57.0% of the total in 1969 they enrolled only 33.4% in 1978. Between 1969 and 1973 harambee enrolment was increasing at an average rate of 13.0% compared with 12.9% for aided schools. However, between 1973 and 1978 the harambee annual increase averaged at 43.9% compared with 4.4% for aided schools.

In the early 1970's many harambee schools operated only 2 Forms. However, as Table 7 demonstrates, this situation is changing. In 1975 harambee schools accounted for 61.1% of the Form I enrolment and 72.9% in 1978. However, in 1975, only 34.8% of the Form IV

TABLE 6

Enrolment in Aided and Unaided Secondary  
Schools, 1969-1978

Year	Aided Enrolment	% of Total	Unaided Enrolment	% of Total	Total Enrolment
1969	65,644	57.0	49,602	43.0	115,246
1970	74,561	58.8	52,294	41.2	126,855
1971	81,046	57.6	59,676	42.4	140,722
1972	91,494	56.5	70,416	43.5	161,910
1973	99,438	56.9	75,329	43.1	174,767
1974	103,763	53.0	92,016	47.0	195,779
1975	115,748	51.0	111,087	49.0	226,835
1976	118,635	42.3	161,753	57.7	280,388
1977	127,996	40.0	191,986	60.0	319,982
1978	121,410	33.4	240,615	66.6	362,025

## Notes:

1. Figures from CENTRAL BUREAU OF STATISTICS, Economic Survey 1978, 1977, 1976, 1975, 1974, 1973, 1972, 1971, 1970, 1969. Government Printer, Nairobi.

Rates of Enrolment Increase

	AIDED		UNAIDED	
	Total Increase	Average yearly increase	Total Increase	Average yearly increase
1969 - 1973	51.5	12.9	51.9	13.0
1973 - 1978	22.1	4.4	219.4	43.9

TABLE 7

Secondary Enrolment by Form, Differences  
between Aided and Unaided Schools, 1975-1978

		1975	1976	1977	1978
Form I	Aided No.	28,673	27,715	30,587	28,433
	Aided %	38.9	29.2	28.7	27.1
	Unaided No.	45,017	67,119	75,826	76,480
	Unaided %	61.1	70.8	71.3	72.9
	TOTAL	73,690	94,834	106,413	104,913
Form IV	Aided No.	23,453	25,908	28,355	27,020
	Aided %	65.2	56.8	53.9	45.0
	Unaided No.	12,517	19,709	24,213	33,000
	Unaided %	34.8	43.2	46.1	55.0
	TOTAL	35,970	45,617	52,568	60,020
Form VI	Aided No.	3,959	4,225	4,671	4,385
	Aided %	95.5	91.4	90.3	79.3
	Unaided No.	187	398	503	1,145
	Unaided %	4.5	8.6	9.7	20.7
	TOTAL	4,146	4,623	5,174	5,530

## Notes:

1. Figures from CENTRAL BUREAU OF STATISTICS, Economic Survey 1979, 1978, 1977 and 1976

admissions were in harambee schools but in 1978 this figure increased to 55.0%. Similarly, the percentage of the Form VI intake in unaided schools rose from 4.8% in 1975 to 20.7% in 1978.

The movement has continued to be monitored but virtually uncontrolled by the Government. The criteria for legal registration were only introduced in the 1970's and most of the requirements were either vague or easily met. The Government demanded that the school be sponsored by a Mission or a recognised local committee and managed by a responsible body. The minimal initial capital fund was set at K 40,000 Shs. ( about £ 2,350 ) and land availability at 30 acres. The committee was required to erect two classrooms, teachers' houses and latrines according to public health standards and ' maintain educational standards '. In addition, the provision of water facilities and adequate communications were conditional to Ministry of Education registration which was provisional for two years. (163)

The standards of facilities and education in most harambee schools are very poor. Inspection is limited, running water is rare, electricity even rarer, classes are too large, equipment is inadequate and the schools are supplied with not much more than a syllabus and cannot contemplate having a staff more than 50% qualified without government assistance. (164)

The Government has become increasingly concerned about the drop in standards. As early as 1965 the

Ominde Commission had reservations. The report sympathised, at least at an ideological level, with the surge in local initiative and commented;-

" Psychologically, the source of inspiration of the Harambee school is identical with the underlying motives of the government's own development program. " (165)

However, the Commission believed that harambee schools, being local efforts, would contribute to strong tribal feelings disruptive of national integration and also that the movement was essentially in conflict with the practicalities of the national development plan and would lead to occupational aspirations unlikely to be fulfilled. Furthermore, the fall in standards, they argued, was not conducive to progress;-

" It is very important that communities should be discouraged from launching out on schemes that they cannot adequately fulfil... there comes a stage in development and sophistication at which school buildings pass the limit of what can be achieved by self-help methods. " (166)

In Recommendation 29 the report suggested that;-

" Self-Help in education must be controlled, but not in a purely negative spirit. Self-Help has a permanent and valuable place in education, but Government control of such activities must be firm. " (168)

The first attempts at government influence in the self-help movement came in 1967 when a policy of taking over 25-30 Form I classes per year was announced, and this became a major part of the 1970-1974 education development programme. The 1970-1974 Development Plan, in fact, expressed the hope that the demand for harambee schools would soon ' die a natural death ' because of the expenses involved and as a result of the

decline in employment opportunities for the average school leaver. (169) The Government reiterated the fear originally expressed by the Ominde Commission that;-

"... many of the children in these schools would not in fact receive an education that could justify the description of secondary. " (170)

By the end of the Plan period it was apparent that the government take-over policy had had little effect and the harambee movement showed no signs of an 'early death' . Accordingly in 1975 the Government implemented a new scheme of aid called the ' Harambee Package Programme '. (171) Fifty schools per year were offered assistance in the form of fully qualified teachers, correspondence courses for K.J.S.E, audio-visual equipment and aid from the Inspectorate.

The Minister of Education, Dr. Taaitta Toweet explained that the earlier policy was too slow a means of assisting unaided schools. The provision of 1,000 teachers per year was, he argued, a more effective form of state aid. (172)

The increase in harambee school numbers continues unabated. The Government has not attempted to rigidly implement any of the restrictive measures recommended by the Ominde Commission. It is therefore important to understand the political bargaining behind the self-help movement.

Primarily, of course, the harambee effort grew out of the tremendous demand for secondary education. Parents

see harambee schooling as a second chance for their children who failed to obtain the C.P.E results necessary for admission to government schools. In addition, four further years of education, however good it is, does significantly raise the chances of obtaining a white-collar job and as an investment in a child it is relatively cheap.

However, a harambee project provides a situation in which the link between the people, the local MP and Parliament may be evaluated and tested. The locals and the school committees feel that the MP's role is in securing assistance and persuading prominent politicians and officials to attend the barazas. As Keller noted;-

" Headmasters tended to feel that their biggest assets for securing trained teachers from the government were either influential committee members or MP's. " (173)

Furthermore, in complaining of MP's who fail to attend fund-raising schemes, William Okello asked;-

" What is the use of such MP's ? " (174)

Politicians recognise the importance of harambee schemes to their political futures and leadership of a committee is a valuable asset and an inevitable step for middle class Africans with political aspirations. Barazas provide an opportunity for the invited dignatories to make an indirect political display. At the meetings the politicians and officials take every opportunity to out-donate the others. (175)

In some cases, harambee schools are illegally registered

by prominent officials and MP's. As Keller put it;-

" ...although there is a legal basis for closing down or not registering harambee schools which do not meet certain specified standards, in some cases officials find it politically wise to surrender to local pressures for the recognition of a school even when it is not up to standard. " (176)

Harambee is part of the K.A.N.U. ideology and disapproval and control of its practice is not easily rationalised. In addition, it is crucial for ambitious politicians, officials and civil servants to be involved with their local harambee programmes. Sometimes the entire Kenyan cabinet may be seen at a fund-raising meeting. This integration of national and local politics through the means of local development initiatives is extremely important for both politicians and "wananchi". Therefore, it is likely that the harambee movement will continue with the unofficial support and official disapproval of the government.

### 3. Private schools

In 1978 there were 365 Private schools in Kenya compared with 602 aided and 728 unaided. They have remained largely unstudied but they have been increasing rapidly since the early 1970's and, once confined mainly to Nairobi, they are now distributed throughout Kenya in both urban and rural areas.

The standard of private schools vary enormously. At one end of the scale there are schools such as St. Mary's and Strathmore College both in Nairobi and classified grade A. They have modern buildings, are very well equipped, with facilities which would compare favourably with the top

British grammar schools. Fees are high and there are many hidden costs. St. Mary's charges about £350 per year. Loreto Convent, Msongari in Nairobi charges approximately £265 per year and these fees put the schools beyond the means of the average African family. Therefore the top private schools have a high percentage of Asians and White Kenyan/expatriate children in their rolls.

Outside the grade A category, standards drop considerably. Conditions in most of the grade D private schools, especially in the rural areas, are appalling. Teachers are rarely qualified or indeed, very well educated. Overcrowding is severe and common. Equipment and the provision of books are totally inadequate and general facilities are very poor.

Private schools are, of course, profit making concerns, often owned by prominent politicians and civil servants, and every effort is made to cut down costs. Fees in some rural private schools may be about £90 per year and, quite often, other charges are levied as the terms progress. There are some marginally cheaper than government schools but the standard of education offered is considerably lower. As Malaki commented:-

"Most private schools are out to make as much money as possible and are prepared to spend very little for the benefit of their students. This is a mockery of educational ethics and should be discouraged at all costs. It is time the Ministry of Education closed such schools in the interests of the poor parent who pays exorbitant school fees for his innocent child who wastes his time in such schools." (177)

Stricter control of private education has been promised by the government for some time. In 1978 the Minister of Education, Dr. Toweet noted that;-

"The Government's attention has been drawn to numerous complaints regarding discrimination; poor education standards, poor teachers, exorbitant fees and many others in a number of privately registered schools." (178)

The Permanent Secretary, Mr. Gichathi further pointed out in early 1979 that;-

"We know there are private schools that exploit pupils and give very little return. Others enrol far beyond the number stipulated by the Government." (179)

However, the new Permanent Secretary, Mr. M'Mwirichia announced in May of 1979 that steps would be made to introduce stricter inspection of private secondary schools, <sup>(180)</sup> but there seems to be little sign of them since the Inspectorate is already under-staffed and over-worked.

4(ii) The Informal Sector

This study is not directly concerned with the informal sector but it is important to be aware of some of the alternatives to formal schooling in terms of students' choices and government policy.

The true 'informal' sector consists of small training apprenticeship artisan schemes which have developed over the past 10 years virtually unnoticed by educationalists. <sup>(181)</sup>

The trainees and their instructors are largely drawn from the poorer strata of society (though not the poorest)

and they are primarily Embu, Meru and particularly Kikuyu forming a close knit often tribal based network of distributors and suppliers working mainly in the squatter towns in Nairobi. They produce skilled mechanics, tradesmen and artisans while disregarding trade tests and distrusting paper qualifications and school credentials, although students pay for instruction (often illegally) and wages are rarely offered.

It is a very dynamic system and fulfils a very valuable function in providing cheap services and products and opportunities for self-employment. It has substantial support at the grass roots level and is spreading out from its Nairobi centre to the District towns of Nyeri, Murang'a and Thika. <sup>(182)</sup> However, it has received little government recognition or assistance despite its encapsulation of the 'ideals', certain Kenyan education-  
alists would like to see incorporated into the technical and agricultural education system.

In this section the various government sponsored and assisted informal educational schemes will be described.

4(ii)a Adult Education

Although some research was conducted in the early 1970's the Kenyan government has only recently turned its attention, in any considerable degree, to adult education. As a 'Daily Nation' columnist wrote;-

"In countries where formal education cannot alone meet the urgent need for generalised basic education in the near future because of the heavy financial burdens involved, adult education can make an effective contribution by responding directly to the practical needs of economic, social and cultural development of nations." (183)

In December 1978 the first Regional workshop in the Evaluation of Adult Education was held in Nairobi. The 5 day seminar chaired by J. K. Koinange, the Principal of K.U.C. noted that most African nations devoted less than 1% of the national budget in Adult Education and yet, in Kenya, for example, 35% of all male and 70% of women Kenyans between the ages of 15 and 70 are illiterate. The Workshop recommended that the government step up their efforts in this direction since full literacy, especially in the rural areas, would make an extremely important contribution to development. (184)

These conclusions were supported by the Kenya Secondary Schools Headmasters Association Conference in March, 1978 held at the Kenya Science Teachers College, Nairobi, (185) and the Government has promised significantly increased expenditure for these projects and intends to utilise the talents of University students and the enthusiasm of the Scouts and Youth movements in this area. (186)

4(ii)b Youth Centres and Clubs

Agricultural education in Kenya has, up till recently, been the priority of the Ministry of Agriculture. Primary school leavers could train to become junior agricultural assistants while secondary school leavers trained at

Egerton College near Nakuru - a system which could hardly provide the basis for widespread agricultural innovation.

However, since independence Young Farmers' Clubs have been formed largely in secondary schools. In 1977 there were over 160 clubs with a membership of 6,000 but the movement seems to have lost impetus recently since they depend primarily on the enthusiasm of the teachers and are largely theoretical. (187)

In addition, the 4 - K Clubs (188) were started in 1963 as part of the Rural Youth Programme as voluntary agricultural and harambee associations. In 1972 there were more than 1,000 clubs in 26 out of Kenya's 41 districts with a membership of 26,000 led by 1,400 voluntary workers and usually attached to a primary school or youth centre. Their problems, however, are similar to the Young Farmers' Clubs and their effects almost as limited. (189)

Youth Centres were set up by the colonial government in 1957 - the first one being located in Nyeri. After independence they were administered by the National Youth Council. The government eventually became involved with them through a grants-in-aid scheme administered by the Ministry of Co-operatives and Social Services in formulating the Youth Development Programme Policy in February 1971. Forty aided centres began operations in 1971/2 and there were 60 functioning by 1973. (190) Their purpose is to admit school leavers, drop-outs and illiterates and

develop skills and attitudes appropriate to income-earning opportunities in the rural areas. The curricula concentrates upon technical subjects such as carpentry, motor mechanics, tailoring, dressmaking, masonry, agriculture, home economics, leatherwork, metalwork, plumbing, electrical courses, typewriting and book-keeping.

From 1975 the Youth Development Programme was administered by the Ministry of Social Services and Housing and it noted that over 100 projects over the country were receiving government attention and assistance and a further 250 would be developed, involving 1,500 instructors by 1980. (191)

4(ii)c Harambee Institutes of Technology

The government expressed its interest in technical education in establishing provincial technical schools such as Nyeri Technical and Kabete Technical near Nairobi which utilise the E.A.C.E. curricula but specialise in commerce, secretarial arts, engineering and mechanics. The World Bank has provided most of the capital for these ventures and the government expects to increase enrolment from 6,480 in 1976 to 8,424 by 1983. (192)

However, it has been recognised that this form of education requires a broad rural base and should enrol primary failures and drop-outs. The Commonwealth Conference on Non-Formal Education for Development held in February 1979

in New Delhi noted that an average 30% of the total annual budget of developing nations is devoted to formal education compared with only 4% in the non-formal sector. The Conference recommended the development of less costly, more innovative and flexible programmes for learning outside schools and colleges. (193)

Kenya has however, opened a Technical Teachers' College in July 1979 for 700 students and a Ministry of Education and Teachers Service Commission team was sent to India, Pakistan and Bangladesh to recruit 200 teachers for physics, mathematics and technical courses. (194)

In addition, Kenya received a \$23m loan from the World Bank in April 1978 to finance various education projects in the country, part of which would supplement the \$31m multi-purpose schemes scheduled in the 1979-1983 Development Plan in remote areas such as Garissa, Wajir, Marsabit, Turkana, Samburu, West Pokot and Isiolo. (195)

Harambee initiatives have recently been channelled into technical training establishing Institutes of Technology which differ from Village Polytechnics in that they are not exclusively concerned with rural self-employment. (196)

The Government supports some of the Institutes with grants and teachers and expects the enrolment to increase from 1,007 to 3,859 from 1976 to 1983. (197) There are several problems, however. The Institutes are concentrated in Central Province which has the 3 most advanced -

Kirinyaga Technical Institute, Murang'a College of Technology and the Kiambu Institute of Science and Technology. Present plans crucially depend on overseas aid. Only projects with 40% of the target initial capital realised will go ahead. There are not enough trained staff and the administration is weak so that most Institutes are obliged to supplement their budget by selling produce and requesting assistance from the government. (198)

4(ii)d Village Polytechnics

The Village Polytechnic movement was launched by the National Christian Council of Kenya in 1966 involving the local raising of capital and self-help construction. They were intended to be low cost training centres for rural trades and occupations aimed at meeting the local requirements. In general, Village Polytechnics were originally designed to admit primary school leavers.

By 1972 there were 30 Village Polytechnics established and 18 of these were receiving substantial grants from the N.C.C.K. (199)

The movement has been welcomed by educationalists since it represents a radical departure from the formal school system. Recruitment is generally local and unrelated to school qualifications, the curricula is individualised, teaching is practical rather than theoretical, organisation is informal, participation is encouraged and control is local and autonomous rather than centralised. (200)

An evaluation mission was conducted by the Institute of Development Studies and the Norwegian Agency for international Development in 1974. In 1973 to 1974, 75 Village Polytechnics had been selected for government aid. The Mission found that between  $\frac{1}{2}$  and  $\frac{2}{3}$  of the leavers found some sort of paid work or self-employment. (201)

On average  $\frac{2}{3}$  of the leavers remained in the rural areas but Village Polytechnics near urban centres or having a high percentage of trainees from distant areas tended to show higher levels of migration. (202) However, the distribution was biased towards the more wealthy and progressive rural areas despite efforts to counteract this process. In 1973 the 15 aided Village Polytechnics were all in Central Province. (203)

The movement has rapidly developed. Between 1977 and 1978 250 Village Polytechnics were sponsored by the N.C.C.K. and organised by the National Village Polytechnic Central Committee. (204) As a result the Youth Development Division of the Ministry of Housing and Social Services commissioned a report in 1978 based on a survey of 23 Village Polytechnics mostly in Central Province. (205)

The report aimed at gauging the performance of Village Polytechnics in Central Kenya in promoting rural development, assessing trainee attitudes to Village Polytechnics and to employment prospects in the rural areas and Nairobi and estimating the extent to which the success of Village Polytechnics is dependent on the standards of

living in the local area. The study identified a number of short-term problems faced by Village Polytechnics which tended to boil down to a lack of finance for particular operations or developments and long-term problems mainly concerned with matters of organisation and administration particularly in attracting and retraining suitably qualified instructors.

However, the report concluded that the Village Polytechnics are fulfilling a need quite effectively. The contribution made by Village Polytechnics to local community development could be seen in the provision of skilled artisans, the fulfillment of building contracts and by the sale of furniture, clothing and farm implements. There is evidence of some loss of qualified trainees to the towns but only 28% of the trainee sample expressed a wish to work in Nairobi. It was also reported in 1979 that 85% known Village Polytechnic leavers were working and of this number 70% are based in rural areas. (206)

While there are several practical problems facing Village Polytechnics the report argued that the greatest danger to the continued development of Village Polytechnics is the growing lack of flexibility in organisation and the associated lack of long-term plans. Despite the early contrast of the Village Polytechnic with formal secondary education the polytechnics appear to be becoming

increasingly formalised and inflexible and courses are now more standardised. (207)

Nevertheless, the programme has tremendous potential if it can become more related to agricultural training and as the Evaluation Mission commented in 1974;-

"The real potential of the Programme... lies in its foreseeable future as an essential component of a large scale and many faceted programme of rural development." (208)

5. The Objectives of Education - New Emphases

In Section 2 the various educational paradigms to have influenced African education systems were considered in general. In this section the impact of two of these will be considered in the Kenyan context.

5(i) Manpower Production and Planning

The Addis Ababa Conference of 1961, the Hunter Report of 1962 and the Ashby Report on Nigeria mentioned above greatly influenced thinking in Kenya.

The Ominde Commission strongly argued for a careful co-ordination of educational development with economic growth and manpower requirements specifically recommending the training of technicians, crafts, office arts and agriculture in formal schools pointing out that;-

"No circumstance is more likely to discourage foreign investors than a belief that the necessary skilled manpower will not be forthcoming." (209)

The most important report on manpower planning was produced by the Ministry of Economic Planning and Development in 1965. (210) Realising that primary school is terminal for over 90% of the leavers and that their aspirations are geared almost solely to non-agricultural employment when the 1964-1970 Development Plan estimated a production of only 15,000 jobs per year in the modern sector it was clear that;-

"One of the heaviest responsibilities facing Kenya's educators is to devise ways and means of re-orientating the aspirations and interests of most of the young people passing through the primary schools." (211)

In terms of primary education, the Report recommended a curricula related to agricultural and vocational training and this should be;-

"Supported through a continuous and sustained programme of indoctrination as to the importance of improved and modern farming to the development and progress of the nation and the rewards which are possible to those who pursue it seriously." (212)

Turning to secondary education, it was recognised that Form IV is terminal for 60-70% of the students and that the present curricula was almost;-

"... wholly orientated to producing individuals for the pipelines of higher education and training." (213)

Recognising that 45% of Kenya's stock of high-level manpower was employed in skilled office occupations the Report suggested that the curricula should reflect these likely occupations for school leavers, in addition to

industrial arts;-

"The incorporation of an element of industrial arts into the secondary schools will also aid substantially in changing poor attitudes towards manual work often so common among students in secondary schools where curricula are orientated largely to higher education and white collar work." (214)

In terms of higher education, research demonstrated an over-emphasis on non-specialised degrees with too few students studying for science/mathematics based and vocational degrees. At the Form VI level it was pointed out that the mix between Arts and Science was imbalanced and the Report recommended government machinery to allocate government bursaries and loans for study in institutions of higher education relevant to the country's skill requirements.

Similar calls for re-orientation in the formal system have been made in the 1972 Ministry of Education's Study of Curriculum Development, the 1970-74, 74-78 and 79-83 Development Plans and the 1977 Gichathi Report. The Deputy Speaker of the National Assembly, Mr. J. K. Muregi, for example, in July 1977 called for a complete overhaul of the educational system since Kenya was short of professionals such as engineers, scientists and accountants. (215) In September of the same year, Mr. G. K. Kariithi, the Permanent Secretary in the Office of the President strongly argued that the educational system should emphasise applied science;-

" Only then can we overcome the present deficiency in managerial, technical and professional skills. "  
(216)

However, most of the change has been at the level of tertiary education. University, K.U.C, Polytechnic and teacher training outputs are now controlled and related to national requirements and the emphasis on arts degrees is declining. In 1978, 62.3% of the University students were taking science related degrees. (217) In addition, the cost of university education is to be recuperated by requiring the students to do one year's practical work as part of their courses (218) , and President Moi has indicated that a loan programme will soon be initiated with students contributing a proportion of their future earnings in repayment. (219)

Re-orientation of the curricula to technical and vocational training has been extremely limited in primary and secondary education. (220) Most developments have been outside the formal system. Although the 1979-1983 Development Plan proposes no drastic alterations there are indications that some progress will be made in the 1980's. The Minister of Education, Dr. Toweet, in May 1979, promised that Kenya would soon launch a project to re-orientate the whole primary school curriculum towards a more environmental and pre-vocation based course of study. (221)

5(ii) Education for Rural and Agricultural Development

Rural development has been defined as;-

" ..improving the living standards of low income populations residing in rural areas and making the process of their development self sustaining. " (222)

Kenya has made some attempts to do this since land reform was started by the colonial administration in 1954 and expanded by the Government after independence.

After a definite concentration on economic growth and capital investment in the urban/industrial sectors of the Economy in the 1960's, Kenya has begun to heed the calls for rural-oriented development programmes. It has been realised that the 80-90% of the population living in rural areas deserve a greater share of national development and that the number of jobs in the urban/industrial sectors have increased more slowly than the population and particularly the number of school leavers. (223) The slow increase in salaried employment has been due to a number of factors including; increasing productivity as workers become more experienced, economies of scale in production, shifts towards labour-saving technologies as urban wages rise and the difficulties in moving to import-substitution to export oriented industries. Although Kenya's G.D.P had been rising at a rate of 6.5% p.a between 1964 and 1972 and 4.0% between 1972 and 1976, employment outside the government sector has remained virtually stagnant. (224)

During the 1970's there was increasing awareness of the economic viability of investment in agricultural development. It was recognised that agriculture's capital-output ratio is lower than industry's, investment in agriculture creates a base of purchasing power for local manufactured goods, rural development affects the bulk of the population and is therefore politically important, cash crops can earn foreign exchange and that agriculture is labour intensive in a situation where unskilled labour is in surplus, and rural development could diminish wage differentials between urban and rural areas. (225)

In addition, it was realised that urban investment encouraged a drift of young and educated Africans from the rural areas in search of wage employment<sup>(226)</sup> and other city attractions. (227)

Research is beginning to demonstrate that rural development programmes are economically viable even on a small scale. With improved availability of extension advice and credit, very high levels of output per acre can be achieved on small holdings. Ruthenburg, in his study of agricultural development in Kenya, estimated that investment in services to peasant farmers on their own holdings produced a return in marketed produce of 29% compared to an approximate return of only 18% on irrigation schemes and 9% on large settlements. (228)

Increased agricultural production would have, of course, considerable effect on rural industry in processing, construction, services, retailing, transportation and marketing. (229)

Accordingly, Kenya has been influenced by the wave of academic and practical support for a policy of rural development. (230) During the 1960's government expenditure on agriculture dropped in terms of relative importance. In 1963, K£ 65.9 million were allocated to agriculture and veterinary recurrent expenditure and development, accounting for 22% of the central government budget. Although the capital value of investment increased to K£ 155.9 million in 1970, this represented only 7.4% of the budget. (231)

However, the 1970-1974 Development Plan promised that;-

" ... rural development will in this Plan represent the basic development strategy. " (232)

The Plan went on to state that;-

" The Government believes that it is only through an accelerated development of the rural areas that balanced economic development can be achieved, that the necessary growth of employment opportunities can be generated and that the people as a whole can participate in the development process. " (233)

As a result, the Special Rural Development Programme ( S.R.D.P ) was started on six sites throughout Kenya in 1970 including credit, marketing, agricultural extension, family planning and literacy schemes. (234) The Government also established ' District Planning Boards ' on the District Councils to identify and evaluate local

projects concerned with agricultural production, industrial development, co-operative initiatives, community development, social services, housing, training and communications. (235)

To accompany the emphasis on agricultural extension and development, the Government also initiated a Rural Industrial Development Programme ( R.I.D.P ) aimed at;-

" ... promoting rural economic development, creating more jobs and utilising local resources for the establishment of industries in rural areas. " (236)

The R.I.D centres provide loans and technical facilities which encourage encourage entrepreneurship among the rural population. The number of centres increased from 4 in 1974 to 21 by the end of 1978, expenditure rising from K£ 0.2 million to K£ 1.7 million. (237)

Despite these efforts and government promises to do much more (238) , inequalities and poverty are still persistent features in Kenyan rural areas. The Integrated Rural Survey of 1977 disclosed that 41% of families engaged in small holder agriculture ( 80% of the total population ) had incomes, including subsistence production, of less than K 2,000 Shs. per family in 1974 to 1975.

Another 14% had incomes in the range of K 2,000 Shs. to K 3,000 Shs. (239) As a result, the 1979 to 1983

Development Plan focusses more attention on remote and less advantaged areas;-

" The Plan focusses sharper attention on measures to deal with the alleviation of poverty through emphasis on continued growth, raising household incomes by creating more income-earning opportunities,

increasing the output and quality of services provided by the Government and improving income distribution throughout the nation. " (240)

The Government has recognised the importance of supporting and promoting their rural development programmes through the formal school system. As noted earlier, the hierarchical selective educational system generates a general distaste of rural agricultural employment as the reward for failure. The purpose of education is seen simply as a mechanism of social mobility and a passport to urban/white-collar occupations. Primary and secondary education does little to prepare the student for employment in rural areas (241), and most students aspire to and expect some form of non-manual employment in the towns. Anderson found that even in a well developed rural area such as the North Tetu Division of Nyeri District, where small scale cash cropping is expanding rapidly, most school leavers still preferred the security of wage-employment. (242)

As Foster noted;-

" ...whatever political ideology is used to shore up a particular policy, alert minded young people will react by committing themselves towards income bearing education and rejecting, or at least paying little more than lip service to, non-income bearing education. " (243)

Calls for a re-orientation of the curriculum, especially at primary school, to direct and train young people for life and employment in the rural areas have been repeatedly made in Kenya since 1966 when the Kericho Conference identified these problems and suggested a number of solutions. (244) The National Christian

Council of Kenya also produced a report in 1966 entitled ' After School - What ? ', and pointed out that only 2.4% of the 148,000 primary school leavers would get urban wage employment and argued for disinvestment in the formal school system. (245)

Since then, the Manpower Report of 1964, the Curriculum Development Report of 1972 and the Gichathi Report of 1977 have all made similar recommendations but among the academics opinions widely differ. Ghai and Gwyer, for example, argue for the development of Village Polytechnic type institutions at the expense of formal education. (246) Bennet, on the other hand, recommends massive and sustained expenditure on adult education which would;-

"... act as a catalyst to improve agricultural and animal husbandry methods; nutrition and dietary practices; general hygiene and housing standards; the structure of society; and the individual's awareness of his own capabilities and his potential for economic progress. " (247)

Another school of thought, and one more popular in Kenya, proposes a more practical and agriculture related curriculum within the formal system. (248)

However, the question we must ask is, has there been significant and effective re-direction of the educational curriculum and structure of the formal school system in Kenya ? The radical proposals of the Gichathi Report appear to have been either shelved or suspended and the initiatives which have been taken are largely outside the formal sector which remains hierarchical and selective , emphasising the rôle of education as one of personal

advancement. Indeed it will be questioned in Chapter 6 whether a re-direction of the education system is possible in the current political situation. Certainly, a change would be unpopular with the students. As Anderson commented;-

" ... whilst attempts to localise and to give a new rural vocational orientation to the curriculum seems logical and desirable from a planner's point of view, from an individual student's point of view they appear in a very different light. " (249)

This chapter has examined the Kenyan educational structure in the light of its historical development and the influence of philosophical paradigms and policy reports. In the following chapter, several specific problems of the system are identified and discussed, with particular reference to the persistence of inequalities and the problem of orientation.

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" If the present trend continues, post-primary education will gradually be dominated by the children of the rich. "
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47. SWINBANKS, W.F. 1961. Rural Trade Schools in Uganda. Oversea Education. (32), 164-170.

48. SCANLON, D.G. 1960. The Bush School. Phi Delta Kappan. 41. 148-150.
49. KINGDOM-HOCKINGS, D. 1955. The Middle School Syllabus in Relationship to Native Agriculture in Tanganyika. Oversea Education. (27), 24-25.
50. KANDAWIRE, J.A.R. 1974. Education and Rural Development in Colonial Nyasaland. Journal of Eastern African Research and Development. 4(2), 119.
51. MARVIN, R. 1975. 'Economic Baba' - Is this a Satisfactory Explanation of Why African Parents Value Schooling? Journal of Modern African Studies. 13(3), 433.
52. HANCOCK, G. 1977. Diploma Fever... A Communicable Disease. New Internationalist. (54).
53. OFUATEY-KODJOE, W. 1976. Education and Social Change in Africa: Some Proposals. Journal of African Studies. 3(2), 234.
54. KARP, P. 1976. Rural Development: A People-Oriented Strategy. Antipode. 8(2).
55. See, BARKER, D., OGUNTOYINBO, J and RICHARDS, P. 1977. The Utility of the Nigerian Peasant Farmer's Knowledge in the Monitoring of Agricultural Resources. Monitoring and Assessment Research Centre. (4) General Report. And, HOBEN, A. 1972. Social Anthropology and Development Planning. Journal of Modern African Studies. 10(4).
56. THOMAS, H. 1974. Literacy without Formal Education: A Case Study of Pakistan. Economic Development and Cultural Change. 22(3), 489-495.
57. VANZETTI, N.R and BESSELL, J.E. 1974. Education and the Development of Farming in Two Areas of Zambia. The Journal of Development Studies. 11(1), 41-54.
58. SEARLE, C. 1977. Classrooms of Freewill. New Internationalist. (54).
59. The 'Ujamaa' movement began in earnest after the Arusha Declaration of 1967 but largely failed to attract a sufficient number of peasants. See, MWAPACHU, J.V. 1976. Operation Planned Villages in Rural Tanzania: A Revolutionary Strategy for Development. African Review. 6(1). The programme was theoretically voluntary but force was, in fact, used to move the less enthusiastic peasants. See, INGLE, C.R. 1970. Compulsion and Rural Development in Tanzania. Canadian Journal of African Studies. 4(1), 77-100.

The advantages of group farming were seen in terms of scale economies, mechanisation, credit, services and a reduction of the costs of marketing, harvesting, sanitation and health services. See, MLAMBITI, M.E. 1976. Rural Development: The Tanzanian Type. Tanzania Notes and Records. (79), 1-12.

However, the purity of the original doctrine was soon perverted. Disorganisation, poor planning and the continuation of rural bourgeoisie elements have resulted in the collapse of the rural Economy. See, COULSON, A. 1977. Whatever happened to Ujamaa ? New Internationalist. (48), 17-19.

60. See, CHEN, PI-CHAO. 1972. Overurbanization, Rustication of Uban-Educated Youths, And the Politics of Rural Transformation: The Case of China. Comparative Politics. 4(3), 361-386.
61. Rural-oriented education has been a feature of the Tanzania system since independence. After the Arusha Declaration an experiment was carried out in southern Tanzania at the 12 communal villages forming the Ruvuma Development Association. The village schools were closely related to the local community and its problems and the students were expected to contribute their talents and training to the area's development. See, WOOD, A.W. 1969. The Community School in Tanzania: The Experience at Litowa. Teacher Education in New Countries. 10 (1), 4-12.
62. EVETTS, J. 1973. The Sociology of Educational Ideas. Routledge and Kegan Paul. 127.
63. EVETTS, J. 1973. op cit. 126.
64. EVETTS, J. 1973. op cit. 126.
65. COHN, A. 1971. Political Socialisation : A Holistic Approach. Hacettepe Bulletin of Social Sciences and Humanities. 3(1), 49.  
His study of young Kikuyu children in Kenya from 1967 showed that political socialisation depended on family, peer groups, social structure and education. Education became the most important factor as children grew older.  
See also, MERELMAN, R.M. 1971. Political Socialisation and Educational Climates. Holt, Rinehart and Winston : New York.  
Socialisation is effected through the media of teachers who are also products of a particular section of Society and hold views generally ascribed to that section.
66. ROUSSEAU, J. 1953. Rousseau: Political Writings. , WATKINS, F. (Ed.), Thomas Nelson and Sons, London. 176.

67. OMARI, I.M. 1976. Educational Expansion and the Pattern of Occupational Choice of University Students in Tanzania. Utafiti. 1, (2), 186.
68. MUJANJU, A.B. 1972. A Critique of Education for Development. East Africa Journal. 9, (6).  
The relationship between education and social mobility was demonstrated in western Uganda using a sample of 465 men and women in two villages. Schooling critically influenced status and earnings. See, KELLEY, J and PERLMAN, M.L. 1971. Social Mobility in Toro: Some Preliminary Results from Western Uganda. Economic Development and Cultural Change. 19, (2), 204-221.
69. GIVON, T. 1971. Linguistic Colonialism and De-Colonialisation: The School System as a Tool of Oppression. Ufahamu. 1, (3), 45.
70. MC.CONNELL, G. 1963. The Political Aims of Education in Developing Countries. in. BURNS, H.W. (Ed.) op cit. 46.
71. COURT, D. 1973. The Social Function of Formal Schooling in Tanzania. The African Review. 3, (4), 577-593.
72. WASSERMAN, G. 1970. The Research of Politics, The Politics of Research. East Africa Journal. 7, (11).  
In his study of Nairobi University he noted that;-  
" ..possible academic dissent is channeled and allowed to harmlessly dissipate. " 12.  
High-level research is most often funded by the State. For the effect of this on research topics see, ROSE, S and ROSE, H. 1976. The Politics of Neuro-biology: Biologism in the Service of the State. in. DALE, R., ESLAND, G. and MACDONALD, M. (Eds.) Schooling and Capitalism: A Sociological Reader. Routledge and Kegan Paul and Open University Press. 120-127.
73. MBURU, F.M. 1979. The Trouble with African Intellectuals. The Nairobi Times. 28.1.79. Kenya.
74. OCHIENG, W. 1979. Knowledge and Dependency among Kenyan Scholars. The Sunday Nation. 18.3.79. Kenya.  
He says of Kenyan scholars that;-  
" They would rather cling to the already well articulated and recorded foreign ideologies. They are masters of other people's thoughts and are disdainful of the values that transported their ancestors throughout the vicissitudes of history. "
75. CURLE, A. 1964. Education, Politics and Development. Comparative Education Review. 8, (33), 29.
76. FREIRE, P. 1972. op cit.
77. FREIRE, P. 1976. A Few Notions about the Word ' Conscientization '. in. DALE, R. et al. (Eds.) op cit. 225.

78. FREIRE, P. 1972. Cultural Action for Freedom. Penguin. Freire was 'encouraged' to leave Brazil by the Government and his literacy programmes abandoned. Another example of political interest in education is provided by India where particular interest groups shape the educational systems to conform with their own conceptions of how the social structure and culture should develop. See, RUDOLPH, S.H and RUDOLPH, L.I. 1973. Education and Politics in India: Studies in Organisation, Society and Policy. Harvard University Press, London.
79. CONNOR, W.D. 1975. Education and National Development in the European Socialist States: A Model for the III World? Comparative Studies in Society and History. 17(3), 326-348. European socialist countries have aimed to produce a classless educational system in reflection of their economic and political philosophies. This has not entirely worked with urban schools having a marked advantage over rural schools. Indoctrination has also failed to entirely eradicate personal ambitions.
80. SEARLE, C. 1977. op cit. The teaching unit - the 'Turma' consists of 25 to 30 students divided into 5 or 6 'groupos' with a student leader designated to discuss community and school problems. Culture, curricula, social and ideological problems are the responsibilities of 'seccoes' - groups of teachers.
81. SHENGENA, J.J. 1973. The Teaching of Political Education in Tanzanian Schools. Taamuli. 3(2), 27-35. Also, COURT, D. 1973. op cit.
82. BOURDIEU, P. 1973. Cultural Reproduction and Social Reproduction. in. BROWN, R. (Ed.) Knowledge, Education and Cultural Change; Papers in the Sociology of Education. Tavistock Publications. 71.
83. BOURDIEU, P. 1973. op cit. 73.
84. CARNOY, M. 1974. Education as Cultural Imperialism. New York: David Mc.Kay Co.
85. MARCUSE, H. 1964. One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society. Routledge and Kegan Paul.
86. In, ARONOWITZ, S. 1976. The Trap of Environmentalism. in. DALE, R., ESLAND, G. and MACDONALD, M. (Eds.) op cit. 104. For Trotsky and Gramsci, for example, all art and literature was the product of a power situation in which the dominant elite has control of the technical culture.

- See, DAVIES, I. 1973. Knowledge, Education and Power. in. BROWN, R. (Ed.) op cit. 328.
87. Researchers such as Berger, Luckman and Ioan Davies have argued that;-  
       " The central feature of an educational system is the control of knowledge. "  
 in DAVIES, I. 1973. op cit. 331.  
 Also see, BERGER, P. and LUCKMAN, T. 1966. The Social Construction of Reality. Allen Lane.
88. In, YOUNG, M.F.D. 1973. Curricula and the Social Organisation of Knowledge. in. BROWN, R. (Ed.) op cit. 343.
89. See, MARTELL, G. 1976. The Politics of Reading and Writing. in. DALE, R., ESLAND, G. and MACDONALD, M. (Eds.) op cit. 105-109.
90. YOUNG, M.F.D. 1973. op cit. 341.
91. HENDERSON, P. 1976. Class Structure and the Concept of Intelligence. in. DALE, R., ESLAND, G. and MACDONALD, M. (Eds.) op cit. 142-151.  
 Also, APPLE, M.W. 1976. Commonsense Categories and Curriculum Thought. in. DALE, R et al. op cit. 174-184.
92. KARIER, C.J. 1976. Testing for Order and Control in the Corporate Liberal State. in. DALE, R. et al. op cit. 129.
93. ARONOWITZ, S. 1976. op cit. 103.
94. KARIER, C.J. 1976. Business Values and the Educational State. in. DALE, R. et al. op cit. 21-31.
95. BOURDIEU, P. 1976. The School as a Conservative Force: Scholastic and Cultural Inequalities. in. DALE, R. et al. op cit. 110-117.
96. KARIER, C.J. 1972. Liberalism and the Quest for Orderly Change. History of Education Quarterly. 12, 57-67, 71-80.
97. KANTER, R.M. 1972. The Organisation Child: Experience Management in a Nursery School. Sociology of Education. 45(2), 186-212.
98. GINTIS, H. 1976. Towards a Political Economy of Education: A Radical Critique Of Ivan Illich's Deschooling Society. in. DALE, R. et al. op cit. 15.
99. BOWLES, S. 1976. Unequal Education and the Reproduction of the Social Division of Labour. in. DALE, R. et al. op cit. 32-41.

100. ALEXANDER, J. 1974. The Relationship of the Africa Inland Mission and its National Church in Kenya between 1895 and 1971. New York University. Ph.D.
- ANDERSON, J. 1970. The Struggle For the School. Development Texts, Longman, Nairobi.
- SHEFFIELD, J.R. 1973. Education in Kenya: An Historical Study. Teacher's College Press.
101. WARD, K. 1975. Evangelism or Education ? Mission Priorities and Educational Policy in the Africa Inland Mission, 1900-1950. Kenya Historical Review Journal. 3(2), 243-260.  
Most Missions found it difficult to combine these twin aims.
102. SHEFFIELD, J.R. 1973. op cit. 12.
103. SHEFFIELD, J.R. 1973. op cit. 17.
104. SHEFFIELD, J.R. 1973. op cit. 18.
105. PHELPS-STOKES REPORT, 1924. Quoted in, STABLER, E. 1969. Education since Uhuru : The Schools of Kenya. Wesleyan University Press. 6.
106. MUTUA, R.W. 1975. Development of Education in Kenya : Some Administrative Aspects, 1846-1963. East African Literature Bureau. 60.
107. SHEFFIELD, J.R. 1973. op cit. 22.
108. SHEFFIELD, J.R. 1973. op cit. 42.
109. SCHILLING, D.G. 1976. Local Native Councils and the Politics of Education in Kenya, 1925-1939. International Journal of African Historical Studies. IX, (2), 218-247.
110. SHEFFIELD, J.R. 1973. op cit. 46.
111. MUTUA, R.W. 1975. op cit. 105.
112. SHEFFIELD, J.R. 1973. op cit. 47.
113. SHEFFIELD, J.R. 1973. op cit. 64.
114. SHEFFIELD, J.R. 1973. op cit. 68.
115. MUTUA, R.W. 1975. op cit. 68.
116. URCH, G.E.F. 1968. The Africanization of the Curriculum in Kenya. University of Michigan Comparative Education Dissertaions Series. No. 12. 119.
117. URCH, G.E.F. 1968. op cit. 252.

118. SHEFFIELD, J.R. 1973. op cit. 69.
119. OMINDE, S.H. 1964. Kenya Education Commission Report. Government Printer, Nairobi. Para 44.
120. However, Urch argues that;-  
 " With independence there has been a concerted effort on the part of the Government to encourage an egalitarian society... A policy of nonracialism has been championed in order to discredit the colonial system where a man's race declared his place in society. "  
 URCH, G. 1969. Africanization and Socialisation of the Education in Kenya. Pan-African Journal. 2(1), 53.  
 By 1966, the former European schools had approximately 30% African enrollment. In 1979 the majority of places were taken by Africans. See, FURLEY, D.W. 1972. The Struggle for Transformation in Education in Kenya since Independence. East Africa Journal. 9(8), 13.
121. MPHAHLELE, E. 1965. Alignment of Educational Goals in Kenya. East Africa Journal. Feb.
122. ODHIAMBO, D. 1965. What is Kenya's Educational Goal ? East Africa Journal. March.
123. OMINDE, S.H. 1964. op cit. Para 208.
124. OMINDE, S.H. 1964. op cit. Paras 209-210.
125. STABLER, E. 1969. op cit. 47.
126. URCH, G.E.F. 1968. op cit. 159.
127. STABLER, E. 1969. op cit. 160.  
 These conclusions were supported by the Development Plan for 1966-1970;-  
 " If the objective of universal primary education is to be realised in a reasonable period without seriously jeopardising economic growth the rapid growth of population growth must be checked. "  
 GOVERNMENT OF KENYA, 1966. Kenya Development Plan, 1966-1970. Government Printer, Nairobi. 52.
128. GOVERNMENT OF KENYA, 1969. Kenya Development Plan, 1970-1974. Government Printer, Nairobi. 453-454.
129. GOVERNMENT OF KENYA, 1969. op cit. 459.
130. GOVERNMENT OF KENYA, 1969. op cit. 166.
131. GOVERNMENT OF KENYA, 1969. op cit. 2.
132. GOVERNMENT OF KENYA, 1969. op cit. 460.

133. GOVERNMENT OF KENYA, 1974. Kenya Development Plan, 1974-1978. Government Printer, Nairobi. 404.
134. GOVERNMENT OF KENYA, 1974. op cit. Para. 19.1.
135. GOVERNMENT OF KENYA, 1974. op cit. Para. 19.6.
136. GOVERNMENT OF KENYA, 1974. op cit. Para. 19.6.
137. The Thika Division of Kiambu District, Central Province and around Kitui in Eastern Province.
138. MINISTRY OF EDUCATION, 1972. A Study of Curriculum Development in Kenya. Government Printer, Nairobi. 17.
139. MINISTRY OF EDUCATION, 1972. op cit. 26-27.
140. MINISTRY OF EDUCATION, 1972. op cit. 137.
141. MINISTRY OF EDUCATION, 1972. op cit. 21.
142. MINISTRY OF EDUCATION, 1972. op cit. 36-37.
143. GOVERNMENT OF KENYA, 1974. op cit. Para. 19.83.
144. GOVERNMENT OF KENYA, 1974. op cit. Para. 19.7.
145. The Standard. 1.7.77. Kenya.
146. GOVERNMENT OF KENYA, 1979. Kenya Development Plan, 1979-1983. Government Printer, Nairobi. 103.  
Primary school enrollment of the 6-12 cohort is expected to increase from 85.6% in 1978 to 95% in 1983.
147. GOVERNMENT OF KENYA, 1979. op cit. 103.
148. GOVERNMENT OF KENYA, 1974. op cit. Para. 19.8.
149. The Standard. 1.6.78. Kenya.
150. GOVERNMENT OF KENYA, 1979. op cit. 103.
151. PEACOCK, A. 1978. Measuring the Gulf - Primary Education in Kenya and the Problems of Change. Unpublished Article, Kamwenja Teacher Training College, Nyeri, Kenya.
152. MINISTRY OF EDUCATION, 1978. Examinations Centres List. Unpublished.
153. Daily Nation. 19.6.79. Kenya.
154. Daily Nation. 8.5. 79. Kenya.
155. ABREU, E. 1976. The Challenge to Kenya's Colonial

History: The Role of Voluntary Organisations in Education with Special Reference to African and Asian Communities. Kenya Historical Review Journal. 4(2), 207-222.

156. KAY, S. 1978. Local Pressures on Educational Plans in Colonial Kenya: Post Second World War Activity among the Southern Abaluyia. The International Journal of African Historical Studies. XI, (4), 689-710.  
After 1945 and before the ' harambee ' movement the Abaluyha were able to influence colonial development plans to increase the number of schools built and the pace at which they came under aid.
157. HILL, M.J.D. 1974. Self Help in Education and Development: A Social Anthropological Study in Kitui, Kenya. Bureau of Educational Research, Kenyatta University College, Nairobi. P-10.6.
158. MOOCK, J.L. 1974. Pragmatism and the Primary School: The Case of a Non-Rural Village. in. COURT, D. and GHAI, D.P. (Eds.) Education, Society and Development: New Perspectives from Kenya. Nairobi, Oxford University Press. 105-122.  
A study of the densely populated Maragoli area showed how one of the responses to providing better opportunities for the young was to rapidly build harambee secondary schools.
- NACHISON, J. 1971. A Case Study in Kenya: Community Development Builds a Nursery School. Community Development Journal. 6(1), 12-18.  
In the Siku Location of Central Kenya the need for a nursery school in the Mwanza section was identified in 1967 and this was built by community donation and labour.
- WALLIS, M. 1976. Community Development in Kenya: Some Current Issues. Community Development Journal. 11(3), 192-198.  
This provides a summary of the full range of harambee projects.
159. For example, in April 1979 the teachers and parents' associations in Kiambu District resolved to build 2 girls boarding secondary schools - one at Kamamgu, Kikuyu Division and one at Ndumberi, Kiambaa Division and expected to raise K 1,700,000 Shs, ( approx. £ 100,000 ) over the following year. Daily Nation. 3.4.79. Kenya.
160. The visits of prominent personalities to ' barazas ' is well publicized. Both Kenyatta and Moi, for example, in November 1977, attended a fund raising meeting in aid of Munyu Harambee Secondary School in Thika. The Standard. 7.11.77. Kenya.

In March 1979 President Moi helped to raise K 1,519,877 Shs. ( about £ 90,000 ) at Kagumo Teachers' College in Nyeri for an assembly hall, a nursery school and projects in 5 local primary schools.  
Daily Nation. 19.3.79. Kenya.

161. STABLER, E. 1969. op cit. 162.
162. GODFREY, E.M and MUTISO, G.C.M. 1974. The Political Economy of Self Help: Kenya's Harambee Institutes of Technology. Canadian Journal of African Studies. 8(1), 112.
163. HILL, M.J.D. 1974. op cit. 15.
164. Differences in standards between aided and unaided schools will be discussed in later chapters but one should note that in the national press there is a growing disillusionment with harambee education. Mr. Benson Kaaria of the Machakos District Education Board has expressed concern over the appalling K.J.S.E and E.A.C.E results achieved by harambee schools in his area.  
The Standard. 13.4.78. Kenya.  
 The Busia District Education Officer, Mr. R. Koech pointed out that there were only 56 passes ( 10.5% ) in the K.J.S.E in unaided schools in 1977. He blamed the lack of qualified teachers and adequate facilities.  
The Standard. 21.4.78. Kenya.
165. OMINDE, S.H. 1965. Part II. op cit. 24.
166. OMINDE, S.H. 1964. Part I. op cit. Para. 101.
167. OMINDE, S.H. 1965. Part II. op cit. Para. 600.
168. OMINDE, S.H. 1965. Part II. op cit. Para. 624.
169. GOVERNMENT OF KENYA, 1969. op cit. 459-460.
170. OMINDE, S.H. 1964. Part I. op cit. 73.
171. GOVERNMENT OF KENYA, 1974. op cit. Para 19.27.
172. Sunday Nation. 10.6.79. Kenya.
173. KELLER, E. 1975. The Role of Self-Help Schools in Education for Development: The Harambee Movement in Kenya. Bureau of Educational Research, K.U.C, Nairobi. P-11.30. 7.
174. The Standard. 11.3.77. Kenya.
175. There are many examples quoted in the Press and politicians make sure that their roles are well

publicised. Vice-President Mwai Kibaki raised K 456,000 Shs. ( £26,800 ) for Gitugi Girls Secondary School in Kangema, Murang'a District. Kibaki and his wife gave K 20,000 Shs. and the M:P for the area, Joseph Kamotho, donated K 31, 000 Shs. and the Central Provincial Commissioner, Mr. Simeon Nyachae, gave K. 5,000 Shs. Daily Nation. 23.7.79. Kenya.

Mwai Kibaki also raised K 355,595 Shs. ( about £ 21,000 ) for Ngoru Girls Secondary School in Nyeri District. Kibaki gave K 26,300 Shs. personally and the Central P.C donated K 2,000 Shs.

Daily Nation. 19.6.79. Kenya.

President Moi gave K 75,000 Shs. from himself and ' friends ' for Uthiru Secondary School in Kiambu District.

Daily Nation. 18.7.79. Kenya.

176. KELLER, E. 1975. op cit. 6.
177. Sunday Nation. 17.6.79. Kenya.
178. The Standard. 1.2.78. Kenya.
179. Daily Nation. 19.1.79. Kenya.
180. Sunday Nation. 20.5.79. Kenya.
181. KING, K.J. 1974. Skill Acquisition in the Informal Sector of the Economy. in. COURT, D. and GHAI, D.P. op cit. 291-309.
182. KING, K.J. 1975. Skill Acquisition in the Informal Sector of an African Economy. The Journal of Development Studies. 11(2), 108-122.
183. Daily Nation. 19.12.78. Kenya.
184. Daily Nation. 13.12.78. Kenya.
185. Daily Nation. 3.3.79. Kenya.
186. Daily Nation. 1.3.79. Kenya.
187. KIPKORIR, B.E. 1974. NonFormal Education in Kenya. I.D.S, University of Nairobi Discussion Paper. No. 211. 3.
188. The meaning of Kuungana Kufanya Kusaidia Kenya ( the Four K's ) is;- to come together to help Kenya.
189. KIPKORIR, B.E. 1974. op cit. 5.
190. KIPKORIR, B.E. 1974. op cit. 27.

191. Daily Nation. 1.6.79. Kenya.  
Youth Training centres are now run by the Government rather than local committees. For example, the 28 Rift Valley Projects received a grant of K 1,254, 467 Shs. ( £73,800 ) during 1978-1979 to meet the costs of salaries and equipment. Many of the programmes also receive aid from abroad. The West German organisation ' Cebemo ' gave K 34,869 ( £ 2,050 ) to Centre leavers wishing to start agricultural projects and the Dutch Embassy donated K 30,000 Shs. ( £ 1,760 ) to Cheptarit Youth Centre to erect a workshop.
192. GOVERNMENT OF KENYA, 1979. op cit. 104.
193. Daily Nation. 13.3.79. Kenya.
194. Daily Nation. 19.6.79. Kenya.
195. The Standard. 21.4.78. Kenya.
196. GODFREY, E.M and MUTISO, G.C.M. 1974. op cit.
197. GOVERNMENT OF KENYA, 1979. op cit. 104.
198. GODFREY, E.M. 1973. Technical and Vocational Training in Kenya and the Harambee Institutes of Technology. I.D.S, University of Nairobi Discussion Paper. No. 169.
199. WANJALA, E.A. 1973. The Village Polytechnic Movement in Kenya. Community Development Journal. 8(2), 104-107.
200. COURT, D. 1972. Dilemmas of Development: The Village Polytechnic Movement as a Shadow System of Education in Kenya. in. Development Trends in Kenya. Seminar Papers, Centre of African Studies, University of Edinburgh.
201. GOVERNMENT OF KENYA AND NORWEIGIAN AGENCY FOR INTERNATIONAL DEVELOPMENT, 1974. The Kenya Village Polytechnic Programme. I.D.S, University of Nairobi, Special Paper. No. 17.
202. GOVERNMENT OF KENYA AND NORWEIGIAN AGENCY FOR INTERNATIONAL DEVELOPMENT, 1974. op cit. 19.
203. GOVERNMENT OF KENYA AND NORWEIGIAN AGENCY FOR INTERNATIONAL DEVELOPMENT, 1974. op cit. 36.
204. KIPKORIR, B.E. 1974. op cit. 13.
205. FERGUSON, A and BARKER, D. 1978. Village Polytechnics in Central Kenya: Progress, Problems and Prospects. Preliminary Report to the Ministry of Housing and Social Services.

206. Daily Nation. 1.6.79. Kenya.
207. FERGUSON, A and BARKER, D. 1978. op cit. 11.
208. GOVERNMENT OF KENYA AND NORWEIGIAN AGENCY FOR INTERNATIONAL DEVELOPMENT, 1974. op cit. 52.
209. OMINDE, S.H. 1965. Part II. op cit. Para. 704.
210. MINISTRY OF ECONOMIC PLANNING AND DEVELOPMENT, 1965. High Level Manpower Requirements and Resources in Kenya, 1964-1970. Government Printer, Nairobi.
211. MINISTRY OF ECONOMIC PLANNING AND DEVELOPMENT, 1965. op cit. 42.
212. MINISTRY OF ECONOMIC PLANNING AND DEVELOPMENT, 1965. op cit. 42.
213. MINISTRY OF ECONOMIC PLANNING AND DEVELOPMENT, 1965. op cit. 39.
214. MINISTRY OF ECONOMIC PLANNING AND DEVELOPMENT, 1965. op cit. 39.
215. The Standard. 18.7.77. Kenya.
216. The Standard. 13.9.77. Kenya.
217. The Standard. 21.6.78. Kenya.
218. Daily Nation. 1.12.78. Kenya.
219. This was, in fact, proposed in 1972. See, ROGERS, D.C. 1972. Student Loan Programmes and the Returns to Investment in Higher Levels of Education in Kenya. Economic Development and Cultural Change. 20(2), 243-259.
220. PEACOCK, A. 1978. Report on the Seminar on Science Teaching for Primary College Tutors, Kenya Science Teachers' College, August 20-26. Unpublished.
221. Daily Nation. 18.5.79. Kenya.  
President Moi has anticipated this development in his talks with the UNESCO General Assembly in Paris in November, 1978. The Nation reported that;-  
" He said hundreds of school leavers with virtually no practical skills flocked to urban areas in search of jobs which do not exist... Correcting this situation requires reform in the educational curriculum, and a change in the attitude of youths in favour of agriculture and manual work, away from obsessive pre-occupation with white-collar office routine. "  
Daily Nation. 17.11.78. Kenya.

222. LELE, U. 1976. Designing Rural Development Programmes: Lessons from Past Experience in Africa. Economic Development and Cultural Change. 24(2), 289.
223. MBITHI, P. 1974. Rural Sociology and Rural Development: Its Application in Kenya. East African Literature Bureau.
224. GOVERNMENT OF KENYA, 1979. op cit. 81.
225. GERHART, J. 1972. Rural Development and Urban Growth. International Urbanization Survey - The Ford Foundation. 7.
226. MBILINGI, M. 1968. The School Leaver Problem. Discussion Paper, University College of Dar-es-Salaam.
227. MBITHI, P. 1974. op cit. 74.
228. GERHART, J. 1972. op cit. 12.  
It has been estimated by the Kenya Tea Development Authority ( 1972 ) that the total cost of creating a job in tea was about K£ 50 compared with K£ 1,500 to K£ 3,000 in industry. 13.
229. GERHART, J. 1972. op cit. 15.
230. See, MWAPACHU, J.V. 1976. op cit.  
MLAMBITI, M.E. 1976. op cit.  
MBITHI, P.M. 1972. Harambee Self Help: The Kenyan Approach. The African Review. 2(1), 147-166.
231. GERHART, J. 1972. op cit. 8.
232. GOVERNMENT OF KENYA, 1969. op cit. 166.
233. GOVERNMENT OF KENYA, 1969. op cit. 2.
234. GOVERNMENT OF KENYA, 1974. op cit. Para. 4.8.
235. GOVERNMENT OF KENYA, 1974. op cit. Para. 4.17.
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237. GOVERNMENT OF KENYA, 1974. op cit. 57.
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" It is.. a fundamental objective of this Plan to improve the overall standard of rural life at least as fast as the rise in average income in the country as a whole. "  
GOVERNMENT OF KENYA, 1974. op cit. Para. 4.2.

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CHAPTER 2

PROBLEMS OF ORIENTATION AND INEQUALITY IN THE  
KENYAN EDUCATION SYSTEM

CHAPTER SUMMARY

1. Introduction
2. Problems of Orientation
  - (i) Occupational and Educational Aspirations
  - (ii) Rural-Urban Migration
  - (iii) Unemployment
3. Problems of Inequality
  - (i) Regional Inequalities
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  - (iv) Structural Inequalities
  - (v) Socio-Economic Inequalities
4. Conclusion

1. Introduction

In this chapter, the problems of orientation and inequality in the Kenyan formal school system are considered in reviewing the relevant recent research and literature. The conclusions are general and supported by evidence from other African countries with similar education structures.

The development of educational facilities since independence did, as noted in Chapter 1, very little to fundamentally change the structure, organisation and orientation of the colonial system. This has encouraged, and been encouraged by the conceptualisation of education as a means of social mobility which originated under colonial rule. As a result, the educated tend to feel that they belong to the socio-economic elite and they aspire to occupational and educational levels far removed from their out-of-school peers and directed towards the urban/modern-sector areas of the Economy.

Since this section of the Economy has been developing at a much slower pace than the increase in educational facilities, aspirations and attitudes such as these led to rural-urban migration and unemployment, and pose serious problems for manpower planners.

These outcomes of the education system's orientation are considered in the following section.

The tremendous increase in the number of schools since independence was based on this conceptualisation of the value of education and the assumption that selection to each stage of the pyramidal system was entirely meritocratic. This raises the question of inequality and Section 3 of this Chapter is devoted to this problem.

Spatial, ethnic and structural inequalities are examined and in demonstrating that the education system is biased towards certain groups and areas, it undermines the basis and questions the value of the expansion of the school system after independence.

In addition, certain aspects of orientation and inequality problems are identified for further detailed field research.

## 2. Problems of Orientation

### 2(i) Occupational and Educational Aspirations

It is difficult, for a European, to fully appreciate the value, and perceived role, of education to a Kenyan African. As noted in Chapter 1, school education is regarded as the key to a richer, fuller and more rewarding life - as the mechanism of social mobility. Such an attitude tends to feed back into the education

system so that its function as an academic selective device becomes primary and this has several disturbing effects on national economic development.

In a situation where entry to the various educational stages is controlled by national examinations, which select only a tiny proportion of the candidates, it is to be expected that the successful will regard themselves as something of an elite. In Kenya, students enrolled for senior secondary education represent only 0.4% of the primary level and research has shown that, even at the junior secondary stage, these successful students dissociate themselves from the lesser educated and adopt attitudes, aspirations and values far removed from their peers and unrelated to national development goals and manpower priorities and capacities.

In 1969, Whiting suggested that the effect of formal Kenyan education on children was similar to that of urbanisation in encouraging a pre-occupation with personal advancement.<sup>(1)</sup> In a similar vein, Mwaniki's 1973 study of the relationship between self-concept and academic achievement among Kenyan pupils demonstrated that personal evaluation was strongly correlated with examination performances.<sup>(2)</sup> Herzog further suggested that academic achievement, in this case, measured by entry to high school was now a more significant event in terms of individual social

advancement of Kikuyu life than the traditional markers such as initiation and passage from one age-group to the next.<sup>(3)</sup>

High school education, then, seems to generate a feeling of superiority which is translated into attitudes and aspirations related to the student's perceived status and worth in society. Students are concerned primarily with personal success and this tends to circumscribe national development plans formulated with these individuals in mind and which limit the rapid social mobility they feel is their just reward. Zolberg, for example, noted in Mali, that only 4% of her sample of secondary school students were prepared to bend to national priorities at the expense of personal desires. In particular, rural development programmes were jeopardised by the reluctance of the students to be involved in primary production. Of her sample, 20% remained quite adamant in refusing to do farm work under any conditions.<sup>(4)</sup>

In addition to, and as a result of, students' perceptions of their elite status, their occupational and educational preferences tend to be far removed from the realities of the job market and unrelated to the real manpower requirements of the Economy in terms of type and location. The remainder of this section is devoted to an examination and evaluation of these aspirations.

A whole body of work on occupational choice has developed within the discipline of Sociology. There is, however, some debate over the approach to the problem. Ford and Box, for example, visualise an individual's occupational choice as;-

"... a function of his values and his perception of the chances of realising them in the alternative occupations". (5)

They, therefore, argue that, in choosing between alternative actions, a person will choose the one for which, as perceived by him, the product of the probability of the action's being successful in achieving a given reward and the value of that reward is greatest. As a result, they see occupational choice as a rational process regardless of how complete the individual's knowledge of the available ends.

On the other hand, Musgrave regards occupational choice as irrational in the sense that freedom and individualism are restricted by a process of socialisation which channels preferences into categories accepted, approved and required by society. (6)

There is certainly an element of truth in both frameworks but it appears that the most fruitful methodology, particularly in an African situation where information regarding the job and education markets is severely limited and aspirations are necessarily

'irrational', is in examining preferences in the context of real expectations and evaluating their realism.<sup>(7)</sup>

Research in Africa has consistently pointed out that secondary students' aspirations are, in the first place, extremely ambitious and secondly, very much different from parental occupations. Adeyinka, for example, in his 1975 study of secondary students in the Western and Lagos States of Nigeria showed that 16% of the boys were looking to careers in medicine, 20% in scientific and technical occupations and only 0.25% in farming. The girls' aspirations were considerably lower but still, in the majority of cases, a long way removed from their mothers' occupations. Adeyinka found that 21% were expecting a career in nursing and pharmacy and 15% in secondary grammar school teaching.<sup>(8)</sup>

For Kenya, Keller noted the same type of situation. Students in the government aided secondary schools typically hoped to be professionals of one kind or another - doctors, lawyers, engineers and so on. Pupils at the much lower standard harambee schools, although not expecting to be real professionals, nevertheless were looking forward to quite prestigious jobs as teachers, managers and administrative officials.<sup>(9)</sup>

Clearly, secondary students aspire to non-manual skilled, often professional, employment requiring higher education and located within the modern sector of the Economy usually in urban areas. The question to ask now is whether they can realistically expect to achieve such ambitious occupational preferences.

For primary students, the majority of research reports suggest that preferences are reasonably realistic. Moock, in her 1974 study of the Maragoli area of Kenya, demonstrated that primary leavers were quite pragmatic in their approach to the job market.<sup>(10)</sup>

Similarly, Brownstein in his sample of K.P.E. (now C.P.E.) candidates throughout Kenya, found their aspirations to be, on the whole, quite realistic.<sup>(11)</sup>

In addition, Peil demonstrated, in the case of Ghana, that the perceived value of primary school investment was being undermined as the reality of the job market became clearer and in some regions school enrolment was actually falling.<sup>(12)</sup>

The secondary student's situation is somewhat different - his aspirations are far less realistic. This is presumably because he has progressed through a very low grain filter and joined, to all intents and purposes, the educated elite and his perception of his bargaining power has been considerably elevated.

Anderson regards the secondary school leaver, then, as "rational" in that he is aware of his advantaged position and seeks to maximise the benefits accruing and his formal education background leads him to expect and prefer the security of wage earning employment. (13)

A considerable bulk of research has focussed on the realism of these occupational preferences and, although opinion is divided, the consensus considers them to be unrealistic in that only a very small proportion of secondary students will be able to fulfil their ambitions.

Miller and Bibby's investigation in the Accra area of Ghana in 1969, revealed that 25% of their sample of Form V secondary school students were expecting to enter the professions and this could be compared to a likely intake of only 1 - 5 % depending on the state of the Economy. (14) For Nigeria, McQueen indicated that the level of realism decreased the higher the educational stage and that only the secondary students in his broad sample of young individuals from primary leavers to unemployed and employed youngsters recorded unrealistic aspirations. (15) Klingelhofer came to very similar conclusions for Tanzania (16) and Zolberg found that 75% of her sample of students in Mali chose white-collar occupations in preference to farming,

mainly in high-level professional and bureaucratic positions.<sup>(17)</sup> Finally, Adeyinka found in Nigeria that only 0.34% of his sample chose farming as a career whereas 19% wished to become doctors and 11.6% preferred the legal profession. The success rates for the latter two categories were, however, only 3.85% and 3.10% respectively.<sup>(18)</sup>

Although Maxwell<sup>(19)</sup> and Somerset<sup>(20)</sup> have argued in the opposite direction for Kenya in terms of occupational and educational preferences respectively, the School Tracer Project of 1968 convincingly demonstrated that secondary school student aspirations were unrealistic in the light of the job and education markets.<sup>(21)</sup>

It might seem that unrealistic occupational preferences are no real problem in that they will be re-adjusted as awareness of job availability and competition develops. Although there has been no real substantial research on this in Kenya since the Tracer Project of 1968, it does seem that this process of re-adjustment takes a very long time so that school leavers become frustrated, and only resign themselves to lower status and poorer paid employment after a considerable period of unemployment. Aspirational unrealism, as a result, has very far reaching effects upon local and national developments.

In the first place, the pyramidal structure of formal education tends to give secondary students a feeling of superiority over primary leavers and this is translated into aspirations and expectations a long way distant from the normal lot of the average Standard VII failure. Secondary students, therefore, look towards a period of higher education in senior secondary school and College and careers in high-level professional, technical and administrative jobs and the orientation of the curricula towards the modern urban sector of the Economy and the competitive, selective and academic nature of the schooling encourage this tendency. This has a severe limiting effect on rural development programmes since the majority of educated youngsters have no feeling of commitment to participate and make an effective contribution. As early as 1961, Chaplin noted that formal education tended to breed distaste for farming, any sort of agricultural work and village life in general. (22)

Secondly, in order to fulfil their aspirations, school leavers find it necessary to migrate to urban areas. This problem is discussed in the following section.

Finally, since the Economy and the higher levels of the Education system cannot hope to meet the aspirations of the majority of school leavers, aspirational unrealism

produces unemployment. This is a somewhat false situation in that opportunities do exist but in some lower status occupations generally in rural areas. However, the problem is a difficult one because the students are unemployable unless they adjust and lower their preferences. Formal school education does very little to re-orientate student attitudes and so it is likely that the problem will exist as long as the formal system continues in its present form regardless of how much information on the employment situation is made available to the students.

2(ii) Rural-Urban Migration

In common with almost all developing countries, urbanisation in Kenya is progressing at a rapid rate. Between 1962 and 1969 urban population was increasing at a rate of 8.7% per annum compared to a national rate of 3.4% per annum.<sup>(23)</sup> The results of the 1979 Census have yet to be published so we have no more recent data than 1969 but the indications are that urbanisation has not appreciably slowed. However, in the 1960's the increase was mainly accounted for by Nairobi with a 10.9% per annum growth rate, and Mombasa. Although these two cities have maintained their lead in terms of population and economic influence, in the 1970's it was apparent that smaller towns, particularly Nakuru, Thika and Nyeri, were developing at a faster rate.

Laurenti, estimated in 1972 that slightly over 50% of urban growth was due to rural-urban migration and the rest due to natural increase, and so, clearly, this is a considerable problem since it weakens the economy of the rural areas while putting an intolerable burden on urban resources. (24)

Who are the migrants? A leading study by Rempel, Harris and Todaro, conducted in 1968 in Kenya, revealed that the majority of migrants are young and reasonably well educated. (25) Of their sample of 1,100 respondents, 35.2% had Standards I - VII schooling and a further 25.4% had Forms I - VI education. Most of these migrants were 20-24 years old and of this group 42.2% had Standards I - VII and a further 34.1% had Forms I - VI education.

These conclusions are supported by evidence from other African countries. Callaway's study of Qlla village in the Western State of Nigeria indicated that, between 1962 and 1967, about 80% of the local youth had moved away from the area and the 20% who remained were significantly less educated than the migrants. (26)

Why do migrants leave their rural homes? The obvious motivation is to find wage employment. It is not that the migrants would be unemployed at home, rather that the urban areas offer better paid, secure and regular

jobs with superior conditions. Rural employment related to agricultural production is seen as endless, monotonous, unstimulating and exposed producing small and irregular cash earnings. Urban employment, on the other hand, is measured, varied, more interesting and protected, offering regular and appreciably greater salaries.<sup>(27)</sup> In addition, the towns offer a variety of facilities, services and attractions which are not found in rural areas.

The second most important motivation for young migrants is the hope of continuing their education and training in the towns and it appears to be true throughout Africa that educational facilities are more concentrated in urban areas. Gould showed this to be certainly the case in Uganda.<sup>(28)</sup> Similarly, the preponderance of private secondary schools in Nairobi is a significant attraction to young individuals who have failed to obtain a place in a government school.

When the problem of rural-urban migration was first recognised, it was largely assumed that the process was flexible and would equalise since migrants do not often 'settle' in the towns and prefer to think of urban employment as transitory. As Parkin demonstrated for Nairobi, the migrants do not regard the city as "home" but as a place to earn enough capital to set up a sizeable and productive shamba back in the village.<sup>(29)</sup>

The migrants tend to maintain their relationship with their home locale and establish a web of personal economic and social links along which money, information and people travel in both directions.<sup>(30)</sup>

However, there are indications that urban residence is becoming more permanent and that rural-urban migrants regard migration as a more definite break from the rural environment. It is suggested that it is essentially the young and educated who are involved in this and that the responsibility of the formal education needs to be much more closely evaluated in this respect. Rural-urban migration is a much more serious problem than was first believed and the remainder of this section is devoted to an examination of the role of secondary schooling as the source of migrant motivations.

As we saw in the previous section, formal education tends to encourage aspirations which cannot be met within the rural areas. In consequence, the students look toward urban areas to continue their education and find employment, at the same time, looking down upon the relative hardship, isolation and unsophistication of agricultural labour and village life.

The effects on the rural areas are serious. As Callaway's study, mentioned above, demonstrated, formal education led to the breakdown of familial ties and

traditional responsibilities and the reduction of available manpower in the village. He estimated that 35% of the village's youth would have to remain in order to guarantee the future and viability of an on-going rural community and discovered that only 20% preferred to stay, and all of these individuals were working on processing rather than production activities. (31)

Migration has, in addition, severe consequences on urban development. In Nairobi, for example, there is chronic congestion in some quarters and about 30% of the city's population have no permanent residences. Facilities and services are over-burdened and, since the modern sector is growing at a smaller rate than in-migration, there is serious unemployment.

When the Kenya government, first admitted the problem in 1970, they included promises in their 1970-1974 Development Plan to make;-

"... serious efforts to reduce the urbanisation problem by holding more people on the land ... intensively promoting a few growth centres to avoid the primary cities getting too far ahead ... reducing regional income and service inequities ... restricting growth in the primary cities ... to direct an increasing share of the total resources available to the nation (32) towards the rural areas".

Of course, as long as rural-urban income differentials exist migration will continue but the fact that it is

largely the young and educated who tend to migrate suggests that if the Government wishes to reduce and control urbanisation then it should concentrate its attention on the role of education in generating student aspirations rather than vainly attempt to equalise rural-urban differentials.

Migrants to the urban areas generally find employment virtually impossible to come by and all of Kenya's towns, particularly Nairobi, possess a significant number of unemployed. This is not to say that opportunities are unavailable. They do exist but in less prestigious directions and in rural locations. In this sense, unemployment is largely a matter of attitudes. In the following section, unemployment in Kenya is examined and the responsibility of the education system assessed. The discussion is based upon Callaway's thesis that "unemployment has no meaning at all except for school leavers."<sup>(33)</sup>

2(iii) Unemployment

It is difficult to ascertain reliable data on unemployment in Kenya for it has meaning only in the context of the modern sector of the Economy and it is impossible to gauge the extent of self and part-time employment. However, there is little doubt that it is reaching serious proportions and President Moi was obliged in 1979 to complete a Tripartite Agreement

with employers and Unions, similar to its 1970 predecessors, in which employers increased their staffs by 10% in return for a temporary suspension of wage increase demands.

Unemployment, then, is essentially an urban modern sector phenomenon and it appears that a majority of unemployed are young, educated beyond primary level and migrants from rural areas. As a result, the majority of researchers see unemployment as, to all intents and purposes, a school leaver problem.

Kinyanjui and Shepard, for example, reporting in 1972, noted that before 1968 less than 1% of a representative sample of secondary school leavers failed to find employment or further training whereas, after 1968, 14.8% were failures and this, they suggested, was due to the rapid expansion in educational facilities.<sup>(34)</sup>

This conclusion is supported by evidence from other African countries. Peil's 1970 study of Ghanaian Middle School Leavers is typical in this respect. She showed that only 25% of the leavers were able to continue their education and about 33% of the rest found work within 6 months. The remainder, however, spent many months of fruitless searching.<sup>(35)</sup>

Substantial research has indicated that since the majority of unemployed are relatively educated young

people, a significant proportion of the responsibility may be laid on the formal education system. It was Callaway's conclusion for Nigeria in 1963 that the school system simply produced too many leavers to be accommodated by the Economy.<sup>(36)</sup> In a similar way, Carnoy and Thias demonstrated, for Kenya, that the rapid growth in the number of Africans with secondary schooling between 1968 and 1974 would have tended either to lower wages in the modern sector or increase unemployment. In this case wages were inflexible and the result was a large number of educated unemployed.<sup>(37)</sup>

However, it is important to recognise that the problem is not purely a quantitative one, for it is clear that there are jobs available - in the rural areas, in primary agricultural production and secondary processing activities. If the unemployed could be slotted into these vacancies the problem would, theoretically, disappear. Wallace's study of a village near Kampala in 1972, for example, demonstrated that unemployment is not a rural feature.<sup>(38)</sup>

The point to be made from this is that, although over-production of school leavers is a significant aspect of the problem, the root of the matter is that the educated unemployed are effectively unemployable because of their aspirations and expectations which cannot be met by the Economy.

We saw in Chapter I that school education is regarded primarily as an economic investment. As Hoerr convincingly argued for Malaysia, and his conclusions are applicable to Kenya, education emerges as the most attractive investment an individual could contemplate. The employed person would, on average recoup his entire outlay on primary schooling in less than 3 years, and the returns are roughly twice as high for secondary schooling.<sup>(39)</sup> Of course, the investment pays dividends only if the individual acquires salaried employment. In the previous sections, it was argued that formal education encourages this notion in its modern sector and urban orientation generating aspirations which become increasingly unrealistic the higher the educational stage and the lower the educational standard. To fulfil these expectations the school leavers are obliged to migrate to the urban areas where industrial and tertiary activities are concentrated. Since the rate of job creation in this sector is low and has decreased appreciably since the promising days of the 1960's, one consequently finds a significant percentage of young educated individuals among the unemployed.

The problem is complicated by feedback from this situation into the formal school system of education. Rado, Morgan and Shepard noted in 1970 that the

selection of school leavers for job vacancies was primarily based on academic qualifications mainly because employers were unable to assess anything else, particularly the applicants' personality, aptitude and character.<sup>(40)</sup> Similarly, Kinyanjui, in 1974, reported a strong correlation between E.A.C.E. performance and the time taken for employment to be found.<sup>(41)</sup>

This has engendered a qualification escalation and a high repetition rate particularly in Standard VII in order to retake the crucial C.P.E. As O'Connor noted in 1974;-

"Today, those who do not obtain first or second class grades in the E.A.C.E. have great difficulty in obtaining employment, or, at least, in gaining employment which meets their expectations, and there are indications that before very long this will be affecting those leaving Form VI..."<sup>(42)</sup>

In this way, unemployment, rather than discouraging formal education's orientation towards modern sector occupation, in fact, further encourages the stress on examinations, competition and diploma qualifications. This trend is, unfortunately, only self-defeating, for although the achievement of higher qualifications makes an individual more employable it does nothing to increase his position relative to others who have joined the same bandwagon and neither does it increase the number of vacancies available. In Kenya, today, the situation has gone even further than O'Connor

predicted. It is apparent that only vocational graduates can genuinely expect to fulfil their occupational ambitions. An E.A.C.E. diploma is, now, no guarantee of a good job or, indeed, a job at all. This naturally leads to a feeling of frustration which, unfortunately, is not relayed to current students in re-orientating their aspirations but into other channels such as crime,<sup>(43)</sup> begging and the scratching of a marginal living in the squatter towns in the hope of obtaining a job in the future.

As a result, the solution of the problem is two-sided. Clearly, the number of jobs needs to be increased and as development is likely to be slack in the modern sector for some time to come, attention should be focussed on creating opportunities in the rural areas.<sup>(44)</sup>

As Norbye predicted, only 20% of Kenya's labour force would find jobs in urban areas in 1985 and less than 30% by 2,000.<sup>(45)</sup> However, such a policy would be pointless without a concerted effort to restructure the formal education system and re-direct student aspirations towards rural primary production and processing employment. Berry, for example, noting a similar situation in Botswana, argued for a re-development of the school curricula<sup>(46)</sup> and Callaway, as early as 1963, recommended, in general, that;-

"The schools should be made more environmental, foster the idea of the dignity of labour and should encourage greater realism and resourcefulness." (47)

The previous sections have demonstrated that occupational and educational aspirations, rural-urban migration and unemployment are inter-related and it was suggested that they are essentially school-leaver problems. The present structure and orientation of Kenyan formal education encourages the notion that schooling is the key to social mobility. This evaluation of education as an investment is largely responsible for the enormous expansion in school facilities, particularly at the secondary level, since independence.

However, both students and parents are assuming that there is equality of opportunity and that the national selective examinations ensure that the system is meritocratic. In the following sections, we will be showing that this is far from the case. There are significant inequalities in the educational system and this casts doubt on the viability of education as a secure investment. In addition, if the system is biased towards certain groups and areas, one could argue that educational expansion in the direction of formal schooling has been largely a waste of capital and human resources.

3. Problems of Inequality3(i) Regional Inequalities

There are marked regional inequalities in educational provision, type of schools and standards in Kenya.

At independence, these could be largely traced to the legacy of colonial and mission initiatives, a situation found elsewhere in Africa as Swatman noted in Tanzania<sup>(48)</sup> and Gould for Uganda.<sup>(49)</sup> In Kenya, those remote areas where colonial influence was minimal were critically disadvantaged. The sparsely populated Districts in the North-East, Coast and Rift Valley Provinces received very little attention in terms of educational provision but, even in the more densely populated areas, it was clear that Nairobi and Central Province were strongly advantaged. In 1966, 94% of the 7 - 13 age cohort in Central Province were enrolled in primary schools compared to 53.9%, for example, in Nyanza Province in western Kenya. In terms of secondary education, 8.1% of the 14-19 age cohort were enrolled in Forms I - IV in Central Province in 1966 compared to only 2.7% in Nyanza Province.<sup>(50)</sup>

Since independence such marked inequalities have been somewhat alleviated, particularly at the primary level, by community action in building, equipping and staffing schools and the suspension of tuition fees up to Standard VI. As Table 8 demonstrates, 1976 Provincial primary enrolment favours Central, Eastern and Western

TABLE 8

Provincial Primary School Enrolment - 1976

Province	% of total 5-12 Age Cohort for Kenya	Standards 1-7 Enrolment	% of Total	C.P.E. Enrolment (Standard 7)	% of Total
Nairobi	3.6	84,738	2.9	9,594	4.1*
Central	15.9	571,583	19.7*	57,242	24.3*
Coast	7.7	160,156	5.5	13,257	5.6
Eastern	17.1	543,222	18.8*	45,580	19.4*
N.E.	2.0	7,507	0.3	651	0.3
Nyanza	20.3	550,580	19.0	40,450	17.2
Rift Valley	20.7	530,646	18.3	37,026	15.7
Western	12.7	446,185	15.4*	31,652	13.4*
		2,894,617		235,452	

## Notes:

1. Figures from MINISTRY OF EDUCATION 1978, Annual Report 1976, Government Printer, 21-22, 30-31
2. Population figures from CENTRAL BUREAU OF STATISTICS 1972. Population Projections by District 1970-1980. Kenya Statistical Digest X (3). Uses Series A assumptions
3. \* = cases where enrolment % of total exceeds equivalent provincial % of age cohort.

TABLE 9

'Opportunity Index' - Form 1 places as  
Percentage of the Population aged 14,  
1971, by Provinces

Province	Index	Rank
Nairobi	34.8	1
Central	11.6	2
Coast	9.6	3
Eastern	6.4	5
N.E.	0.7	8
Nyanza	5.1	7
Rift Valley	5.4	6
Western	7.5	4

## Notes:

1. Figures from MINISTRY OF EDUCATION 1972  
A Study of Curriculum Development in Kenya  
 Government Printer, 50

Provinces but the only strongly disadvantaged area is N.E. Province.

However, the figures for secondary school provision are not so encouraging. Table 9, for example, gives calculations of Provincial "opportunity indices" - Form I places as a percentage of the population aged 14 - and indicates the clear lead of Nairobi and Central Province over other areas of Kenya.

More recent data for 1976, in Table 10, compares Provincial Forms I - IV enrolment as a percentage of the Kenyan total with the number of individuals in the 13-16 age cohort expressed as a percentage of the national total. Central Province comes out on top with Western second, and Nairobi third. In terms of Forms V - VI enrolment, Central Province and Nairobi are, once again, clear leaders.

There are, in consequence, significant disparities in Provincial examination performances. In 1976, for example, the total entry to the University of Nairobi, based on E.A.A.C.E. results, for Western Province did not equal the entry from only one school in Central Province.<sup>(51)</sup> Table 47 gives the Provincial homes of a sample of 992 University of Nairobi students. Expressed in terms of students per 1,000 head of population the most successful province was Central with a figure of 0.13. The next highest was Western Province with 0.072.

TABLE 10

Provincial Secondary School Enrolment - 1976

Province	% of total 13-16 Age Cohort for Kenya	Forms 1-4 Enrolment	% of Total	Forms 5-6 Enrolment	% of Total
Nairobi	3.5	25,960	9.6*	2,088	21.2*
Central	15.4	63,867	23.6*	2,814	28.6*
Coast	8.2	15,721	5.8	787	8.0
Eastern	16.7	40,304	14.9	836	8.5
N.E.	2.1	638	0.2	-	-
Nyanza	20.3	44,606	16.5	1,461	14.9
Rift Valley	20.2	33,306	12.3	1,208	12.3
Western	13.5	42,155	15.6*	637	6.5
		270,557		9,831	

## Notes:

1. Figures from MINISTRY OF EDUCATION 1978, Annual Report 1976, Government Printer, 46-47.
2. Population figures from CENTRAL BUREAU OF STATISTICS 1972. Population Projections by District, 1970-1980, Kenya Statistical Digest x (3). Uses Series A assumptions.
3. \* = cases where enrolment % of total exceed equivalent % of age cohort.

Inequalities are also apparent in terms of the type of school. Table 18 shows that 28.7% and 22.0% of the schools in Western and Nyanza Provinces respectively, are state aided compared with 43.1% for Nairobi and 51.3% for Central Province.

As for educational standards, Table 18 also demonstrates that Nairobi has a massive lead over other regions in terms of the percentages of Grade A and Grade B schools. Tables 11 and 12, showing primary and secondary provincial teaching qualification statistics, also indicate the advantage enjoyed by Nairobi, closely followed by Central Province.

The data on the spatial distribution of educational facilities consistently outlines the lead of the Nairobi Provincial Area and Central Province over other regions in Kenya in terms of school provision, type and standards and these inequalities are more significant at the secondary level. However, these differences cannot be attributed to variations in performance and ability.

Court and Prewitt's simple test in matching the Provincial proportions of C.P.E. passes qualifying for secondary school with the places available in secondary schools as a percentage of the school age population (15-19) showed that educational resources were not being matched with regional variations in

TABLE 11

Provincial Primary Teaching Qualifications - 1976

PROVINCE	% Professionally Qualified	% S1 among Qualified	% P1 among Qualified
NAIROBI	99.0*	10.7*	34.9*
CENTRAL	82.1*	3.8*	27.5*
COAST	53.1	1.1	25.2*
EASTERN	59.0	1.1	19.6
N.E.	60.6	-	19.5
NYANZA	55.3	2.3	22.4
RIFT VALLEY	58.7	2.0	26.1*
WESTERN	56.8	1.4	21.1
Average	63.0	2.6	24.3

## Notes:

1. Figures from MINISTRY OF EDUCATION 1978  
Annual Report 1976. Government Printer.34-35
2. \* = above the national average
3. S1 = Top grade Secondary School Teaching  
Qualification  
  
P1 = Top grade Primary School Teaching  
Qualification

TABLE 12  
Provincial Secondary Teaching  
Qualifications - 1976

Province	% Qualified Citizens	% Qualified Non-Citizens	% Qualified Graduates, citizen & non-citizen
Nairobi	32.9	36.5*	28.4*
Central	38.4*	18.2	20.4*
Coast	35.0	27.6*	21.8*
Eastern	39.9*	15.7	14.8
N.E.	88.0*	-	48.0*
Nyanza	38.8*	13.7	19.0*
Rift Valley	42.8*	19.5*	19.5*
Western	30.9	10.7	14.0
Average	37.4	19.1	18.6

Notes:

1. Figures from the MINISTRY OF EDUCATION, 1978 Annual Report 1976. Government Printer. 55-57, 61-63
2. \* = above national average
3. Figures for N.E. Province are unrepresentative. There were only 3 schools in this Province in 1976.

examination performance.<sup>(52)</sup> Nyanza Province, for example, came out on top in terms of performances but only fourth in terms of the provision of secondary facilities. In excluding Nairobi data, Central Province, on the other hand, was ranked fourth in performance but first in secondary opportunity. In addition, they revealed a similar phenomenon in setting the rank order of the number of primary age school children against the percentage of this age cohort actually in school. They found that the Provinces with the greater number of school age children are not necessarily those with the greater number of primary school places.

The persistence of inequalities, they suggest, is not related to regional variations in intrinsic ability or the inheritance of a spatially skewed distribution of educational facilities from the colonial period, but to Provincial variations in political influence.

It is common now in Kenya to find that regional educational inequalities are popularly attributed to the lack or pervasiveness of political bargaining power.

Abdallal, for example, wrote that;-

"The problem of both primary and secondary education in Mombasa and other towns in the Coast has become so acute that unless the elders and the MPs tackle it expeditiously, it will result in the succeeding generations<sup>(53)</sup> facing a gloomy and hopeless future."

In the same way, it was claimed by Mshamba that Taita/Taveta District in Coast Province has only 2 girls' secondary schools because of the lack of commitment and drive by the local MPs.<sup>(54)</sup> Similarly, it was suggested that the posting of only 70 UK volunteer teachers, out of a total of 230 to Western Province, indicated some political bias<sup>(55)</sup> and, in 1977, there were claims that University entry policy was becoming more political than meritocratic. As the 'Standard' commented;-

"One only needs to go through the University intake and note that most of the students are from Central Province. A few years ago, there used to be a sizeable number from Eastern Province but these days you will be lucky if you counted more than 10. What does that indicate?"<sup>(56)</sup>

It is extremely difficult to evaluate the extent to which political influence affects educational provision but, clearly, it does exist and operates to the benefit of the Nairobi and Central Province regions and the Kikuyu ethnic group, in that politicians from this tribe and area dominate the Kenya government.

Political influence is most obviously seen in the assistance to harambee and other local community educational developments.

The distribution of state run institutions is gradually becoming more equitable but inequalities, in terms of secondary school provision, are actually widening due to the very different rates of harambee developments.

Harambee activity is, by definition, based on local community effort and, in the majority of cases where central government has no investment in the project or a share in the implementation, are unrelated to national development priorities, needs and plans. The Ominde Commission of 1964 was first to recognise the parochial and tribal nature of the harambee movement and Keller argued that it would lead to ethnocentrism and inequality in that;-

"Loyalty to ethnic elites and political patrons are synonymous in Kenya and under such conditions, with the growing inequalities resulting from the competitive communalism representative in the Harambee movement, polarisation of ethnic affinities is a real possibility." (57)

This parochialism leads to different types and speeds of development because of the variations in the strength of success-orientation of the ethnic groups, but as Anderson argued;-

"It is the wealthy, progressive areas that are able to establish schools most easily, because not only is money more readily available, but so are the organisational and entrepreneurial talents of the area's members." (58)

Hill was able to confirm Anderson's conclusion by using the 1972 Community Development statistics. He compared the population against Self-Help contributions and computed a ratio of £K per head for each Province. His data indicated that Central Province had a clear lead of £k0.53 per head over Coast, £k0.23 East,

EKO.25, North East, EKO.24, Nyanza EKO.20, Rift Valley EKO.26 and Western EKO.16. (59)

The Village Polytechnic Evaluation Mission of 1974 demonstrated that a similar situation was in evidence;-

"The present selection of Village Polytechnics eligible for Government aid may be biased towards the more wealthy and progressive rural areas in spite of current efforts by the Programme administration to counteract this bias." (60)

Godfrey and Mutiso discovered the same bias in the construction and financing of Harambee Institutes of Technology. They found that Kiambu and Murang'a, two of the richest Districts in Kenya, had been able to raise the largest amounts locally but, in addition, since the richest regions tend to be the most influential politically, foreign and government aid tended to reinforce rather than counteract this dis-equalising effect. (61)

Regional inequalities are not, therefore, likely to disappear as the process of development continues since the political influence of the richer areas will be important in ensuring that this situation will persist. Therefore, there is a need for a deliberate policy and methodology for school location planning aimed particularly at establishing the most efficient and equitable distribution and utilisation of inputs and

resources and improving the access of disadvantaged groups. (62)

Another aspect of spatial inequality in educational provision - that of the difference between urban and rural areas - is considered in the following section.

3(ii) Rural-Urban Inequalities

Research has pointed out that Nairobi has an advantage over rural Districts in terms of educational provision, and the type and quality of the schools. This type of lead is enjoyed by other towns, notably Mombasa, Kisumu and Nakuru. (63)

The unique position of Nairobi as regards secondary schooling, in terms of the provision of Form I places and the percentage of government aided and Grade A schools, has been noted in the previous section.

A 20% pass rate to secondary school is considered good for a rural Standard VII but 90% is quite normal for a Nairobi school. (64) In addition, urban schools can often enrol students with much lower academic qualifications. Omuya Kogolla, therefore, noted that;-

"... in town you can get a boy admitted to Form I with 16 points while one in the rural areas with 24 points has to repeat Class 7 due to lack of Form I places." (65)

Urban secondary schools have also far superior buildings and facilities and very much better provision of equipment and books. More importantly, urban areas tend to attract the better teachers because of higher salaries,

superior conditions of employment and the greater likelihood of obtaining staff accommodation linked to the general benefits of living in a town.<sup>(66)</sup> As a result, the quality of rural school staff is generally much lower and shortages of teachers are quite common. A typical example was the concern over shortages in Eastern Province in February, 1979. In Machakos District, the Teachers Service Commission (T.S.C.) found that 750 classes had been without teachers since they were opened. At the same time, the Embu District Development Committee expressed concern over 200, effectively teacherless classes in the area.<sup>(67)</sup> It was further pointed out that urban-rural inequality in terms of teaching standards would continue unless particular attractions were offered to rural teachers.<sup>(68)</sup>

The differences between urban and rural areas are probably more significant in terms of primary education. Most large towns, particularly Nairobi, have a greater number of nursery centres<sup>(69)</sup> and better primary schools.<sup>(70)</sup>

Government primary schools are divided into Schedule A, B and C categories. Schedule A schools are mainly a feature of the rural environment. There are no fees up to Standard VI and K.60 Shs. per annum is charged in Standard VII. Building fees and other charges bring the cost up to about K.150 Shs. per annum for upper-Standard students. In Nairobi, Schedule A schools

charge the same fees but the buildings and equipment are superior and the teachers are usually better trained. Standards and, of course, fees are higher in Schedule B schools and in Schedule C schools, the fees are K.900 Shs. per annum, almost all the teachers are qualified and English is taught in all seven years rather than only in the last four. Competition for places is intense and there are generally six applicants for each vacancy every year.

In addition, there are the more exclusive private schools such as Nairobi Academy, Banda and Braeburn in Nairobi which employ expatriates, charge very high fees and enrol a high percentage of non-Kenyan children and a very low proportion of African Kenyans.

The differences in the quality of education between the top and bottom ends of the spectrum are enormous and these are reflected in C.P.E. performances and hence, secondary school selection.

In terms of the 1977 C.P.E., the first top 10 schools in Kenya were in Nairobi.<sup>(71)</sup> In 1978, Nairobi accounted for 7 of the top 10 schools and only one of the other three was in a rural areas.

The superiority of urban children in terms of examination performance has, in fact, been noted throughout Africa. Poole, for example, showed this to be the

case for Hausa children in northern Nigeria. (72)

In Kenya, although it is obvious that urban children have access to better educational facilities, much attention has been devoted to the Standard VII examination, C.P.E. and research has shown that it has an inherent urban bias which reinforces the affect of differentials in opportunity and casts doubt on its supposed meritocracy.

In 1972 Ministry of Education Curriculum Report was first in suggesting that C.P.E. was an unreliable indicator of ability and, in fact, biased in certain directions;-

"It is sad that so much careful planning and resolute effort is devoted to an examination of which the validity and reliability are (so far as we could ascertain) unproven, and which has such restrictive effects upon the work of the primary schools... . The examination in its present form tests attainment only. It is not designed as a test of innate ability nor as a predictor of performance in secondary school." (73)

The Report went on to examine the urban bias in the examination;-

"... The C.P.E. examination as at present constituted probably favours candidates with well developed verbal skills to the detriment of their more mathematically gifted fellows, moreover there is a strong possibility that it favours children in urban areas, those from educated families and those from schools where education is conducted in the medium of English from Standard I." (74)

It has been largely assumed that the advantage of the urban student was in his greater exposure to the English language. As the Nairobi Times commented;-

"... the secret of the urban and private school performance in C.P.E. lies in the pupils better command of the English language." (75)

However, research is showing that the urban students tend to do better in all 3 C.P.E. subjects. Mwaniki found this to be the case in his 1973 study of urban and rural Kenyan children. (76)

Accordingly, after 1972, reforms were introduced designed to:-

- (1) make C.P.E. a more effective terminal examination in that the proportion of questions testing knowledge and skills useful to the primary leaver was increased substantially
- (2) demonstrate the candidate's ability to reason
- (3) include a higher proportion of items drawing on situations and experiences familiar to rural children.

Since 1973 the effects of changes in C.P.E. have been monitored by Somerset and his colleagues at the Examinations Research Unit in Nairobi by comparing the performances of rural low-cost, Nairobi low-cost

and Nairobi high-cost school samples. In 1978 they concluded that;-

"It is immediately apparent that changes in C.P.E. have not reduced the overall performance gap between Nairobi high-cost and rural low-cost pupils, as had been hoped. On the contrary, in science, history and geography, the gap has widened since the reforms were introduced. Only in English is there evidence of an overall narrowing and even this trend was partially reversed in 1977." (77)

Urban-rural inequalities, quite clearly, do exist but it is wrong to consider the residential location as the primary reason why urban children tend to do better than those in rural areas. The effect of urban residence is limited to the advantage of greater exposure to the English language and situations and experiences found in the C.P.E. and E.A.C.E. papers. The real advantage of urban areas lies in their educational structure which allows better access to superior quality schooling.

Examination performance cannot be genuinely correlated with "area" but to the type and standard of schooling and educational experience. Heyneman showed, in Uganda for example, that performance in the Primary Leaving Examination was related to the age of the student, the rate of examination repetition and the level of pre-selectivity based on the availability of primary school places in each locale. (78)

Similarly, Makau and Somerset commented in their study of C.P.E. that their results;-

"... suggest strongly that the huge performance advantage enjoyed by Nairobi high-cost pupils in the English paper can be ascribed entirely to two sources, first, the superior quality of the education they receive and second, their greater familiarity with the language." (79)

Their work indicates that far greater attention should be paid to structural inequalities and these are considered in a later section.

### 3(iii) Racial and Ethnic Inequalities

Once racial segregation was abolished at independence it was largely assumed that racial educational inequalities would disappear. However, in effect, they persist in that the European and Asian communities can afford to send their children to the very high standard and costly private schools. This situation will continue for as long as socio-economic differences exist between the three races and it is extremely unlikely that the government will attempt to interfere. As Rothchild noted, Kenyan attitudes to racial inequalities are quite sophisticated for,

"... although the people are nationalistic about their Africanisation objectives, they are cognizant of the contribution of out-groups in the development process." (80)

Racial discrimination, then, exists to the extent that Africans, to a large extent, are restricted in entry

to the better primary and secondary schools in the private sector. There are, however, a considerable number of reported cases where African children are discriminated against in the assumption that they may not be able to pay the fees. (81)

Of more social and certainly, political significance to the Kenyan Africans are tribal inequalities which originated during the colonial period and have manifested themselves in a variety of ways in persisting up to the present day.

In terms of economic and political influence, the Kikuyu, the largest single tribe, have maintained their lead since the early part of the 20th Century. Post-independence politics in Kenya were, to begin with, based on tribal lines and even now that a single-party system has evolved, political leaders derive their constituency support essentially from a tribal basis. The Kikuyu have dominated the central political structure and thereby ensured that Central Province has been able to secure support for social welfare activities and in building up a pool of trained manpower and an array of commercial enterprises.

Rothchild, for example, showed in his study of I.C.D.C. loans (for industrial and commercial development) up to 1966 that the Kikuyu, comprising 20% of the male population, received 64% of the industrial and 44% of

the commercial loans. Similarly, income statistics revealed a marked disparity. (82)

Of course, once tribal inequalities have been generated the advantaged are reluctant to relinquish their privileged position and, therefore, employ political influence and economic pressure to guarantee that this situation persists. In this way, inequalities tend to become self-perpetuating and ethnocentrism tends to reinforce rather than decline.

Kenya is still a very ethnocentric country. Mapp's study in 1972 revealed that the Nilotic tribes in the west of Kenya were not only antagonistic to the Nilo-Hamitic tribes of the Rift Valley and the Bantu of Central and Eastern Kenya but exhibited marked internal parochialism in that the Luhya tended to maintain a rigid separation from their close neighbours, the Luo. (83)

However, tribal loyalties seem to be more flexible in urban situations. Mapp found that the least urbanised people in her Kenyan sample to be the most ethnocentric. (84)

Similarly, Parkin found in Kampala that the Ganda, in particular, were prepared to co-operate on a cross-tribal basis with those who shared the same social and economic status. (85) Nevertheless, it does appear to be true that reciprocity between public officials, politicians and supporters is based more on tribal solidarity than anything else. (86)

Political and economic inequalities in Kenya, based on tribal lines, are partly attributable to a variety of inherited circumstances such as the greater exposure of the Kikuyu to colonialism. However, it would be wrong to suggest that Kikuyu dominance was purely fortuitous for it is clear that they were first to realise the importance of abandoning their traditional lifestyle in order to compete with and benefit from the colonialists. The Maasai, for example, although the white settlers appropriated more of their land than the Kikuyu's, never developed this attitude and still remain, to a large extent, very traditional and backward. The Kikuyu, on the other hand, were first to politicise and act in a concerted manner against the colonialists. More significantly for our argument here, they developed, as noted in Chapter 1, their own independent schools and were successful in manoeuvring the allocation of an inequitable share of colonial resources to Kikuyu areas.

As a result, the accession of Kikuyu to prominent civil service and political positions was related fundamentally to their higher level of education. As Rothchild argued:-

"In the immediate post-independence period, the recruitment of Africans was based essentially upon education and experience. Since African efficiency was essential to supplant non-African hegemony, these qualities represented a prized asset - even if not distributed evenly within the population... . Thus the needs which gave rise to solidarity and which placed a high priority upon a combination of rapid Africanisation and merit, opened the way to (87) inequalities among the Africans."

In terms of educational provision, tribal inequalities effectively mirror the regional inequalities described above. The advantage of the Kikuyu in terms of the distribution of government aided schools is slowly being eroded, relatively, rather than absolutely but they have managed to maintain their lead through the construction of local community schools. After the Kikuyu, the Luo and Luhya are probably the most advantaged because of their more recent developments in the unaided and private sectors and preponderance in Nairobi where they are slowly reducing the Kikuyu dominance in the city. The least advantaged tribes are the Samburu, Turkana, Somali, Maasai and associated groups and since they have little political influence this situation is likely to persist for some time to come.

Tribal inequalities are also apparent in terms of attitudes towards education. Several remote tribes in Kenya are somewhat reluctant to send their children to school fearing that it will disrupt the

family economy of which the children are an important part. The Kikuyu, however, since the colonial days have greatly valued education and families will sacrifice personal welfare in order to educate their children. Kenneth King's study of the Narok and Kajajido Districts of the Rift Valley in 1971 demonstrated, for example, that, in terms of C.P.E. performance and secondary school selection, the Maasai achieved the poorest results and failed to get the full benefits of school education. The Kipsigis and particularly the Kikuyu, however, were much more success orientated and gained a lot more from the system. (88)

The educational system also favours the more urbanised tribes who come more into contact with English-speaking people and situations since English, apart from the first three years of primary schooling, is the medium of instruction. The Kikuyu, Luo, Luhya and Kamba who dominate Nairobi have a clear advantage in this respect. (89)

Clearly, ethnic inequalities are an important feature of the education system but so far we have only discussed inequalities related to the distribution of the educational facilities and in the previous section it was suggested that research should focus more on structural inequalities internal to the system.

Therefore variations in facilities and standards from school to school are examined and evaluated in the following section.

3(iv) Structural Inequalities

In terms of primary schooling, the standard of education is related to the type and category of school. The urban private schools are by far the best and the differences between Schedule A, B and C schools are as significant.

In the first place, there is about two to three times as much money spent on the urban Schedule C schools by the Nairobi City and Municipal Councils than on Schedule A schools by the District authorities. This means that the Schedule C schools have far superior buildings, facilities and equipment stocks. In addition, the higher standard schools attract the better qualified and more experienced teachers. It has been noted that Nairobi private schools are able to employ ex-patriate teachers on overseas terms and Schedule C schools have a high proportion of S1 (secondary grade 1) and P1 (primary grade 1) qualified staff whereas the Schedule A schools generally employ a high proportion of P3 (primary grade 3) and unqualified teachers.<sup>(90)</sup>

These differences between schools are reflected in

C.P.E. results. For example, Somerset, in his 1974 comparison of Nairobi and Nyeri high-cost and low-cost schools, found, on average, that people in the former performed much better than their colleagues in the latter.<sup>(91)</sup> The same conclusion was reached in his more recent study with Makau in 1978.<sup>(92)</sup>

Similarly, Wachtel, in his study of performance differences between Nakuru schools in 1976 found, by employing a variety of statistical indicators based on C.P.E. scores, that;-

"... pupils at higher cost schools have a significantly better chance of gaining a secondary school place."<sup>(93)</sup>

Although these differences may be partly attributed to the variations in English language competence between urban and rural areas the inequalities in the standard of education from school to school is just as important. In fact, Somerset argued in 1974 that variations in C.P.E. results were highly correlated with the experience and qualifications of the teaching staff.<sup>(94)</sup>

The importance of good teaching at this level cannot be over-estimated and in 1979 after the 1978 C.P.E. results were announced and analysed the responsibility for failure was laid upon the teachers by the students, parents and Ministry of Education officials. For example, the Busia District Commissioner, David

Mulama, blamed the appalling results in his region on;-

"... teachers' absenteeism, poor school management, failure to prepare lessons and failure (by parents and teachers) to check on the children's progress." (95)

The same conclusion was reached by the Eastern Provincial Education Officer, George Ndung'u in noting that of the 128 Embu District schools taking part in the 1978 C.P.E. only 41% performed "relatively well" while the others achieved "deplorable results". In describing the position of Embu as 31st in the country as "pathetic", Mr. Ndung'u particularly blamed the situation on;-

"... school heads who instead of playing the vital role of supervisors in their respective institutions took time off to run their own business ventures, totally disregarding their noble profession for which they continued to draw salaries." (96)

A final example is the extremely poor performance of Bungoma District in Western Province in finishing second last on District rankings and Napare and Wetang'ula were adamant in blaming the situation entirely on the school teaching staffs in neglecting their students and pursuing other interests;-

"When a school head is not busy acquiring hundreds of acres of land, he is busy canvassing votes for the next elections in the council or in Parliament." (97)

It has also been suggested in some quarters that the Education Administration is inherently biased towards

the higher standard schools particularly in Nairobi. The T.S.C. has been heavily criticised for its sometimes bizarre and inconsistent teacher posting policy<sup>(98)</sup> which has led to shortages in many rural areas.<sup>(99)</sup> As a result, there is a growing feeling that T.S.C. should be decentralised so that posting operates on a regional basis and may be related more closely to particular District requirements.<sup>(100)</sup> In a similar vein, it has been suggested that K.N.U.T. (Kenya National Union of Teachers) negotiate in the first place for higher salaries to attract better qualified and more committed teachers and secondly, for differentials to encourage experienced and highly qualified staff to teach at poorer quality schools and in the rural areas.<sup>(101)</sup>

At present, none of these recommendations show any signs of implementation and at the primary level massive variations in the quality of education from school persist and in some ways are entrenched and legitimised by the Administrative structure.

Very similar inequalities are apparent at the secondary level. As noted in Chapter I, secondary schools are graded from A to D and categorised according to type; government aided or assisted, unaided and private. The differences in facilities, standards and teaching staffs are quite enormous, and

although there are exceptions, as a general rule it is far better for a student to attend a higher graded government school than lower graded private and harambee schools.

The variations in standards produces significant differences in E.A.C.E., E.A.A.C.E. and University entry results which may be correlated with school type and grade. Chapter 4 contains a detailed analysis of the 1978 E.A.C.E. results in this respect and, although we shall not dwell on this here, the data convincingly demonstrate that the scores vary according to school standards. (102)

In terms of University entry it is significant that the same pattern of school performance is repeated year after year. For the 1977 University of Nairobi entry, 6 of the top 8 schools were Provincial government aided and the other two were National state aided. The ninth place was occupied by Strathmore College which is an expensive private Nairobi school. (103) This situation led a "Former Student" of Eldoret to comment that the system was self-perpetuating in that;-

"The good students when nominating their choice of school for A-level will opt for one of the better schools. Thus the good schools get the good students; the system is self-perpetual. The same can be said of headmasters and teachers." (104)

The inequalities therefore continue after school in that students educated at government high graded schools have a better chance of finding a job. In the School Tracer Project of 1968, Kinyanjui and Shepard found that 9.2% of their sample of national government school leavers were still employed after one year compared to 14.5% of local state and 36.7% of harambee school leavers. (105)

Clearly, differences in performance may be attributed to pre-selectivity patterns, since the better schools attract the higher qualified students at C.P.E. but it is important to isolate this factor from the dis-equalising effect of differences in school standards. This quality of education may be examined in terms of facilities and teaching.

There are very significant differences between school facilities, particularly in terms of laboratories, classrooms, libraries and general services. A detailed analysis is given in Chapter 4 but it is worthwhile, as a rule of thumb, saying that facilities decline from A to D grade and from government to private and unaided schools. Conditions in the lower graded harambee and private schools are often appalling and stand in marked contrast to such well-maintained and equipped schools as Kagumo High in Nyeri District and Lenana High in Nairobi. It was reported,

for example, that Hill School, Eldoret operated entirely without water facilities, (106) and a similar situation was reported at Bericho Secondary School in Kerugoya. (107) Another example is the closure of several schools in the Runyenjes Division of Embu District by the Public Health Officer in May 1979 because of the lack of sanitary facilities. (108)

In the same way, teaching standards decline from A-D graded and government to unaided schools. Variations in teaching qualifications are discussed in Chapter 4 but it is important to note that the level of responsibility and, indeed, ethics, fall very rapidly as one moves outside of the higher graded government schools and the National Press are full of examples of this.

Absenteeism is a chronic problem at lower standard schools. The Ndegwa Commission Report which recommended that state employed persons be free to conduct business outside their employment has been severely criticised in this respect. Rabambi, for example, cites the case of;-

"... a teacher in a Kitui school with a farm in Naivasha and a business interest in Murang'a who spends some days looking after these individual interests and hours solving the business problems through the telephone." (109)

In January 1979, the Western Provincial Education Officer went as far as to blame the region's appalling academic performances on a

"... lack of commitment to duty and chronic absenteeism." (110)

He continued to say that;-

"This is a manifold problem which I cannot have solved within the 9 months I have been in office. I was thoroughly flabbergasted on my tour of inspection the other day not to find school heads and their deputies in all the 46 schools I visited." (111)

In addition, reports of teacher irresponsibility and low moral values are very common.<sup>1</sup> A typical example is that of a headmaster of an Embu school, who was ordered to pay 20 goats and 6 rams as compensation for making a schoolgirl pregnant. (112)

There have also been a number of cases where school staff have been convicted of actual theft or appropriation of school funds.<sup>2</sup> An example is that of the trial in June 1979 of a tutor of the Kenya

1. One example is that of a primary school teacher, Killian Walakisa of Tana River District, who was jailed for 3 years for "defiling" a 12 year old schoolgirl. Nation 8.5.79. Kenya.

A teacher actually kidnapped a schoolgirl at a Kisumu school and had "morally corrupted the young girl while ... still attending school". Nation 22.5.79. Kenya.

2. A headmaster of a Kericho school was jailed for theft of school funds in June 1979. Nation 28.6.79.

A primary headmaster was also found guilty of stealing 48 corrugated iron sheets from his school in Eldoret and jailed for one year. Standard 11.4.79. Kenya.

Science Teachers' College, and the headmaster of Karai Secondary School who have been accused of attempted robbery at a Kiambu farm. (113)

In many poorer schools, corporal punishment is practiced and severely so. In July 1979 a teacher was appearing at the High Court for manslaughter in connection with a child who died after a caning. (114)

In June of the same year a teacher at a Machakos school was fined K.500 Shs. for allegedly rounding up 15 students to beat en masse for nicknaming him "Isn't it" - an expression he tended to mis-use. (115)

A final example of the low standard of teaching at poorer schools is the extent of "private tuition" which is employed as a subtle means of exploitation. In a typical letter by David Adawo it was claimed that a system of coaching was operating in the Bondo Division of Siaya District where teachers were singling out pupils whose parents could afford to pay for extra tuition. If they refused the teachers boycotted the students. (116)

These few examples cannot give a very comprehensive picture of teaching standards at the poorer schools. Detailed statistical analysis of qualifications is given in Chapter 4, but there is no doubt that the quality of teaching and the commitment of the teachers falls very rapidly as one moves out of the top private and good government schools.

Structural Inequalities then, are very important in that they actually explain differences in performance between schools and transgress spatial and ethnic variations in educational provision. A good school is a good school whether it be in Central rather than Nyanza Province or Nairobi rather than a rural village. In this sense, they are more important than these other types of inequality and yet they have been researched less.

Another form of inequality which has been somewhat ignored is that of socio-economic background and this is discussed in the following section.

### 3 (v) Socio-Economic Inequalities

As a general rule of thumb the quality of pre-secondary education depends on how much one is able to pay.

Nursery schooling is certainly a very important aspect of a child's educational development and this is available to only a small section of the population.

Herzog found, in 1968, that there were 4,600 nursery centres in Kenya enrolling some 175,000 pupils but the variations in standards were enormous. (117)

Herzog examined the relationship between the quality of nursery centre and the background of the children's parents by employing a sample consisting of a centre

in Mathare Valley, a squatter area of Nairobi; one in Kariobangi, an African estate; some centres used mainly by middle-class Africans and Asians and one in Ngecha, a village in Kiambu District some 20 miles north of the city. He found significant differences between the Centres' children in terms of the parents' household income, education and occupations.

In addition, the poorer parents, besides being able to afford only the lower quality schools, tended to regard the nurseries mainly as day-care centres - as conveniences for the harassed mother, whereas the middle-class parents saw them more in terms of a springboard to primary entry and good C.P.E. results.

The same sort of situation is evident in primary education. Maleche and Krystall, for example, felt justified in arguing that;-

"The quality of a child's primary school will be determined by the affluence of his area and his family." (118)

Chege and Ergas' 1973 study also convincingly demonstrated that the quality of primary schooling depended on the type of school attended and ultimately the fees one could afford. (119) As noted earlier, primary schools are categorised as Schedule A, B, C and private and the differences in fees between them are substantial. Theoretically, of course, tuition fees

are waived from Standards I - VI but this equalising effect is counteracted by the replacement of these fees by other 'charges' and the fact that parents may choose to pay for primary education if they wish.

Free primary education is, in essence, a political gesture and it is clear that the schools have to recoup some of their losses on tuition fees. After Kenyatta abolished the Standards I - V and Moi, the Standard VI fees, there were numerous reports of schools charging for all kinds of items. A typical example is a letter by Peter Otwani of Busia District in which he commented that;-

"Since the introduction of free primary education from Standards I-V, Busia District Education Board has imposed yet another fee on the children in addition to other payments amounting to K.85 Shs. described as Harambee, Watchman, desks, sports etc. As for Standard VI - VII pupils, apart from paying the above they are also required to pay the normal school fee of K.60 Shs. per annum which means these pupils have to pay a total sum (120) of K.145 Shs. per annum."

The point to make is that Kenya cannot afford genuinely 'free' primary education and in a situation where parents are paying for their children's education is is very much the case that the quality of education received is related to the amount of money one can pay. As a result, C.P.E. results, since they are strongly correlated with school type, are partly dependent on

socio-economic background. Mwema went as far as to suggest that;-

"Schedule C schools may seem to perform better than A schools in the C.P.E., but this is not due to any amenities; rather it is due to the home backgrounds of the children in C schools. The majority of such children come from gainfully employed parents .... are well educated ... and can even afford them extra coaching." (121)

The wealthier students may also have the benefit of private out of school tuition. Momanyi, for example, argued that;-

"... the external examination should no longer be relied upon as the screening bar for innate ability among the students. The examinations have become unfair because the higher income parents can afford to employ private tutors while the rest cannot." (122)

In theory, secondary school entry should not be biased towards the wealthier socio-economic groups since it is largely assumed that meritocracy is guaranteed by the examination system. Wealthy students can afford to pay the very high fees at the exclusive, private schools but the charges are standardised in government schools and are within the capacities of a high percentage of African families. In fact, the fees are much higher at harambee and low-graded private schools where the quality of education is much lower. There is chronic exploitation at these levels and the following examples, quoted by a Provok and Karuri student respectively, are typical;-

"I'm a student in a private school in Kisii Town. We pay K.1,820 Shs. per year. What we are provided is one set of uniform, few exercise books and food only. No textbooks are provided. The uniform is made of cheap material to the lowest standards." (123)

"Harambee means pulling together voluntarily. However, to some people Harambee means the contribution of fixed sums of money by force. After paying up building funds every Karuri High School student is being forced to contribute extra money to extend the school. Every student must pay a certain amount of money or else leave the school." (124)

Despite this, it appears that a disproportionate percentage of higher socio-economic strata students attend the higher standard schools, even in the government sector.

Brownstein, for example, found in 1972 that secondary school enrolment in Kenya was related to the educational level of the Father. For those fathers with no education in his sample, only 38.2% had children in secondary school compared to 73.7% of fathers with 5 or more years of education. (125)

This sort of relationship has been consistently found in other parts of Africa. Clignet and Foster's 1964 study of Ghana and the Ivory Coast, for example, produced similar results. They examined the backgrounds of students in a sample of secondary schools. By taking the percentages of fathers in different educational and occupational categories and then

comparing these with the proportions of such men in the total population, a selectivity index was calculated illustrating the chance which sons of fathers in these categories had of obtaining secondary education. The selectivity index, for Ghana and for fathers with no education was 0.4. This compared with a value of 6.9 for secondary and 13.0 for University educated fathers. In terms of the fathers' occupations a selectivity index of 4.9 was recorded for the professional, and higher technical and administrative categories compared to 0.1 for semi-skilled and unskilled workers. (126)

Zolberg showed a similar relationship in her study of secondary students in Mali. Over 1/3 of the boys and 2/3 of the girls had fathers in the middle to high occupational categories in the modern sector and over  $\frac{1}{2}$  the boys and  $\frac{3}{4}$  of the girls had literate fathers. (127)

At the University level the over-representation of more affluent socio-economic groups is even more apparent. Fields and Rastad found, in their 1971 study of University of Nairobi students that 21% of the sampled respondents' fathers had no education compared to a figure of 80% for all Kenyan males over 40. Similarly, 56% of the students' fathers had some primary education compared to a national average of 18%. The respective figures for Forms I-IV education

were 18% and 2% and, for post junior secondary schooling, 4% and 1%. (128)

An earlier study by Rastad in 1970 also showed that Nairobi University students originated, in general, from more wealthy backgrounds. Most of the educated fathers were employed in the professional, administrative and entrepreneurial sectors and although almost 25% did not own any land, those who did generally owned a considerable amount. (129)

There is, therefore, quite a bulk of evidence indicating that academic success is related to socio-economic background and in a system which is supposed to guarantee meritocracy we must ask why this happens.

In the first place, the more affluent households can afford to pay for nursery schooling and private tutors and send their children to the superior primary schools. Secondly, the wealthier parents can provide children with a better learning environment at home and thirdly, tend to encourage and help the children more in realising the value of a good education. In addition, it is possible that the greater awareness of the educational and occupational markets possessed by modern sector household heads may be of benefit in securing places for their children in higher quality institutions.

It is also important to realise that since education largely became the mechanism of personal advancement in the colonial period, the elite, who were the product of that relationship, have a vested interest in reproducing the conditions which lead to their privileged positions. In this way the education system becomes 'elitist', not only in the sense that it is hierarchically structured, but also in that it is biased towards the elite of the socio-economic spectrum as a result. The process becomes circular.

There is little doubt in Kenya that education is related to affluence. Marris and Somerset, for example, showed this to be one of the most important factors behind entrepreneurship. Their sample of Kenyan businessmen included a higher proportion with primary or secondary education than the age group most comparable with their own. In addition, they noted that the level of education rose with the scale of business. (130)

Morganstern came to similar conclusions in his 1968 analysis of the earnings of 1624 household heads in relation to the number of years of schooling, school quality, educational experience and socio-economic background. The socio-economic background influenced the quality of the schools attended which then determined the level of educational attainment and, therefore, earnings. (131)

A similar finding by Zolberg led her to conclude,  
for Mali, that;-

"Where education is used as an avenue of mobility, it is likely that those in the traditional sector will be relatively excluded by those with a foothold in the modern sector, in a situation of great scarcity, regardless of ideological stance." (132)

The circularity of this process was neatly demonstrated by Cox and Mberia for Kenya in their study of the Kikuyu village of Ngecha in Kiambu District, 20 miles north of Nairobi. They isolated a sample of 42 males aged from 61 to 92 and examined the differences between the schooled and unschooled in terms of several socio-economic indicators. The educated tended to be employed in more prestigious occupations with greater economic returns and were generally more progressive in their farming and had accumulated large parcels of land. In addition, the schooled had, to a large extent, smaller families and their children had gone further in school.

It was particularly interesting that the educated had seen the value of education as an investment in the future and therefore ignored the local harambee school in sending their children out of the District for a better education. The unschooled generally had larger families and could not afford to keep children in school for long. (133)

Differences in attitudes towards education have been noted in other parts of Africa. Murray, for example, in his study of the Ankole in Uganda investigated various factors of family and community background in encouraging or inhibiting school attendance and discovered that it was the wealthy and progressive families, having adopted cash crops, who sent their children to school. (134)

The elite, as Court has argued, know the advantage of education and, in obtaining disproportionate access to educational resources, guarantee their survival and self-perpetuation. (135)

As Maleche and Krystall concluded;-

"Thus, a system ostensibly for the country as a whole, a system which consumes 33% of the national budget is a system which seems designed for those few whose backgrounds mark them as potentially high-level manpower even before school entry". (136)

The prospects of a significant change in this system are, it would seem, remote since it is the elite who have risen to positions of political prominence and their control of the distribution of educational resources is pervasive. As M. Kinyanjui, put it:-

"Now it is no longer a question of racial dominance but middle-class dominance over the peasants and workers. Woe unto the peasant children in the rural areas. Year after year, like ships getting wrecked on a reef, they always get wrecked in exams. It is not accidental - it is a grand plan." (137)

4. Conclusion

The material examined so far suggests that the formal system of education in Kenya is highly selective, academic, theoretical, competitive and pyramidal. As a result it produces a cadre of youngsters who at Form IV look upon themselves as an educated elite. In a sense, they are an elite but the advantages of their position are considerably less than they believe, for it is apparent that they aspire to occupational and educational levels which are quite unrealistic. Such ambitions are unfortunate, not only for the individuals but also for national development planning. Formal schooling encourages students to aspire to non-manual, skilled, modern sector employment while ignoring opportunities in agriculture, processing and industry, particularly in rural areas. Therefore, the system produces far too many leavers looking for work in the urban/modern sector fields and not enough in the rural/agricultural categories. This is indeed a serious problem for a country such as Kenya which is starting to invest a more significant percentage of its resources in rural development with the result that modern sector growth will be slack for some time to come. It would seem that the formal education system, in which so much is invested, acts only to undermine national goals and manpower priorities.

In addition, the educated young, in hoping to fulfil

their aspirations, are the most important category of rural-urban migrants. This only tends to overburden urban resources and produce unemployment while creating a labour vacuum in the rural areas and inhibiting agricultural development.

Unfortunately, these problems do not seem to lead to a re-orientation of the education system. Rather it is tending to reinforce its competitive, selective and examination based structure.

Clearly, there is a pressing need for a complete overhaul of the formal system in terms of organisation, structure, direction, administration and curricula but radical changes would not be popular with the customers of the education market.

Education is seen as the vehicle of personal advancement. It is, therefore, valued not as an end in itself, but as a means to an end. So long as the system remains hierarchical it will be regarded solely as the selective device to social and economic positions of prominence. If the education system is elitist it is to be expected that the successful students will join the socio-economic elite. This accounts for the present orientation and is the argument upon which resistance to change is based.

Unfortunately, only a very small proportion of the 'educated elite' are able to find places in the high

level urban and modern sector occupations they aspire to, but the important point to remember is that the perceptions of the educational and occupational markets are more pervasive than the realities. These perceptions, then, generate the problems of rural-urban migration and unemployment mentioned above.

This evaluation of the role of education in Kenya is, of course, based on the understanding that selection is purely meritocratic. However, we have seen in this chapter that there are important inequalities of various kinds. These inequalities operate at both primary and secondary levels and the results are manifested in examination results and entry to Form I, V and University.

It is clear that the system is biased towards certain socio-economic and ethnic groups, various regions and locations and to students attending particular types of schools. It is, therefore, extremely important to examine these inequalities closely for if it is the case that the education system is elitist, not only in the quantitative but also the qualitative sense, then it brings into question that wisdom of the enormous expansion in educational facilities, particularly the Harambee movement, since independence and the whole orientation of the organisation and curricula.

In this thesis, it was decided to examine student attitudes and aspirations at Form IV and analyse certain aspects of inequality in order to discover to what extent the argument presented in this Chapter is valid. This level was chosen, firstly because primary students have been well researched, in particular, by Somerset and secondly, because Form IV students are interesting in that they represent the elite of the junior secondary stage and yet most of them will fail to continue their training and have to find employment.

In terms of inequality, we will be concentrating upon differences between school types and socio-economic groups (structural) and differences between rural and urban groups (spatial).

Regional and ethnic inequalities have been well documented and there is also evidence that they are declining. In addition, they demand analysis of macro data which is beyond the means and authorisation terms of the thesis field research. In any case, inequalities of this type are purely distributional and do not effectively account for differences in performance between individuals. As noted earlier, it is structural inequality which provides a causative link with performance and they are therefore more important, particularly when they have been somewhat ignored.

In addition, it appears that urban-rural inequalities are becoming more important as urbanisation continues at such an alarming rate and it was decided to include these as a spatial component.

This chapter, then has outlined some of the problems of orientation and inequality in the Kenyan school system, supporting the conclusions with evidence from other African countries with similar education structures. Certain aspects of these problems were identified as meriting further investigation in the field at a detailed level.

Chapter 3 describes the field research aims and methodology, and the data are analysed and evaluated in Chapters 4 and 5.

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CHAPTER 3FIELD RESEARCH - METHODOLOGY AND ADMINISTRATION1. General Aims

Field research was carried out in Kenya between October 1978 and July 1979. Several months were spent in Nairobi acquiring permission for research from the Office of the President and collecting and collating data available from the Ministry of Education, Nairobi Provincial Education Office, the Central Bureau of Statistics, various libraries, Archives and the University of Nairobi. In addition, a questionnaire survey of Form IV students in selected secondary schools was administered in the Nyeri, Murang'a and Kiambu Districts of Central Province, the Embu District of Eastern Province and in the Nairobi Provincial Area.

The aims of the questionnaire survey were to:-

- (1) Study school organisation, administration, methods and curriculum at first hand.
- (2) Examine the differences in performance and standards between schools of different grades and type.
- (3) Collect information from Form IV pupils on their cultural and socio-economic background, educational aspirations and experience, occupational ambitions and attitudes towards educational inequality, economic development and politics.

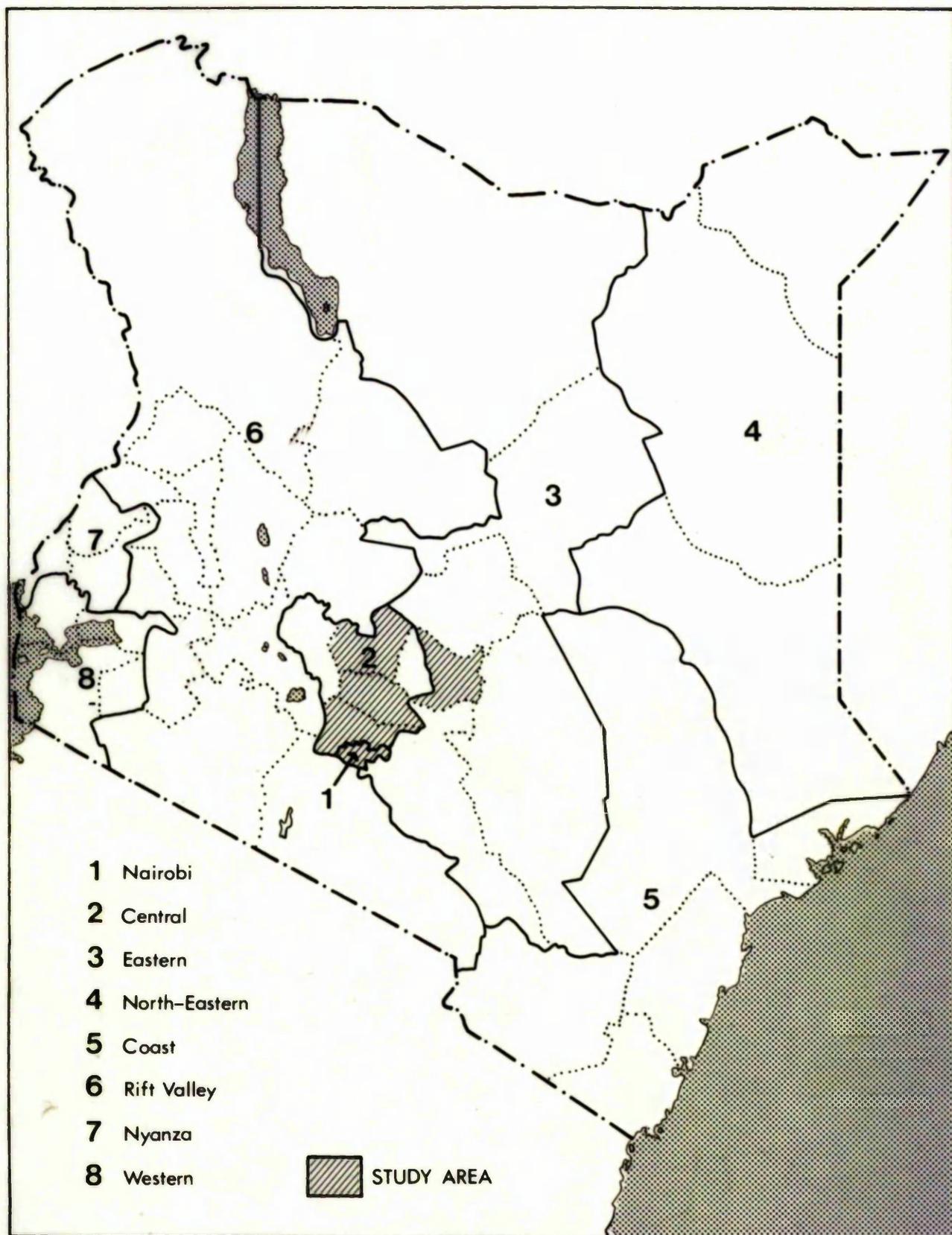
2. Research Organisation2(i) Research Authorisation

A research permit was issued by the Office of the President in November 1978. Permission was only granted to conduct research in central Kenya. An earlier application to compare the educational provision of this area with that of Kisumu District in the Nyanza Province of western Kenya was rejected. Consequently regional and tribal inequalities within the educational system could not be examined with primary data. Therefore, it was proposed to concentrate upon the structural inequalities within an essentially homogenous region in terms of tribe and economic development noting spatial differences between the Nairobi urban area and the rural Districts.

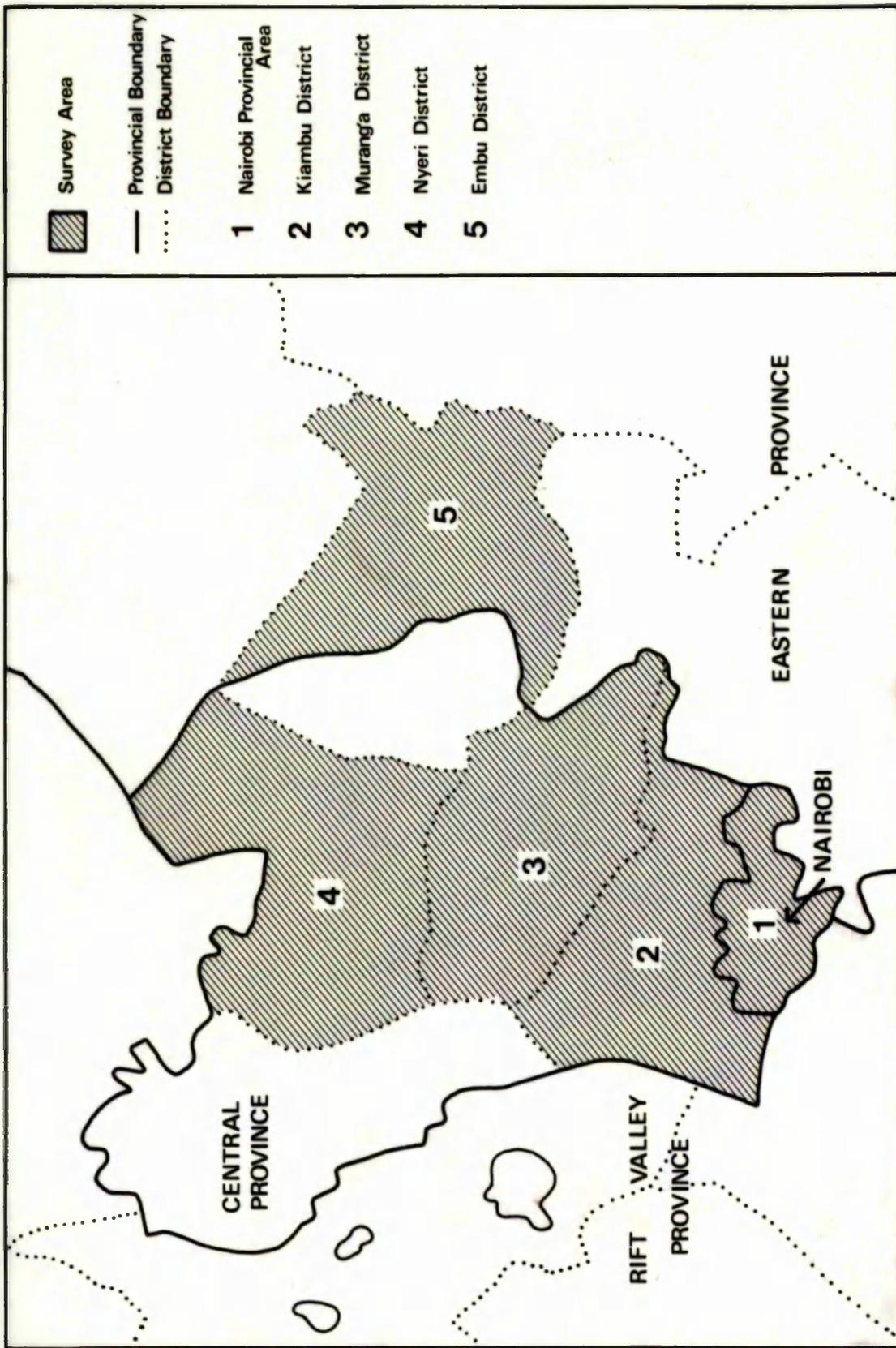
2(ii) Association with Kenyan Academic and Government Bodies

Permission to visit schools was given, upon application, by the Ministry of Education Central Inspectorate in Nairobi. Letters of introduction were then sent to the Provincial Inspectors of Central, Eastern and Nairobi Provinces. Authorisation to carry out research was then given, upon arrival, by the Provincial Education Offices concerned.

I was given an explanatory letter of introduction to the Headmasters of those schools included in the survey. In some cases, the Inspectors telephoned schools to advise them of my intended visit. This procedure ensured that no



**FIGURE 1. Kenya Provincial Boundaries and Survey Area.**



**FIGURE 2. Survey Districts.**

Headmasters refused permission to conduct research.

The Provincial Education Offices were of further assistance in advising upon selection of schools for the sample and in explaining the location of schools included in the survey.

Research authorisation was given by the Office of the President on the condition that associateship with a Kenyan academic body was obtained. The Department of Education Administration Planning and Curriculum Development in the Faculty of Education of Kenyatta University College, some 12 miles from Nairobi city centre fulfilled this obligation. The Department provided a supervisor, Dr. M. Maleche, and typing, printing, postal, library and data analysis facilities.

Further assistance was given by Dr. Alan Ferguson of the Department of Geography, University of Nairobi, particularly in connection with the questionnaire design.

3 Areas chosen for research

The survey included Nairobi as an "urban" area and the rural Districts of Nyeri, Murang'a and Kiambu in Central Province and Embu District in Eastern Province. The location of these Districts is shown on Figures 1 and 2.

- 3(i) Nairobi is Kenya's capital, largest city and most important industrial, market, retail and administrative centre. The population of the Nairobi Provincial area was projected to

be 863,000 in 1979, considerably higher than its nearest competitors Mombasa, Kisumu and Nakuru<sup>(1)</sup>. The importance and uniqueness of Nairobi within Kenya can best be appreciated at first hand. The following comments cannot give any more than a hazy impression of the incredible transition to be found as one moves out of Nairobi into say, the rural areas of Kikuyu and Uthiru to the west and Ruiru and Kahawa to the north.

Nairobi houses the President, Parliament, the Civil Service, Ministries and Government bodies. It is the centre of banking, credit, insurance, radio, television and news services. Virtually all international, private and public Kenyan companies have headquarters in the City. It is the focus of transport in Kenya by road, rail and air.

Indeed, there is no greater indication of Nairobi's hold on investment and development than the sizes of the Asian and ex-patriate communities in the City.

Although Nairobi still has a disproportionate percentage of Kikuyu and more recently, Luo, it is essentially a multi-tribal city with a higher level of integration and permanence within the African communities.

In order to compare the backgrounds and attitudes of urban and rural school pupils it is essential to employ Nairobi as the 'urban' example, since it is the only city of

sufficient size and integration to qualify as truly divorced from the rural areas around it.

- 3(ii) Nyeri District in Central Province is a highly populated and intensely farmed 3,341 sq.km. area<sup>(2)</sup>. Most of the District is above 5,000' with a pronounced ridge and valley topography rising to the Aberdares in the west and the Mount Kenya national park to the north-east. Most of the good farming land is found in the south-west around Othaya and the worst, apart from the forest sections, is the plain between Nanyuki and Amboni. There is a projected population of 509,000, virtually 100% Kikuyu for 1979<sup>(3)</sup>, with a population growth of 4% which is producing considerable pressure on land availability.

The District is dominated by Nyeri Town (90 miles north of Nairobi) with a 1974 population of 38,200<sup>(4)</sup> which houses the Government Provincial Offices and District Administration.

The District is overwhelmingly agricultural. There is virtually no industry unrelated to farm production. Land consolidation began in 1956 resulting in an average farm size of 3.8 acres, a figure which is gradually decreasing through population pressure<sup>(5)</sup>. On the small holdings in the former trustland areas farming is mainly subsistence whereas on the more commercial and mechanised large scale farms, coffee, ranching and wheat are of primary importance.

However, the future of these successful operations is jeopardised by Council takeovers of Nyeri's 2 settlement schemes intended for landless families. These schemes, in Kieni East and Kieni west, have settled over 2,500 families but the shortages of water and machinery and the small acreages available severely hamstring attempts to develop cash outlets such as dairying.

Despite the increasing viability of dairying with grade cattle, a new dairy at Kigango and the growing importance of tea production on small farms in south-west Nyeri; coffee is of primary significance. There are 55 factories in Nyeri producing over 5,000 tons of coffee per annum<sup>(6)</sup>, and this leads to quite considerable socio-economic differences within the District. The coffee estate owners are quite differentiated from the subsistence farmers.

There is definite potential in the area if the rural access road programme can be accelerated and the provision of water outlets and cattle dips increased.

- 3(iii) Murang'a District in Central Province is a hilly and dissected area of 2,516 sq.km. mostly over 4,000' rising to 7,000' in the Aberdares<sup>(7)</sup>. The main town is Murang'a formerly Fort Hall, of 10,000 population although Moragua and Makuyu to the south and Kangema to the west are important centres<sup>(8)</sup>.

Murang'a, about 65 miles from Nairobi, has lost much of its former significance now that the main road to Nyeri and the north, the A2, bypasses the town.

The population is estimated for 1979 at 606,000, mainly Kikuyu with some Kamba, growing at only 2.5% per annum<sup>(9)</sup>.

Over 95% of the population depend directly on agriculture for their livelihood, a higher proportion than Nyeri. Farms are generally bigger and the soils, which are mostly derived from volcanic soils and consist of deep red friable and humic clays, are highly fertile. The loamy soils of central Murang'a can support intensive cultivation of most cash crops notably cotton, tobacco, vegetables and fruit.

Coffee is the highest cash earner - the District produced over 7,000 tons in 1974<sup>(10)</sup> and the big estates around Makuyu are highly productive and lucrative.

Inequalities are pronounced. The settlement schemes in eastern Murang'a are poorly watered and served by roads and the farmers cannot afford the inputs necessary to develop cash outlets. The small holders use at least 65% of their crops for local consumption.

Although the Council hopes to improve the distribution of rural income by obtaining a significant increase in the number of farmers who obtain cash income from their land, the small farmer's main problem is transport to the

factory or market. Murram roads in the District are generally in a poor condition and many are impassable during the rains. In addition, the terrain creates difficulties since the roads tend to follow the ridges north-west to south-east.

- 3(iv) Kiambu District in Central Province is an area of 2,451 sq. km. to the north and west of Nairobi. Deeply indented valleys run from the high ground to the north west near the Kikuyu escarpment to the south east.

The 1979 projected population is 659,000, the main town being Thika, 20 miles to the north of Nairobi, where the new industrial complex is rapidly developing. The population for 1974 was 50,000<sup>(11)</sup>. Other centres of importance are Limuru, Kiambu, Kikuyu and Ruiru.

The rich, deep volcanic soils and abundant rainfall results in 96% of the agricultural land being classified as "high potential". The area is also above the national average in terms of provision of piped water and cattle dips and in the standard of roads. Coffee is the prime cash crop and there are quite sizeable estates around Limuru and Kiambu.

Inequalities are very pronounced and there is considerable out-migration of landless labourers to Thika and Nairobi. A report in 1974 estimated that 15 - 20% of immigrants to Nairobi came from Kiambu. Most of these are male and

between 15 and 25<sup>(12)</sup>. Despite the high agricultural potential of the area, farming pays only when a certain acreage has been accumulated. The population growth of only 1.6% suggests considerable movement away from Kiambu.

3(v) Embu District in Eastern Province is an area of 2,871 sq. km. consisting of 2 distinct regions:- the northern region, on the lower slopes of the Mount Kenya forest, has a high rainfall and high and medium potential land, the southern zone is lower and less dissected with lower rainfall and poorer quality land.

The estimated population for 1979 is 267,000<sup>(13)</sup>, mainly of Embians, Mberes, Akambas and some Meru. The District is densely populated in the North but moderately so in the South.

Embu Township is the major market and centre, 90 miles from Nairobi with some industries, although Siakago is important in the south-east.

Tea and maize production in the north is well developed but the farms are small and cash income is limited. The quality is very much poorer in the south although the potential for ranching is high if the supply of piped water could be improved.

Inequalities are not so sharply marked in Embu - tea estates are not very large. There is definite potential in many areas but the major difficulty is in rural access.

Although the region is well covered the quality of all roads is poor. During heavy rains in the north virtually all murram roads are impassable by normal traffic.

4. Sample Construction and Design

In sample design there are 2 major considerations;

- 1) Sample size - sampling errors are reduced as the sample percentage increases.
- 2) Sampling frame - the sampling method should reduce selection bias.

4(i) Sample size

Ideally the optimum sample size should be decided upon an analysis of pilot survey data. A key variable to be tested in the questionnaire should be isolated and the amount of variation throughout the population estimated. One can then decide upon a sample size to provide enough responses in the least frequently represented categories of the variable to draw conclusions with an acceptable degree of reliability. With a precise statistic for one key parameter of the population one can estimate the degree of confidence in the results<sup>(14)</sup>.

In practice, calculations to design the optimum sample size are unproductive for surveys measuring a large number of variables. Sampling errors can be measured by calculating the standard error from the standard deviation of the variable in the entire population and the number of units in the population and the sample. These

statistics require knowledge of the population parameters and an intensive study of these will defeat the purpose of the sample<sup>(15)</sup>. As a rule of thumb a sample size of 20-25% is generally considered adequate for main census programmes<sup>(16)</sup>.

The sample in this study consisted of 62 secondary schools registered with and appearing on the Kenya Ministry of Education Inspectorate list for 1978. The sample sizes are given in Table 13.

The average sample size was 18.2%. This statistic refers to the sample percentage for the area covered by the survey. There are 1695 schools included on the Inspectorate List. Therefore the sample covers only 3.7% of the total population. Consequently one cannot suggest that the results of the survey are applicable to Kenya as a whole with any high degree of confidence.

#### 4(ii) Sampling Frame

The sample must also exhibit "representativeness" by including the various items which make up the population in proportions which match the true percentages found within that population<sup>(17)</sup>.

Bias may be introduced into a sampling frame by:-

- 1) Sampling with a non-random method
- 2) Designing a frame which does not cover the population adequately or accurately
- 3) Selecting units which are impossible to find or refuse to co-operate<sup>(18)</sup>.

TABLE 13

Sample Size Per District

District	No. Schools (Total Population)	No. Schools in Survey (sample size)	Sample Percentage
Nyeri	78	20	25.6
Murang'a	99	9	9.1
Kiambu	77	6	7.8
Embu	18	7	38.9
Nairobi	68	20	29.4
TOTALS	340	62	18.2

Source: Ministry of Education Inspectorate Secondary  
Schools Grading List, 1978

## Notes:

1. Figures refer only to registered schools

Stratification of the sample is therefore used to increase precision and for the formulation and testing of hypotheses. This process leads to a reduction of the standard error which measures the influence of chance on sample composition, provided that selection within strata is made randomly. (19)

The 'population' of secondary schools could be divided into 3 strata:-

- 1) School type - Government maintained or assisted,  
Private or Harambee
- 2) School grade - A, B, C, D
- 3) Location - Urban or Rural

The population can be sub-divided into these groups. Selection within the groups must be carried out randomly. A complete list of schools was drawn up for each strata in each District. Selection of schools was performed by random numbers. (20) This stratification is shown diagrammatically in Diagram 1. Tables 14, 15 and 16 give sample sizes for the individual strata. These figures indicate sample percentages for the area covered by the survey. If 'Kenya' is defined as the total population the sample coverage statistics are given in Table 17.

#### 4(iii) Sampling Problems

Some important conclusions may be drawn from the previous tables:-

Sampling Frame

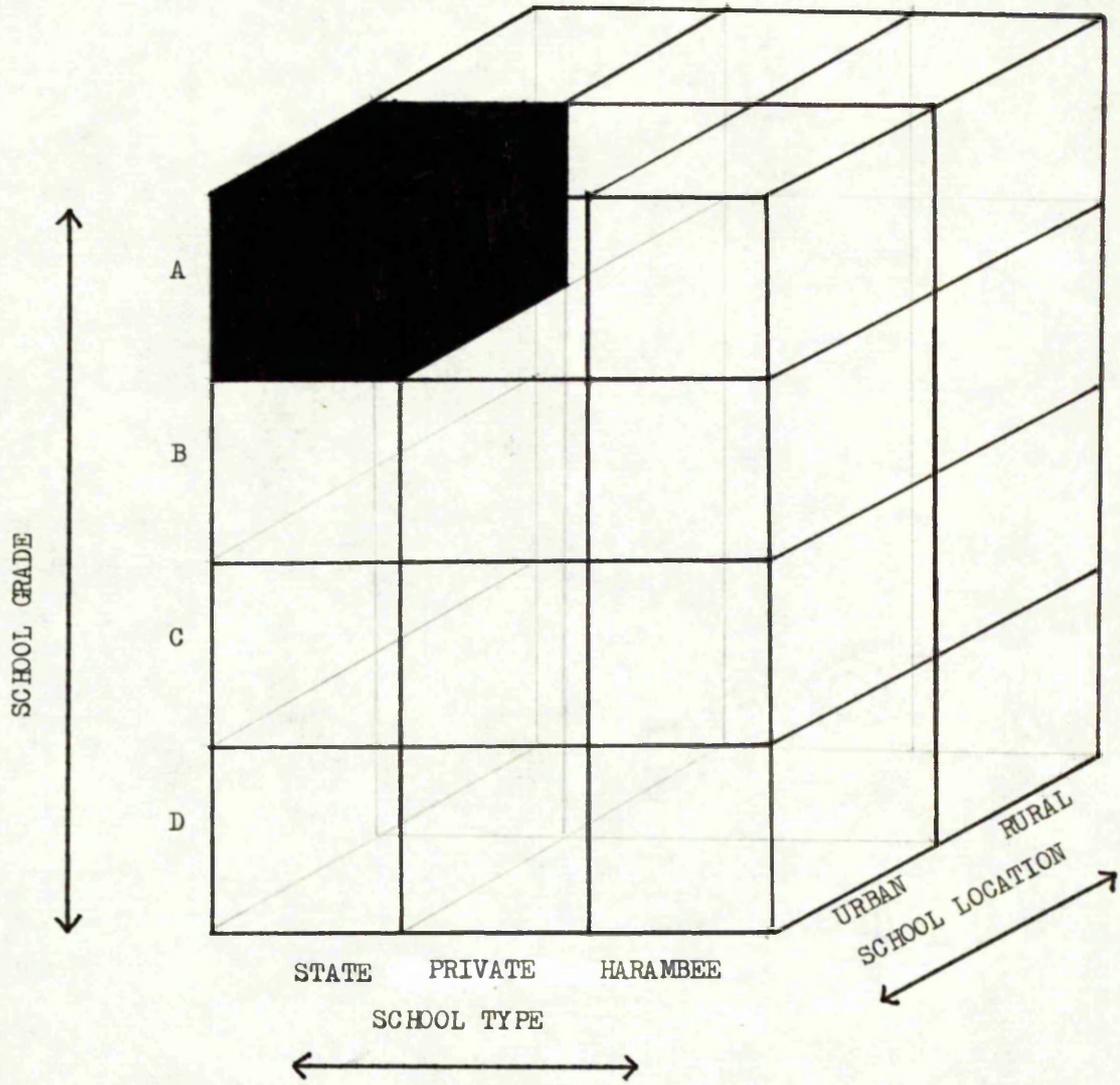


TABLE 14  
School Grade - Sample Sizes

DISTRICT	SCHOOL GRADE											
	A			B			C			D		
	Population	Sample	Sample %	Population	Sample	Sample %	Population	Sample	Sample %	Population	Sample	Sample %
Nyeri	5	4	80.0	11	5	45.5	14	5	35.7	48	6	12.5
Murang'a	5	2	40.0	8	2	25.0	19	1	5.3	67	4	6.0
Kiambu	13	3	23.1	16	2	12.5	27	-	-	21	1	4.8
Embu	3	1	3.3	2	2	100.0	7	1	14.3	6	3	50.0
Nairobi	24	11	45.8	20	5	25.0	11	2	18.2	13	2	15.4
TOTALS	50	21	42.0	57	16	28.1	78	9	11.5	155	16	10.3

Source: Ministry of Education Inspectorate Secondary School Grading List, 1978

Notes:

1. A + B + C + D figures for populations do not equal those given in Table 13. The difference is explained by the number of ungraded schools

TABLE 15

School Type - Sample Sizes

DISTRICT	SCHOOL TYPE									
	STATE			PRIVATE			HARAMBEE			TOTALS
	Population	Sample	Sample %	Population	Sample	Sample %	Population	Sample	Sample %	
Nyeri	37	9	24.3	14	9	64.3	27	2	7.4	
Murang'a	46	5	10.9	1	-	-	52	4	7.7	
Kiambu	53	5	9.4	10	1	10.0	14	-	-	
Embu	15	6	40.0	-	-	-	3	1	33.3	
Nairobi	31	10	32.3	22	10	45.5	15	-	-	
TOTALS	182	35	19.2	47	20	42.6	111	7	6.3	

Source: Ministry of Education Inspectorate Secondary School Grading List, 1978

## Notes:

1. 'State' Schools may be fully maintained or assisted in a number of ways

TABLE 16School Location - Sample Sizes

	URBAN	RURAL
Population	68	272
Sample	20	42
Sample %	29.4	15.4

Source: Ministry of Education Inspectorate  
Secondary School Grading List

TABLE 17Strata Sample Sizes compared toKenya "Total Population"

	SCHOOL GRADE				SCHOOL TYPE		
	A	B	C	D	STATE	PRIVATE	HARAMBEE
Population	128	165	287	864	602	365	728
Sample	21	16	9	16	35	20	7
Sample %	16.4	9.7	3.1	1.9	5.0	5.5	1.0

Source: Ministry of Education Inspectorate Secondary School  
Grading List

## Notes:

1. There is no data available on School Location for the whole of Kenya.

- 1) Although the sample of 62 schools gives an adequate net coverage of the survey area it is inadequate if the total population is considered to be 'Kenya'. Conclusions drawn from the survey data should be considered applicable to the survey area and not necessarily to Kenya as a whole since there are regional inequalities in educational provision throughout Kenya. However, within a Province the structure of that provision is reasonably consistent with the exception of Nairobi. This is demonstrated by Table 18. Therefore it may be valid to consider the results to be appropriate outside the confines of the survey area.
  
- 2) The sample sizes for the stratum "School Type" are not consistent. In particular the sample percentage of unaided Harambee schools is not large enough. It was difficult to include more Harambee schools in the survey because:-
  - (i) many of these schools are very remote and are not indicated on any maps of the area - even the 1:50 000 series. A considerable number of schools have been opened very recently and consequently do not appear on maps over four years old and since they have not been inspected the Provincial Education Offices were of little assistance in locating them. They are rarely

TABLE 18  
Consistency of the Structure of the  
Educational System throughout Kenya

PROVINCE	SCHOOL GRADE				SCHOOL TYPE		
	A	B	C	D	STATE	PRIVATE	HARAMBEE
Western	5.0	5.3	17.7	60.3	28.7	4.6	66.7
Nyanza	3.9	6.8	11.9	50.1	22.0	50.4	27.6
Rift Valley	8.1	12.6	17.7	48.0	43.9	11.1	44.9
Nairobi	33.3	27.8	15.3	18.0	43.1	30.6	26.4
Central	7.1	12.5	22.0	47.5	51.3	9.8	38.9
Eastern	6.2	5.8	16.2	61.0	31.5	15.9	52.6
Coast	19.2	20.5	23.1	33.3	48.7	23.1	28.2
North-East	-	14.3	-	71.4	57.1	-	22.9

% of total

% total

Source: Inspectorate List 1978

1. Figures do not total 100% because of the ungraded schools percentage.

N.B. The figures for Coast and North-East Province are insignificant owing to the small total number of schools

connected to the telephone system and some schools proved impossible to find especially in Murang'a where there has been very little inspection in recent years.

- (ii) the schools are generally located off the main road system. The majority of students come from the immediate area and walk to school. Connecting roads are often dirt tracks which become impassable for most vehicles during heavy rain. Several schools included in the original sample list, particularly for Nyeri, remained unvisited simply because of road conditions. The majority of research in Nyeri was performed in January 1979 when the weather should have been favourable but unseasonable rains continuing over a 10 day period closed almost all the dirt and murram roads in the area.
- (iii) many of the Harambee schools included in the Inspectorate List do not have a Form IV. In addition, the majority of Form IV groups in Harambee schools are very small and were considered too small for a questionnaire survey. Indeed, some schools in Murang'a were included in the survey only after larger Form IV groups in similar schools could not be found.

The small number of harambee schools included in the survey precludes statistical comparison between school type. This problem is exacerbated by the difficulty in precisely defining the category - 'State' school. In this group, one could include schools fully maintained (running costs and salaries) by the government, those operating a state system alongside several harambee streams and schools receiving limited assistance which may take the form of 1 or 2 teachers or several teaching aids.

It was decided to concentrate upon the difference between schools of different grade. It will be noted that harambee schools are all graded 'D' with very few exceptions and therefore, as a general rule, statistical comparisons between school types essentially duplicate the comparisons between school grades.

- 3) The proportion of Grade A and Grade B schools in the sample is over-representative. This is partly due to the difficulties encountered in including Grade D schools mentioned above and partly to ensure that a sufficient number of these schools were tested for significant statistical comparisons between urban and rural locations and between the school grade samples.

4 (iv) Summary

Clearly, the sample is not free of criticisms. Some schools originally scheduled for testing were found to possess an extremely small Form IV or no Form IV at all. Others were impossible to reach or find. These difficulties resulted in an under-representation of Grade C and D schools particularly of the Harambee type. The sample invalidated the statistical comparison of school types but it was noted that such a comparison would, for the most part, replicate the results of a comparison between the school grades.

Furthermore, it is virtually impossible to estimate the representativeness of the samples since the questionnaire is concerned with items whose population parameters cannot be measured except by a full census. However, it was noted that for each area schools are very similar within grades. For example, although 16 Grade D schools are included in the sample, 24 were actually visited and the most striking feature of these were their similarities in design, organisation, pupil intake, standards, performance and problems. This is also notable for Grade A schools although they are more variable in terms of age, history, size and reputation. However, it is difficult to recognise obvious differences between Grade B and C schools and it will be seen later that, in terms of the questionnaire item responses, these schools can often be

grouped together for comparisons with A and D grades.

The sample is also drawn from central Kenya only - a relatively well developed and in some parts, wealthy agricultural area and including the country's primary city. One must, therefore, be careful in applying any conclusions drawn from the survey to regions outside the sampled area. However, it has been noted that outside Nairobi and Central Province the structure of educational provision, in terms of school grade, is reasonably consistent. The exceptions are Coast Province and North-Eastern Province which have only 85 secondary schools between them and for which, therefore, conclusions are difficult to draw. It is suggested, and the reasons will become clearer later, that most of the significant conclusions drawn from the analysis of the questionnaire data are not specific to Nairobi and central Kenya but hold true for the entire educational system.

On the positive side, the sample does provide a sufficient number of units for valid statistical comparisons. Questionnaire data is to be compared between schools of different grade and location mostly by the non-parametric Mann-Whitney 'U' method which requires a frequency of 9 or more in the smallest sample size for the one-tailed test. The Chi-Square test which is also used requires 5 or over in the smallest fraction. These requirements are satisfied for comparisons between:-

- 1) School Grade
- 2) School Location - These comparisons are made within grades. Urban grade A schools, for example, are contrasted with rural 'A' schools. However, the requirements are not met by the Grade C and D samples.

It should also be noted that the sample produced a quite considerable total of 2,126 questionnaire responses of which 1,109 were male (52.2%) and 1,017 female (47.9%).

A complete list of schools included in the survey is given in the School Summary Sheet, Appendix 1. A simple breakdown of the selected schools' location, grade and type is given in Table 19, and in Figures 3 to 8.

5. Questionnaire Methodology, Design and Administration

5(i) Introduction

The Questionnaire was designed to elicit information from Form IV Secondary school students, on socio-economic background, educational and occupational aspirations and attitudes towards education, employment, economic development and social class. Form IV students were chosen for the survey because by this stage they have had over 3 years secondary school experience and are competent enough in their command of the English language to understand and value the questionnaire. In addition, Form IV is the highest age group for which one can compare the responses between schools of different grades. Forms V and VI are generally confined to the Grade A schools. The Form IV

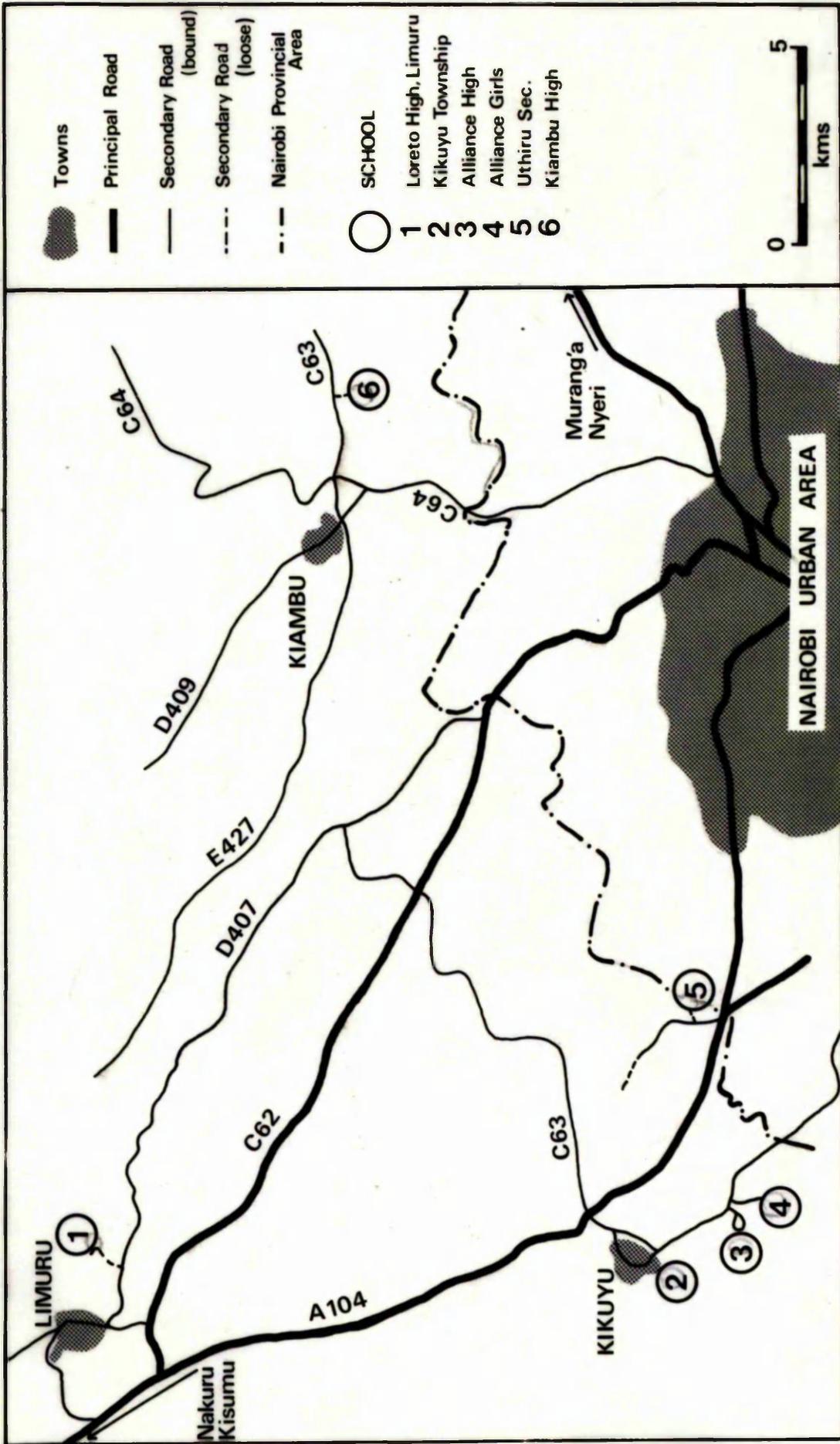
TABLE 19  
The Sample - Location, Type and Grade  
of Schools

District	GRADE				TYPE				No.
	A	B	C	D	M	A	P	H	
Nairobi	11	5	2	2	10	-	10	-	20
Nyeri	4	5	5	6	9	-	9	2	20
Murang'a	2	2	1	4	5	-	-	4	9
Kiambu	3	2	-	3	5	-	1	-	6
Embu	1	2	1	3	4	2	-	1	7
TOTALS	21	16	9	16	33	2	20	7	62

Source: Ministry of Education Inspectorate Secondary  
School Grading List

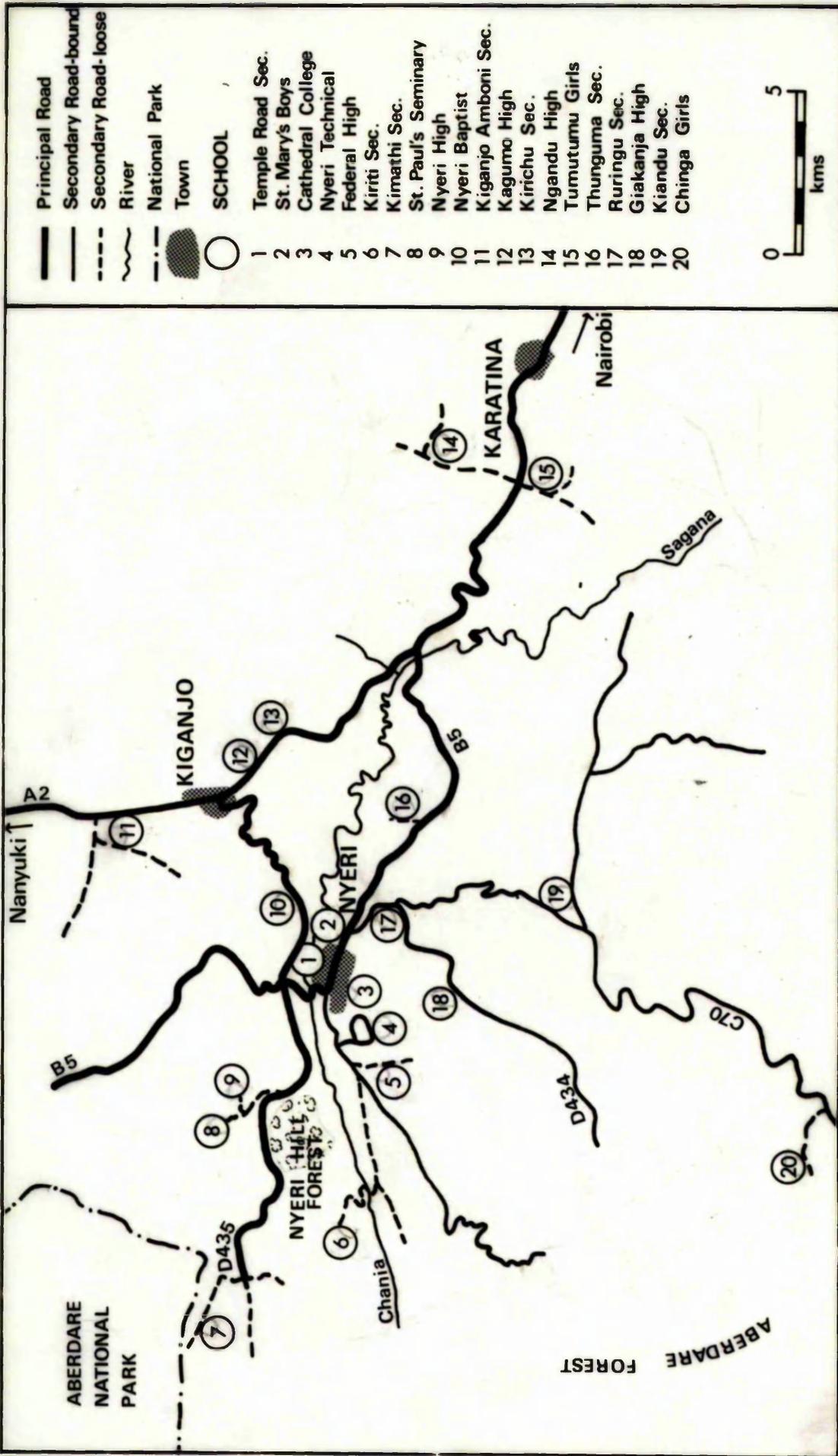
Notes:

1. M = Maintained
- A = Assisted
- P = Private
- H = Harambee



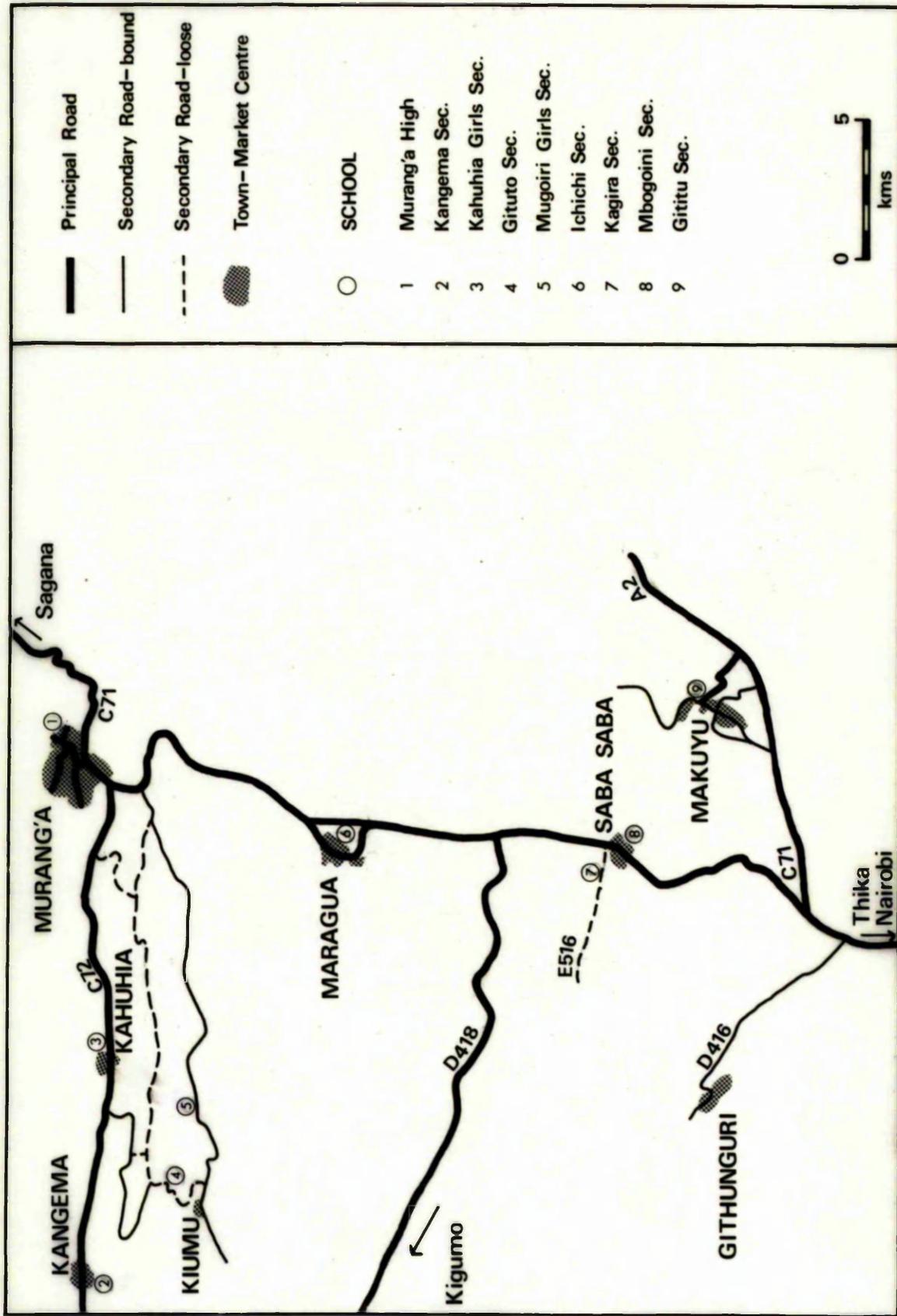
From: SK58 'Nairobi & Environs' 1:100 000  
Edition 3 (Survey of Kenya 1978)

**FIGURE 3. Location of Schools tested in Kiambu District.**



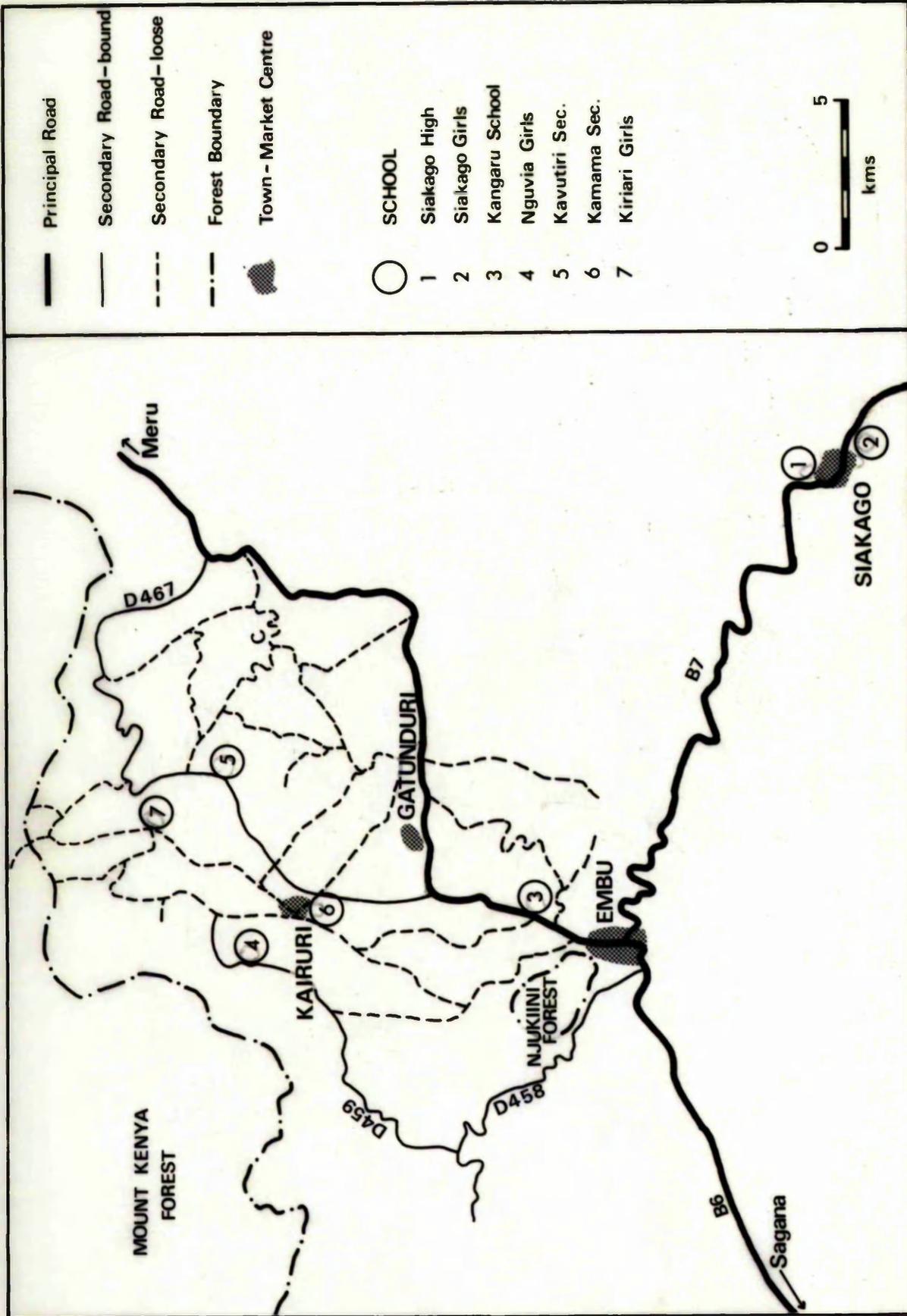
From: 'Mount Kenya National Park & Environs' Edition 1, (publ. Kenya Government 1974) and 1:50 000 Series Y731 Sheet 120/4 Edition 11 (publ. Kenya Government 1975).

**FIGURE 4. Location of Schools tested in Nyeri District.**



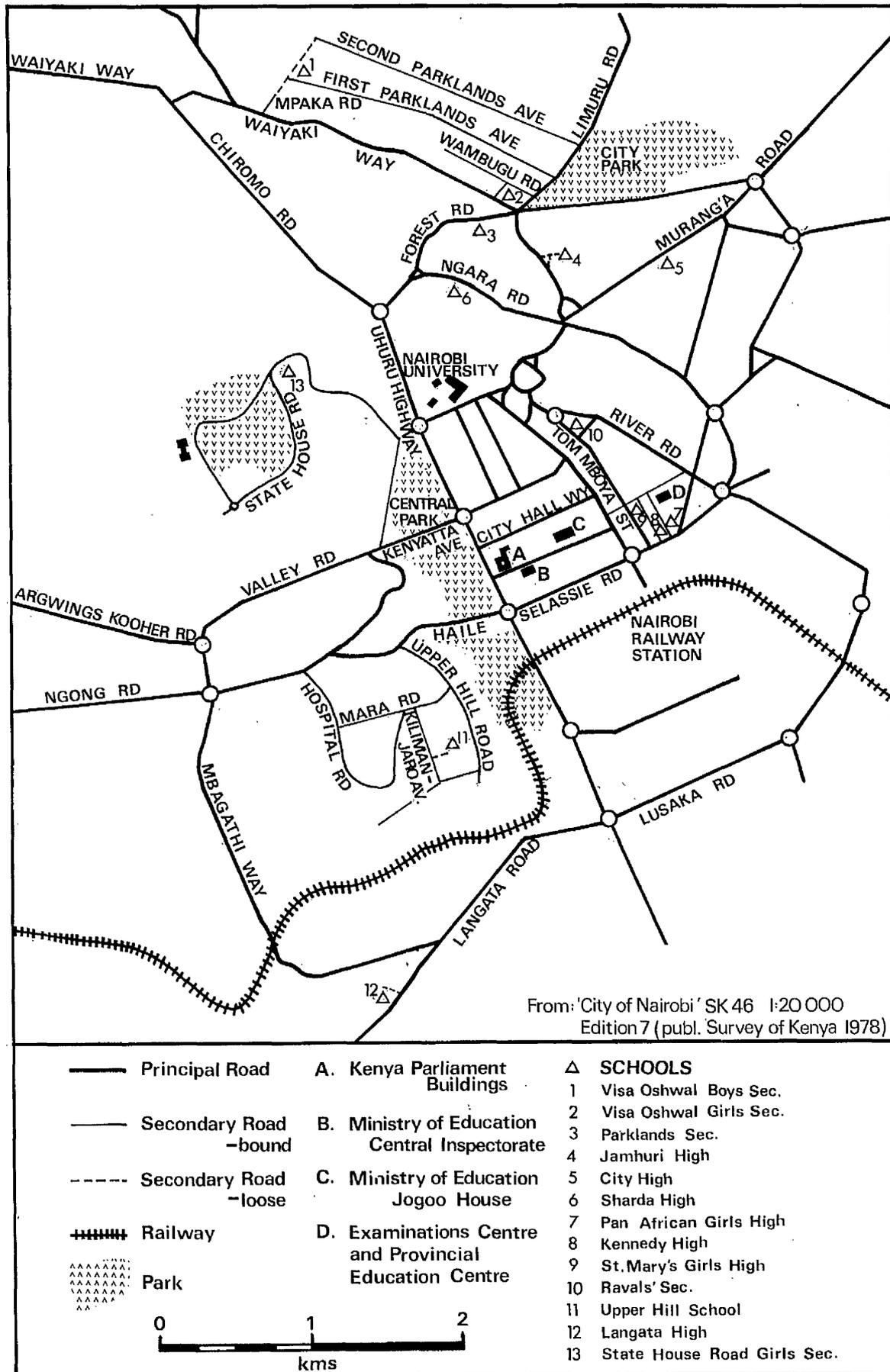
From: 1:50 000 Y731 Series  
 Sheet 135/3, Edition 10 and  
 1:50 000 Y731 Series,  
 Sheet 135/1, Edition 11  
 (both publ. Kenya Gov. 1975)

**FIGURE 5. Location of Schools tested in Murang'a District.**

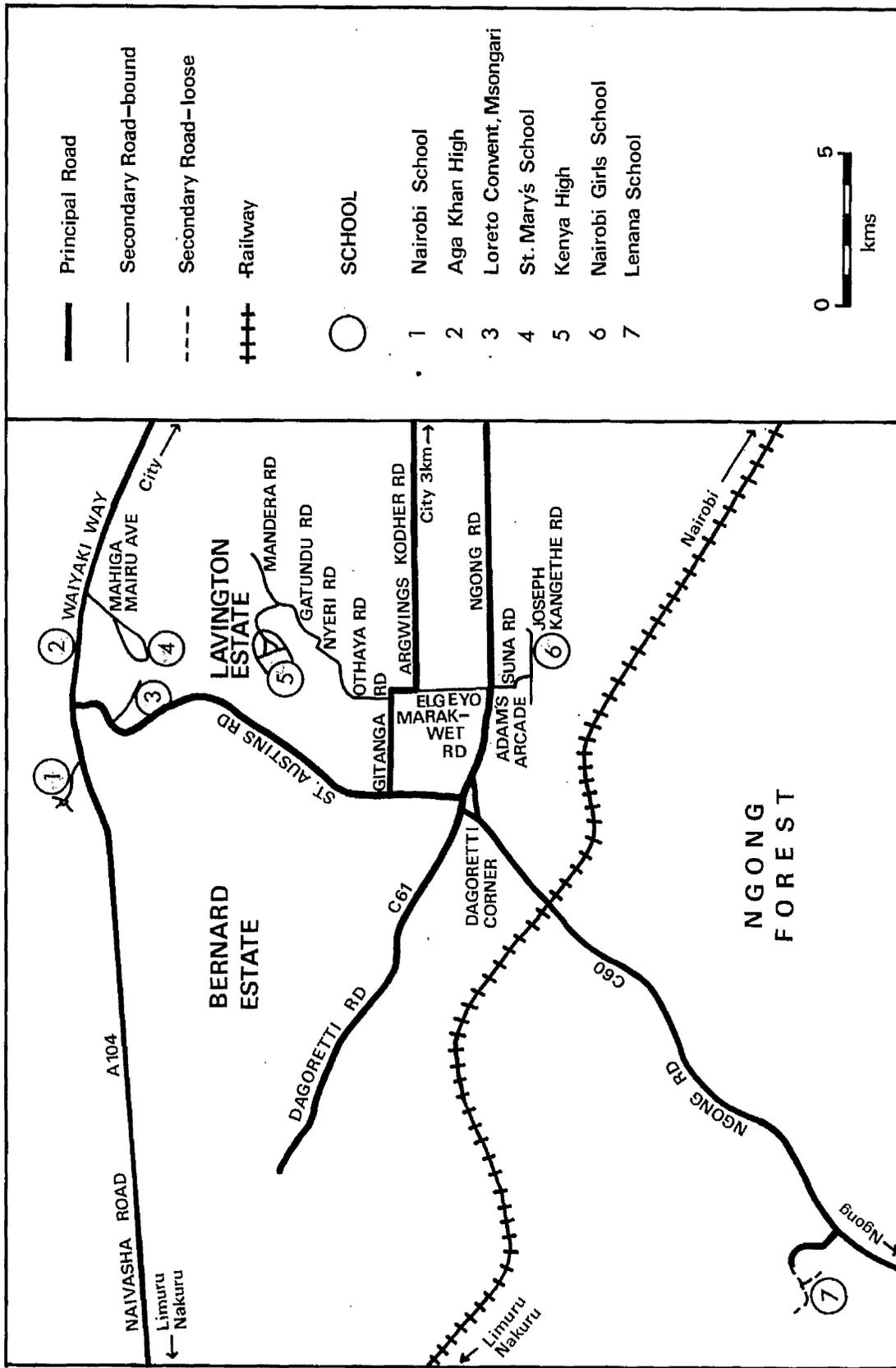


From: Mount Kenya National Park & Environs' Edition 1 (publ. Kenya Gov 1974) and 1:50 000 SK 11 Series, Sheet 121/4 Edition 8-SK (publ. Survey of Kenya 1962) and 1:50 000 SK 11 Series, Sheet 135/2 Edition 6-SK (publ. Survey of Kenya 1965)

**FIGURE 6. Location of Schools tested in Embu District.**



**FIGURE 7. Location of Schools tested in Central Nairobi.**



From: City of Nairobi, SK.46  
 1:20000 Edition 7 (publ. Survey  
 of Kenya 1978) and SK.58  
 Nairobi and Environs' 1:100000  
 Edition 3 (publ. Survey of Kenya  
 1978)

**FIGURE 8. Location of Schools tested in Suburban Nairobi.**

student is also studying for the crucial E.A.C.E. examination (O Level) and for 90% the results will terminate their school careers. They will, therefore, be considering their future more seriously and perhaps, realistically than earlier age groups. The higher level of articulation of the Form IV students is also an important consideration when including attitude questions where the responses are left open.

There are serious difficulties in designing any questionnaire with a considerable variety of designs possible. The final draft of the questionnaire used in this survey was the product of several re-writes, a pilot survey and suggestions offered by a number of advisers. The following reactions describe these pitfalls and the methods used in overcoming them.

5(ii) The Aims of the Questionnaire

A theoretical framework should always precede the research process. A precise definition of those variables one hopes to measure and examine from questionnaire responses and a clear conception of hypothesis to be tested using this data facilitates the conceptual structuring of the subject-matter and formulation of research questions.

The precision of the theoretical framework;

"determines the maximum information potential<sup>(21)</sup> of the questionnaire".

Although a precise conception of hypotheses to be tested is relatively easy to achieve, the formulation of questions to provide the information required with minimum redundancy and maximum coverage is an extremely difficult task. There is no substitute for a pilot questionnaire survey in this respect used in conjunction with educated advisers who are locals of the area. The uses of the pilot survey are described in the following section.

The first stage, then, is to decide upon a schedule of information required from the questionnaire and then decide upon the specific questions to elicit this data.

The questionnaire used in the survey was designed to provide information on the following items:-

- 1) Personal details - age, sex, tribe and address, school and examination performance.
- 2) Family background
- 3) Socio-economic background - Father's occupation, acreage of land owned, cash crops and number of cattle, businesses owned, educational experience and linguistic ability.
- 4) Educational attitudes and aspirations
- 5) Occupational attitudes and ambitions
- 6) Attitudes towards economic development in Kenya
- 7) Attitudes towards social class and elitism

5(iii) The Pilot Questionnaire

A first draft questionnaire was constructed in London with the aims above. However, careful reading of the relevant literature on this subject is no substitute for practical experience. It soon became apparent that the first draft included questions which would be difficult to understand, vague or ambiguous, impossible to answer and either failed to cover the range of responses possible for some variables or would provide redundant information.

The draft was re-written on the advice of Dr. M. Maleche, the Supervisor from the Faculty of Education, Kenyatta University College; Dr. Alan Ferguson of the Department of Geography, University of Nairobi and one of his research assistants, a Kikuyu from Nyeri District; Mr. A. K. Hardyman of the Ministry of Education Inspectorate in Nairobi; and Mr. L. Noble, the Secondary School Inspector of Central Province, based in Nyeri District where the pilot survey was carried out.

The pilot questionnaire was then tested in Nyeri District in November 1978 at the following schools;

- 1) Nyeri High School - a Grade A government maintained school with a reputation as one of Kenya's top schools. A Form IV class of 42 answered the questionnaire.

- 2) Thunguma Secondary School - a Grade C private school of low academic standard and quality. A Form IV class of 43 was tested.
- 3) Kiriti Secondary School - a Grade D harambee school which has just recently started a Form IV. A group of 45 answered the questionnaire.

The pilot survey can be used to:-

- 1) Ensure that question categories adequately cover the range of variability found in the population.
- 2) Ensure that all questions will provide relevant and workable information so that codification and analysis of redundant data is avoided.
- 3) Check question wording for vagueness, ambiguity and logic. It is important to ensure that the respondents completely understand the questions and will be able to provide answers.
- 4) Decide upon a standard consistent method of questionnaire administration. In the three schools different techniques of presentation were used.
- 5) Identify culturally relative terminology and syntax which must be excluded.
- 6) Test the hypotheses and estimate the significance of the relationships in order to reorganise the conceptual framework if necessary.
- 7) Select important attitudes worth examining and the most successful techniques whereby these attitudes can be examined and measured.

The writing of an attitude statement is very difficult. In addition to ensuring that the wording is unambiguous and not 'suggestive' and thereby unconsciously biasing the responses, one must be certain that the attitudes exist in that the respondents are not answering to statements they have never thought about previously.

Analysis of the 130 pilot questionnaire responses resulted in a considerable number of alterations in the questionnaire, in terms of question wording construction and presentation. In particular, several attitude questions were omitted and some socio-economic indicators replaced. The most serious change was the exclusion of all "Thurstone scale" questions.

Thurstone scales involve comparisons of attitude statements two at a time and judging which of the pair is more positive (or the more negative). The statements are given in random order and separated by a scale of 11 divisions. The spread of judgements provides a standard deviation - the wider the spread the more ambiguous the item. Only unambiguous statements are used in the analysis. Medians are calculated for the accepted statements by accumulating individual scores into cumulative percentages. Comparisons are made between individual or unit scores (such as one school) and the median. (22)

The pilot study revealed that in the majority of cases the respondents could not genuinely understand the questions

and found it difficult to scale their attitudes accurately. Likert scales testing equivalent attitudes proved much more successful. Thurstone scale responses proved highly ambiguous and internal reliability was very low. The significance of similar Likert scales, which will be described later, was very much higher. It was thought that the respondents could better understand this technique because it looks less like a "test" with 'right' and 'wrong' responses.

Specific problems encountered in presentation and question design are described in the following sections.

5(iv) Problems in Administration and Presentation

Upon finalisation of the sample, visits were made to each school selected. Although some schools proved impossible to find and road conditions made it difficult and dangerous to reach others, there were no difficulties with schools refusing to co-operate. The research permit and letters of introduction from the Inspectorate were of crucial importance in this respect.

However it is important to describe the administrative and presentation procedure and the problems encountered which may affect the responses in the questionnaire.

5(iv)a Perceptions and Attitudes of the Students and Staff

Reactions to the research visit were highly variable. The authorisation documents, tended to mislead the headmasters into believing that the information was required by the Inspectorate and the questionnaire survey was, to all intents and purposes, a form of Inspection. This was particularly noticeable in the lower grade private schools where conditions are often deplorable and standards very low. The Heads of these schools are generally "managers" without any teaching experience or respectable academic qualifications whose main concern is to ensure that all fees are promptly paid. They were, certainly, unused to dealing with research students and mis-understood the purpose of the research. These type of schools come under heavy criticism from many sources and quite naturally the Heads were suspicious of anything to do with the Inspectorate. Consequently, their responses to the questions were often deliberately vague or ambiguous and in some cases, quite clearly inaccurate. In addition, the staff tended to transmit these attitudes to the students completing the questionnaire.<sup>1</sup>

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1. Some Headmasters introduced me to the Form IV Class as "Mr. Wellings from the Nairobi Inspectorate" or "Mr. Wellings from the Ministry of Education".

The reactions of the students to a white man, coming to their school and giving them a questionnaire is an important factor to consider when analysing the responses. General discussions with the students after they have completed the questionnaire revealed something of the perceptions they had of me and the research.

- 1) To the majority of students a white man is by definition; educated, powerful, important and considerably wealthier than most Africans. Central Province, particularly Nyeri District, was the core of Mau Mau activity during the Emergency. Many of the older Kikuyu who remember that period are generally sullen and resentful in their dealings with the "mzungu". However, the students are much more respectful and openly friendly. All pupils were convinced that the "mzungu" commands respect because of his education, and that expatriate teachers, for example, are far superior to their Kenyan colleagues.<sup>1</sup> Therefore, every class I encountered completed the questionnaire diligently and carefully and behaviour was impeccable throughout.<sup>2</sup>

- 
1. Questionnaire responses to Items D8 and D9 indicate that European teachers are very popular and are regarded as superior to Kenyan colleagues in terms of academic and teaching ability, diligence and their relationships with the pupils.
  2. Nevertheless, there was an undercurrent of suspicion in many lower graded schools.

2. Despite an introduction by the Headmaster or class teacher and the explanation of the project, given in the covering letter with the questionnaire, the students were often uncertain of my real motives. Their perceptions of my "importance" were particularly variable.<sup>1</sup>

The pupils of the lower grade rural schools were quite prepared to believe that I was more important than I am whereas the students at top Grade A schools understood my position much better.

3. There were differences in these attitudes between school grade and location. The students from 'A' and 'B' schools were generally less suspicious and more open. Their performance in discussions and in response to oral questions was much more satisfactory than in lower grade schools. The pupils in lower grade schools often regarded the questionnaire as a test of their academic ability and in consequence, often assumed that the questions required answers which were either "right" or "wrong". In Nairobi, the students were much more familiar with questionnaires and required little prompting. In addition, they are quite used to seeing "mzungus" in the city streets and are considerably more responsive and expressive when questioned.

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1. The students were confused in that my appearance (casual wear and transport by motorbike) did not match their general conceptions of a "mzungu".

This feature is also noticeable in some rural grade A schools which have ex-patriate teachers.

4. A sizeable proportion of respondents believed that the questionnaire was a device to select certain pupils for employment or higher education. Certainly the students are quite familiar with - indeed, soaked in - the competitive examination spirit which pervades the Kenyan educational system. At Form IV, school-children have sat C.P.E. and may have taken K.J.S.E. at Form II and are, by this stage, working towards the E.A.C.E.

No amount of explanation will convince some respondents that the data would be treated confidentially and anonymously. Indeed, many insisted on writing their full name and address on the questionnaire (for which no space was provided) apparently believing that some reply would eventually follow.<sup>1</sup>

- 
1. One boy, for example, at Langata High School in Nairobi handed his completed questionnaire to me before leaving and made the following speech: "Sir, I have tried very hard in this examination and I pray that you like me and give me some help for my father is very poor and he wants me to find some employment, but I have the great ambition to study at Cambridge University in London".

Another boy from Sharda High School in Nairobi wrote to me in February 1980 and said that he would: "be highly glad if you can do favour or find me any alternative or best solution how PLEASE my future will be. And I can be always be remembering you all the time ..... I can thank God and be in a sincere gratitude of respecting you as my safer of my future for what you can work very hard for enabling me to move further or to push ahead with further studies."

One must recognise that some responses have been distorted to fit the student's perceptions of the purposes of the questionnaire. In several cases, it was sufficiently clear that the responses were calculated to please.<sup>1</sup>

These students had clearly gleaned certain items of information from the covering letter and the introduction and responded in order to establish themselves as candidates for whatever positions they believed I was able to offer them after examination of their replies.

5. It is more difficult to estimate the extent of fabrication or evasion in the responses. Certainly, there were no instances of respondents refusing to answer any question. The response rate was extremely high for every item. However, as noted above, the students were mildly sceptical of the questionnaire purpose and those questions dealing with socio-economic background (father's land acreage, cattle owned and so on) were treated with some suspicion.

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1. For example, a number of respondents specified the "School of Oriental and African Studies" or the "University of London" in answering question D2:-  
 "If you had enough ability and money which educational level would you like to reach?"

Furthermore, some claimed, in response to question E1:-  
 "What occupation would you like to have when you leave school?",  
 that they wanted to work for the "Ministry of Education" or the "Inspectorate".

In discussion, the students were generally curious about the need for these questions. They were agreed that research was important but doubted the wisdom of letting other people know exactly how much land or head of cattle one possesses. This point was raised during the pilot run and consequently, in the main survey, the confidentiality of this data was repeatedly stressed.

It is argued however that the level of misleading information will be low. The majority of students believed the questionnaire to be a good thing and possibly beneficial to them later. They were extremely obedient and respectful and answered carefully and diligently. Several headmasters pointed out that, even if they doubted the merit of the survey, they would answer accurately because they had been instructed to do so.

The perceptions held by the respondents would introduce a certain level of unreliability in the questionnaire data. In addition, these attitudes varied from school to school and this necessitated inconsistency in approach and presentation.

- 1) The majority of students in lower grade schools found more difficulty in understanding the requirements of certain questions, particularly the Likert and Ranking scale items. In questions

needing non-factual answers, especially those requiring opinion responses, these pupils were confused by the omission of "right", "wrong" or "yes", "no" type choices. They are familiar with the multiple-choice examination method used in the Primary level C.P.E. and, despite repeated explanations to the contrary they, at first, persist in confusing the questionnaire with some form of competitive test.

Therefore, the point was repeatedly made to several classes that the questionnaire is not an examination in that none of the questions tested academic ability.

- 2) Respondents in higher grade schools particularly in Nairobi were generally more relaxed and responsive in discussion and in the oral questionnaire. Furthermore, they gave more expressive and fluent answers to open questions and a wider range of details in factual items.

Consequently, in the lower grade schools a greater effort was made to encourage the students to express their opinions openly and expressively.

5(iv)b Administration difficulties and technique

The procedure adopted was to visit the schools included in the survey, meet the Headmaster (mistress) and

arrange a convenient date and time to conduct the questionnaire and have a look around the school. The Form IV class to receive the questionnaire was selected by the Head or the highest ranking staff member. A suitable time was arranged - generally a period usually devoted to private study. The students concerned were usually given prior notice of the survey and then introduced to the author and the purposes of the questionnaire by the Class teacher. The respondents were instructed to:-

- (i) Read the covering letter
- (ii) Answer carefully and accurately in black ink all the questions asked
- (iii) Bring to the attention of the author any difficulties or mis-understandings.

There are several advantages of the group administered questionnaire, mainly that it ensures a high response rate and a minimum of interview bias, while permitting interviewer assessments, provision of necessary explanations and giving the benefit of a degree of personal contact.

Clearly, individual questioning would require a team of interviewers. This approach was not considered viable because:-

- 1) The fieldwork budget would not meet the expenses involved.

- 2) It would limit the author's personal contact with the respondents and influence the reliability of conclusions and interpretations drawn from the questionnaires.

A Form IV Class generally contains 36-44 students and this size group can be easily controlled but contamination (copying, talking or asking questions) is a constant danger. <sup>(23)</sup>

There were several difficulties.

- 1) In some cases the Headmaster was unavailable and questions were directed to the Deputy and occasionally the Class teacher. It was expected that Heads would provide general information about the school by completing the "Information Sheet" included in Appendix 2. Some Deputies or Class Teachers interviewed were uncertain of the accuracy of their responses.
- 2) It was proposed to compare the schools in terms of their overall standard and conditions by awarding points for 11 items listed in the "Information Sheet". This required a tour of the school and some honest answers from the guide. Some Heads were reluctant to permit this, arguing that disruption of the classes would result. The time allowed for the "inspection" was also variable and

therefore, the results are valid only for statistical comparison. They cannot be used to rank schools on an absolute scale.

3) It was also necessary to define the role of the class teacher. In the pilot survey the following techniques were used:-

- (i) Nyeri High School - teacher absent from the classroom
- (ii) Kiriti Secondary School - teacher involved in the presentation
- (iii) Thunguma Secondary School - teacher present but takes no active part in the presentation.

The most successful method was that used in Nyeri High School. The presence of the teacher focuses the attention of the students away from the author and his advice is sought in completing the questionnaire. The teachers do not have a clear idea of the correct ways of answering particular questions. Their advice and instruction is often erroneous and biased in certain directions.

Although the teachers felt that their presence would ensure discipline, there was virtually no bad behaviour in their absence.

In the main survey, the teacher left after the introductions. Complete control of the administration,

would, the author believed, ensure a consistent method of presentation.

5(iv)c Presentation difficulties and technique

It is essential to normalise the relationship between interviewer and respondents and for this to be consistent throughout the survey.

During the pilot survey several different techniques were used:-

- 1) The respondents are allowed to complete the questionnaire without instruction. Any problems arising are dealt with individually.
- 2) The interviewer reads out the questions and the respondents must complete their questionnaires at this prescribed pace. No further instructions are given but any difficulties are again dealt with individually.
- 3) The interviewer reads out each question and explains how it should be answered, giving examples. Respondents are not allowed to progress until the question has been answered by every member of the group.

The main difficulty encountered with (1) was the high level of contamination particularly copying. In addition, problems were encountered on the same questions and as a result, individual instruction is highly inefficient.

Technique (2) reduces contamination but fails to instruct respondents efficiently. The method used in (3) proved

the most successful - since it virtually eliminates contamination and produces a very high response rate. A standard verbal instruction with an example was designed for each difficult question. Consequently, very few respondents failed to understand the requirements of any item.

Surprisingly, this rather tedious presentation, did not significantly increase the time needed for completion, which averaged 50-60 minutes, including discussion.

One danger with this approach is the unconscious indication of expected answers contained within the verbal instruction which will bias the responses to conform with a pre-conceived theoretical framework.

Certainly, this difficulty arose when teachers' attempted to interpret the questionnaire to the students.

However, the author, was careful to exclude any hints or clues in the instructions, which suggest a "right" answer, particularly in those situations where the respondents were prepared to treat the questionnaire as an examination. Furthermore, it was crucially important to present the instructions in an established format consistently throughout the survey.

6. Questionnaire Design

6(i) General Problems

The questionnaire is written in English which presents no problems for Form IV Kenyan students. Indeed, English is a more familiar language to many students than Kiswahili. The level of spoken English and comprehension is more than adequate. The standard of writing is considerably lower although the meaning is always clear, despite grammatical and spelling errors.

Nevertheless, the majority of Kenyans speak English in a formal utilitarian manner without great fluency or range of expression.

Consequently, it is essential to exclude idiomatic expressions and such terminology and syntax which may be quite common in "mzungu" English but are incomprehensible to Kenyan Form IV students.

Therefore, it is important to have the questionnaire checked by an educated member of the culture concerned.

A similar difficulty in working with a Foreign culture is the lack of field experience and practical knowledge.

For example, in a question such as:-

B10; "How much land does your father own?"

.... a checklist of categories which adequately covers all possible responses is required. It is essential,

therefore, to use the pilot survey to discover the range of responses likely to be encountered in the sample.

Similarly, attitude questions must relate to items of interest and which reflect genuine contentious issues of relevance to the respondent. The advice of educated locals is particularly helpful in this respect.

6(ii) The Covering Letter

The covering letter should identify the persons and organisations conducting the project and mention the objective of the questionnaire. It is important to indicate the reasons for selecting the particular school in question, stress the importance of the survey and suggest that the analysis will be beneficial in the long run.

The letter also guarantees the anonymity of the respondent and the confidentiality of the information provided. (24)

In addition it is important to point out the Kenyan contribution to the project in terms of supervision and authorisation.

A copy of the covering letter is enclosed in Appendix 3.

6(iii) Question Wording

Wording must be clear and precise and avoid vague idiomatic expressions particularly in view of the formal, pedantic English employed by the Kenyans.

The questionnaire, therefore, used simple language and construction and avoided complex sentences. (25)

It is crucial to avoid ambiguity and vague words such as 'regular', 'generally' and 'often' and socially conventional terms like 'family' without further explanation. (26)

Furthermore, logical, unambiguous and precise questions may contain an inherent bias towards particular responses. (27) In the situation of this survey such "leading" questions were isolated at the pilot stage when it became apparent that the particular response given reflected a perceived 'desirability' indicated in the instructions.

In addition, it was agreed among the advisers that hypothetical and memory questions were of little value in this situation.

Finally the logic of each item was checked to avoid the exclusion of unexpected answers for which no space is allowed or instruction given. (28)

6 (iv) Question Construction6 (iv) a General Techniques

The majority of social survey questionnaires employ the following techniques:-

- 1) Funnelling - factual questions precede more sensitive issues.
- 2) Control Questions - a question is repeated later in the questionnaire in a disguised form to assess the consistency of response to a particularly contentious issue. An example of this are questions C4 and D6 which both, in essence, assess the difficulties the respondent has in continuing his education.
- 3) Padding - questions which are not particularly relevant to the researcher but which interest the respondents. An example is question D8 which was enthusiastically answered by all students although the details given are too specific to draw conclusions of general significance.

6 (iv) b Closed Questions

These type of questions which require a checklist response are the most efficient means of collecting factual information and are irreplaceable for socio-economic data. It is essential to conduct a pilot survey and seek expert advice in selecting the items and categories, since biases may be introduced by obliging the respondent to

choose between given alternatives or select alternatives which had not occurred to him(her). (29)

Confining responses to the given categories, of course results in a loss of spontaneity and expressiveness but the ease of codification generally outweighs these disadvantages.

6(iv)c Open and attitude questions

Open questions which merely require factual information and details are useful where little is known about the items being tested. Spontaneity is encouraged and responses may reveal interesting attitudes. Such questions are particularly useful at the pilot stage in assessing the range of attitudes likely to be encountered in the sample. The responses tend to be personalised and specific and consequently, difficult to codify. Content analysis was used to ease this problem. This is described in Chapter 4.

Attitude questions are extremely difficult to formulate and codify. It is essential to pilot these items more extensively than factual ones:-

"Attitudes are complex and cannot exist in a vacuum. A researcher may ask a respondent to express an opinion about something he has never considered, or in an abstract generalised way not natural to him" (30)

Responses are heavily influenced by perception and linguistic ability and a wide variability produces

difficulties in codification and precludes any form of validity check. It was, therefore, decided to examine the majority of attitudes by Likert scales to ease the difficulties of analysis.

6(iv)d Likert Scales

The Likert technique involves presenting the respondent with a list of statements (Items) for which he may indicate varying strengths of approval or agreement. There are 5 categories for each item ranging from "strongly agree" to "strongly disagree". These positions are allocated numerical values and therefore, it is important to structure all items in the same direction. The most convenient way of doing this is to establish a 'theme' for the item list and provide a consistent lead-in statement for each item.

For example, question D7 measures respondent's attitudes towards discrimination in education. The "lead-in" statement:-

"It is easier to get into a Government secondary school or college if you ....."

applies to all items. Referring to the Questionnaire in Appendix 4, respondents indicate their position by checking the appropriate box.

The major difficulty, here, is in selecting the items. A pilot survey will identify useful attitudes but, in

addition, it is prudent to observe several 'rules'.

Firstly, it is unproductive to include extreme items to which virtually 100% of the sample under study will respond in the same way. Secondly, it is advisable to have a roughly equal number of positively and negatively worded items in the list. Thirdly, experience has demonstrated that neutral items rarely provide results of significant consistency.<sup>(31)</sup>

There are various ways of analysing Likert scale data, such as the t-test and factor analysis.

The t-test technique involves testing the significance of consistency in responses for each item. However, it assumes that the attitudes are uni-dimensional.<sup>(32)</sup>

If a multi-dimensional problem is being researched it can be divided into component parts. Then, the overall mean scores are calculated for each item and compared in terms of each dimension measured. The idea is that the score on any item can be thought as consisting of a number of components which represent the contributions of underlying factors to the item; an individual's factor scores are weighted according to the relative importance of the various factors in the item and combined together with an error component to form his item score.

In practice, the item scores are observed and the factor scores unobserved. Factor analysis attempts to work backwards to estimate factor scores from a knowledge of item values. (33)

This form of analysis is highly complex and requires a considerable number of items. The merit of factor analysis is dubious in that Likert scales are poor on reproducibility because the correlations between each item score and the total score are often insignificant.

Indeed, to use the data as an absolute measurement of attitudes is highly dangerous. This practice is avoided in this thesis by employing item scores relatively, comparing them between school grade and location. A full explanation of the statistical method used is given in Chapter 4.

#### 6(iv)e Ranking

Only one question requiring respondents to rank items is included in the questionnaire. It is important to remember that the students are discriminating only between the items selected and therefore, the ranking order is not absolute but relative. In addition, ranking provides no information about differences between ranks - only, the order of sequence. The method used to analyse the ranking data is described in Chapter 4.

6(v) Final Questionnaire Structure

The final written questionnaire contained 48 individual questions. These items may be classified by type:-

1) <u>Factual - responses to be indicated on</u>	
<u>category checklist (closed)</u>	14
2) <u>Factual - written responses (open)</u>	21
3) <u>Attitudes - written responses</u>	9
4) <u>Likert Scales</u>	3
5) <u>Ranking</u>	1
	<hr/>
	48
	<hr/>

Nairobi respondents were not required to answer questions E4 and E5.

Response to questions B8, B13, D2 and D3 depended on Yes-No filters.

The data was transferred onto specially prepared coding sheets. An example is given in Appendix 5.

The survey was conducted at 62 schools and produced 2,126 responses. The number of respondents interviewed at the individual schools is given in Appendix 1.

6(vi) The 'Information Sheet'

The Head or acting Head of each school included in the survey was asked to complete the 'Information Sheet', an example of which will be found in Appendix 2.

The first 11 items were completed by the interviewer for codification and memory.

The respondent answered 20 questions, the majority of which were factual.

Items 13, 24 and 25 provide data with an element of subjectivity since the respondents possessed incomplete information on the subjects.

Items 15 and 16 only apply to schools which have a Form V and Form VI and similarly 28 and 29 could be answered provided that a Form VI had been in existence for more than one academic year.

In addition, the schools were compared according to composite totals scored in an 'Inspection' of the facilities and general condition of the buildings and services.

A tour of the school was arranged with a guide, generally a teacher but occasionally the Head. Points were awarded, ranging from 1 to 5 for the 11 items listed in the sheet. As mentioned above, the scores were allocated on a comparative basis and should not be treated as absolute measurements but as a simple ranking indicator.

Discussions were held with the respondent and other staff. The school's problems and performance were the major

subjects under consideration. A summary of attitudes, opinions, difficulties and other details was included in item 31.

The information for individual schools is given in the School Summary Sheet in Appendix 1.

6(vii) The Oral Questionnaire

6(vii)a Introduction

The respondents' attitudes towards "social class", "elitism" and their position in society could not be tested by written questionnaire.

These issues are extremely contentious and students are sensitive about committing their sentiments to paper despite assurances of anonymity and confidentiality.

It is essential that the respondents can see that the information is collected from the group as a whole rather than individually.

In addition, a typology must be decided upon and operationalised. The pilot survey demonstrated that it was impossible to use relatively direct open-ended questions to measure social class ideologies. For example, questions such as:-

"What is meant by social class?"

"How many classes are there in Kenya?"

"How do you think people move between classes?"

produced highly variable responses and clearly indicated

that the terminology was mis-understood and foreign to the respondents.

It was decided to employ closed schedule questions of the agree/disagree type, not merely for the case of quantification but also because responses in this form were easier for the students who generally found writing sentences a slow and painful process.

The difficulty here is that the questions may not mean anything to the children who could have answered randomly. However, the duplication of indicators for the same dimension provided that they are significantly correlated with each other, should offset this disadvantage and provide some empirical criterion of the validity of the typology.

#### 6(vii)b Questionnaire Construction

The questionnaire contained 7 statements. Items 1 - 3 were concerned with the respondent's perceptions of the:-  
legitimacy of the class structure

Items 4 - 7 related to perceptions of the:-  
shape of the class structure

Respondents were required to indicate the strength of their agreement ("agree strongly" to "disagree strongly") with each statement.

A list of these items is given in Appendix 6. An example of the coding sheet used to record the responses is also available in Appendix 7.

This section heavily depends on Julienne Ford's analysis of occupational preference and class consciousness in British schools. (34)

One of the major hypotheses she considered was that perceptions of social stratification are related to educational experience.

Furthermore, Ford examined the relationships between school type, occupational choice, father's occupation and social class perceptions. She suggested that consciousness of "class" is generated largely through awareness of the existence of a class system based upon differences in occupational evaluations and the subsequent awareness of one's own place within it.

This relationship is a generally accepted truism in western societies:-

"Men's careers occupy a dominant place in their lives today, and the occupational structure is the foundation of the stratification system of contemporary industrial society. In the absence of hereditary castes or feudal estates, class differences come to rest primarily on occupational positions and the economic advantages and powers associated with them." (35)

The extent to which this applies to the Kenyan case is a debatable issue. Approximately, 90% of the population is engaged in farming and to speak of "class" in classical western terminology is inappropriate. However, we are concerned here with the perceptions of Form IV

students who, with little exception wish to join that 10% engaged in secondary or tertiary occupations. It is argued that, firstly, they dissociate between people in terms of occupation and categorise classes according to this index; and secondly, occupational prestige depends fundamentally on the level of academic qualifications required.

We can, therefore, suggest that Form IV perceptions of 'class' are related to the type and standard of school as follows:-

Type and standard of School (Grade)

determines

Form IV academic performance

determines

Current Form IV perceptions of expected E.A.C.E. achievement

determines

Form IV occupational expectations

determines

Perception of future position in society

determines

Perception of 'class'

If this relationship held true one could expect to discover significant differences in 'class' perception between schools of different grades.

Ford chose to examine class ideologies which;

"... include ideas about the structure or shape of the class system together with evaluations of its legitimacy, values and norms relating to class behaviour, particularly those defining possibility and/or desirability of social mobility" (36)

From this Ford identified 4 possible perceptual models differentiated according to evaluations of the class structure's legitimacy and shape. (37)

The indices are scaled as follows:-

<u>Index</u>	<u>Scaling</u>
1. LEGITIMACY	<u>Legitimate</u> - the class structure should be preserved  <u>Illegitimate</u> - the class structure should be radically altered
2. SHAPE	<u>Dichotomy</u> - one's position in the class structure is easily identifiable as "us" or "them"  <u>Hierarchy</u> - the class structure contains several graduated groups.

The position of the individual models is shown in Diagram 2.

Ford's models may be defined in the following manner:-

- 1) "Power" - The class structure is illegitimate and sharply defined - change may be accomplished only by revolutionary action.
- 2) "Deference" - Perception of 'them' and 'us' is retained but 'them' are no longer targets for hostility but emulation in that the 'elite' has deserved its favoured position.
- 3) "Instrumental-Collectivist" - This model is generally held by "working class aristocracies" who believe in social mobility and therefore disapprove of revolutionary action but supporting in its place collective action to ameliorate their condition.

DIAGRAM 2Typology of Class Ideologies

Evaluation of the legitimacy  
 ←—————→  
 of the class structure

		ILLEGITIMATE	LEGITIMATE
Perception of the shape of the class structure ↑—————↓ HIERARCHY      DICHOTOMY		MODEL 1 "Power"	MODEL 2 "Deference"
		MODEL 3 "Instrumental- Collectivist"	MODEL 4 "Prestige"

- 4) Prestige - Differential status and reward are legitimately ranked in a hierarchy. The most deserving individuals receive the largest material and symbolic rewards.

The questions employed to measure these indices were based upon the originals used by Ford. However, the terminology and wordings were altered to be more meaningful to Kenyan students. They were presented in Likert scale form and analysed in the same way.

6(vii)c The Sample

The questionnaire was largely experimental and it was considered unproductive to conduct it at all the schools selected for the main survey.

Therefore it was decided to select only 10 rural and 10 urban schools for the questionnaire. The sample was selected by the same method outlined in section 4(ii) including approximately equal proportions of differently graded schools. All 10 rural schools were located in Nyeri District.

Details of the sample are given in Table 20 which shows that a total of 783 respondents answered the questionnaire. in 6 Grade A, 5 Grade B, 4 Grade C and 5 Grade D schools.

6(vii)d Questionnaire Presentation

Upon completion of the written questionnaire the respondents were asked to participate in a discussion.

TABLE 20

Oral Questionnaire SampleNYERI DISTRICT (RURAL)

Name of School	GRADE				No. of Respondents
	A	B	C	D	
Nyeri High	✓				40
Giakanja Sec.	✓				39
Kaguma High	✓				36
Tumutumu Girls		✓			42
Nyeri Baptist		✓			34
Nyeri Technical			✓		35
Thunguma Sec.			✓		43
Kiganjo Amboni				✓	40
Kirichu Sec.				✓	37
Kiriti Sec.				✓	44
TOTALS	3	2	2	3	390

NAIROBI PROVINCE (URBAN)

Name of School	GRADE				No. of Respondents
	A	B	C	D	
State House Road	✓				32
Kenya High	✓				42
Nairobi Boys	✓				30
Visa Oshwal Boys		✓			34
Raval's Sec.		✓			47
City High		✓			47
Langata High			✓		40
Kennedy High			✓		40
St. Mary's Girls				✓	43
Pan African Girls				✓	38
TOTALS	3	3	2	2	393

Initially, students were asked to talk about their educational and occupational expectations and aspirations. Gradually, the subject was turned towards the students' perceptions of the Kenyan social system. No reference was made to class until the respondents began to discuss social strata grouping. For example, students who regarded the class structure as dichotomous referred to these classes as "wabenzi" and "wananchi".<sup>1</sup> The discussion would, then, often move onto elitism and the most successful means to join that elite.

When it was apparent that the respondents had a reasonably clear understanding of the terms "class" and "elite", in the simplest of definitions, the respondents were given a typed sheet containing the questions without instructions or answering spaces.

The statements were read out and the respondents asked to indicate their strengths of agreement by hand-raising.

For all items, Likert Scale categories were employed; "Agree Strongly", "Agree", "Undecided", "Disagree" and "Disagree Strongly".

---

1. "Wabenzi" originated as a term for wealthy Africans in Nairobi who drive Mercedes-Benz cars. It is now used to describe the elite in general.

"Wananchi" is a more common term for the "common people" or "average man".

The categories were written on the blackboard to indicate the full range of choices available. This technique guaranteed the anonymity of the individual respondents and virtually eliminated contamination. However, the extent of "voting in sympathy" is impossible to assess.

The results were immediately written onto a coding sheet. A 100% response rate was achieved for all items.

The methods of statistical analysis and interpretation of the data will be described in Chapter 4.

It should be noted that the data is to be used for comparative purposes, between school grade and location. Interpretations of the results as absolute measurements for each individual item are invalid because the sample is too small to credibly assess the consistency and statistical significance and perception of class structure could be examined by any number of indices not included here.

## 7 Additional Data Collected

### 7(i) Job Opportunities Survey

The written questionnaire provided information on the respondent's occupational expectations and aspirations. In order to assess how realistic these preferences are, a job opportunities survey was conducted.

The technique was to analyse the "Appointments Page" of the 'Standard', one of Kenya's main daily newspapers and

the most important source of advertisements.

The appointments were examined for alternate days on alternate months of 1977 and 1978. The total number of issues analysed was 143 providing 2,369 individual advertisements for analysis.

Each appointment was scrutinised for statements of:-

- 1) Academic Qualifications required
- 2) Level of English speaking and writing ability needed
- 3) Experience necessary

The results of the survey are given in Chapter 4(vi).

7(ii) E.A.C.E. results for 1979

The E.A.C.E. performances of individual schools are available at the Examinations Section, Nairobi Provincial Education Office upon authorisation of the Chief Examinations Officer, Mr. Makau.

The data gives the number of candidates, the number of failures and provides a breakdown between grades - Division 1 to Division 4.

Only the school name and district are listed with this information. The grading of schools is available from the Ministry of Education Inspectorate<sup>(38)</sup> and the school type data are provided by the E.A.C.E. Examination Centres list.<sup>(39)</sup>

The combination of these sources enables one to examine E.A.C.E. performance by:-

- 1) Province
- 2) School Grade
- 3) School Type (holding grade constant)

The results of these comparisons are given in Chapter 4(iv).

7(iii) Survey of Department of Geography Freshmen in the University of Nairobi, 1979

Candidates for places in the Department of Geography, University of Nairobi for the 1979 academic year complete a standard registration form indicating their:-

- 1) Permanent residence
- 2) Secondary School(s) attended up to Form IV
- 3) Secondary School(s) attended from Form V to Form VI.<sup>1</sup>

From the total of 250 forms a 50% sample of 125 was randomly selected. The data may be analysed to compare:-

- 1) The proportion of candidates from each Province with its percentage of the national population
- 2) The percentage of candidates educated up to Form IV at A, B, C, and D graded schools with the national averages.

---

1. The authorisation to examine the registration forms was provided by Dr. Alan Ferguson of the Department of Geography.

These comparisons will provide further evidence in support of the hypothesis that University students are disproportionately educated at better grade schools and that certain Provinces provide more than their proportionate share of candidates.

In addition, further information on students' provincial residence is provided by the Nairobi University Perception Study conducted by the Geography Department in 1979.<sup>1</sup>

The results of both analyses are given in Chapter 4(v).

7(iv) Teaching Practice Posts for Kenyatta University

College students, 1979

Kenyatta University College provides a considerable percentage of Kenya's teacher training resources. A booklet was published in June 1979 listing the postings of Faculty of Education students for teaching practice beginning 18 June 1979 by 'area' and school.<sup>(40)</sup> It was noticed that certain areas and types of school received more than their proportionate share of the total of 626 postings.

It was decided to analyse the postings by;

- 1) Province
- 2) School Grade

The results of these analysis are given in Chapter 4(v).

Full explanations of data analysis and examination of results will be given in Chapters 4 and 5.

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1. Kindly provided by Dr. Alan Ferguson

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CHAPTER 4DATA ANALYSIS AND RESULTS 1 - SPATIAL AND  
STRUCTURAL INEQUALITIES IN THE EDUCATION SYSTEMCHAPTER SUMMARY

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  - (g) Father's Acreage of Cash Crop
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7. Educational Experience

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- (ii) Total Number of Years of Education
- (iii) Number of other Secondary Schools attended
- (iv) Classes Repeated
- (v) Pre-School Tuition
- (vi) After-School Tuition
- (vii) Summary

8. Conclusion

CHAPTER 4DATA ANALYSIS AND RESULTS - 11 Response Rate

The method of group administration ensured a high response rate. It was apparent that the respondents found the attitudinal questions more interesting and response rates neared 100 per cent. For the majority of items, values between 80 and 90 per cent were common. In no case did the response rate fall below 75%. Furthermore these values varied randomly between school and item and no significant differences could be identified.

2 Data Treatment and Response

Questionnaire responses were transferred onto individual coding sheets. The non-codifiable attitudinal statements were analysed separately. The data were analysed for significant differences between school grade and location. Consequently, item responses were initially collated by individual school.

The method precludes investigation of relationships outside the range of hypotheses to be tested. For example, once the data has been collected in this way it is impossible to analyse the response differences between male and female students. In addition it assumes that responses will be consistent within individual schools. This is not strictly true but in order to test the hypotheses it is

necessary to treat individual schools as coherent units and measure the differences between them.

Furthermore, identification of response variations within individual schools would, in the majority of cases, produce too small samples to test the significance of the relationships.

3 Data Analysis Methodology

3(i) Mann-Whitney Test

With the exception of attitudinal and Likert Scale items, questionnaire responses were analysed for significant differences between school grade and location by the Mann-Whitney 'U' Test.

The procedure was to produce a representative "score" for each item, for each individual school in the sample of 62.

The simplest technique was to calculate an item average. For example, in Question A2, respondents gave their age in years and an average age for that Form IV class can be computed.

However, in Question B10, respondents indicated their father's educational level. A checklist of 6 categories was provided:-

- 1) No Education
- 2) Some Primary Education

3. Education up to Standard VII
4. Education up to Form II
5. Education up to Form VI
6. University or College Education

The coding sheet provides raw scores for each category. These may be converted into percentages to standardize the responses between schools since the numbers of respondents are inconsistent. The next step is to award points on a graduated scale for individual categories. In this example, category 1 was awarded 1 point; category 2, 2 points and so on. By multiplying the category points by the response percentage, summing these values for each category and dividing by 100, a representative 'score' is computed. In this case, the higher the 'score' - the greater the level of education achieved by the fathers of the respondents.

This technique allows comparisons between schools in terms of individual categories and/or composite scores. For each item, tables are given in the Appendix showing these average or composite values by individual school. It is necessary, then, to test the statistical difference between these values in terms of school grade and location.

The test employed for this purpose was the Mann-Whitney. Clearly, no assumptions concerning the normality of the

population for any item can be made with confidence and this necessitates a non-parametric distribution free test.

The Mann-Whitney is one of the most powerful of this type having nearly 95% of the power of the t-test, with medium size samples and using data conforming to t-test requirements.<sup>(1)</sup> In addition, data measured on interval or ordinal scales are equally valid.

The test is designed to decide whether the difference in the mean of two independent samples is statistically significant.

The samples are drawn up as A and B, and ranked, starting from 1 as the lowest value. Identical values are given tied ranks. For sample A or B the sum of all individual ranking values is calculated. The test statistic U is then calculated from the following equation:-

$$U = n_1 n_2 + \frac{1}{2} n_1 n_2 (n_1 + 1) - R_1$$

where,  $n_1$  = size of sample A

$n_2$  = size of sample B

$R_1$  = sum of ranks for sample A

The value of U may be "inflated" and the correct score may be calculated as  $U_2$ :-

$$U_2 = n_1 n_2 - U_1$$

A rejection level for  $H_0$  - the null hypothesis - is required and this must be consistent for every item.

It was decided to make every test directional and one-tailed (one sample mean is significantly greater than the other) with a rejection level of 0.01. This is a reasonably stringent cut-off level and is designed to exclude relationships of dubious significance which may be suggested by employing a 0.05 level, particularly in a situation where sampling error cannot be estimated.

A difficulty is encountered in comparing Grade A schools with others. The sample of 21 invalidates calculation of the U statistic. However, for samples above 20, the sampling distribution of U approaches normal and a "z" score based on a normal distribution may be calculated from the following formula:-

$$z = \frac{U - \frac{1}{2}n_1n_2}{\left( \frac{n_1n_2(n_1+n_2+1)}{12} \right)^{\frac{1}{2}}}$$

The significance of the z score at a rejection level of 0.01 and one-tailed may be determined from tables.

In order to analyse the significance of school location on item responses it is essential to eliminate the effect of school grade. It is possible to do this by testing the relationships within the samples for each school grade.

However, this is only valid for the Grade A and B samples because the number of urban schools in the C and D groups (2 in both cases) is too small for 'U' Test requirements. The sample sizes for A and B schools are indicated in the following table:-

Table 21                      Urban Rural Sample Sizes

	Urban	Rural	Total
Grade A schools	11	10	21
Grade B schools	5	11	16

For each questionnaire item, appendix tables give the raw values, composite scores (if necessary) by individual school averages and separated into Grade A, B, C and D samples. The results of the Mann-Whitney calculations are also given, indicating the Z and U scores for each individual test. In addition, the item means for urban and rural samples (Grade A and B schools only) are given together with Mann-Whitney 'U' scores. The significance of the relationships are shown diagrammatically as in Diagram 3.

In this case there are significant differences between the means of samples 'A' in comparison with 'C' and 'D' and 'B' against 'D'. However, there are no significant differences when testing A against B, B against C and C against D.

DIAGRAM 3

'U' Test Relationships between School  
Grade Samples (Example)

A	/	/	/	/
B	x	/	/	/
C	✓	x	/	/
D	✓	✓	x	/
	A	B	C	D

Significant = ✓  
 Not Significant = x

3(ii) Chi-Square Test

The Chi-Square Test was employed only in the analysis of the 1978 Kenya E.A.C.E. results.

This data was provided in the form of frequencies counted in each of a number of categories which is an essential requirement of the Chi-Square test. The analysis of E.A.C.E. scores for the sampled schools used percentage data and therefore required the Mann-Whitney 'U' Statistic.

The technique operates by testing an observed distribution against a standardised expected distribution. The statistic  $X^2$  is calculated from the following formula:-

$$X^2 = \frac{(O - E)^2}{E}$$

where O = the frequencies actually observed

E = the frequencies expected.

In this case Chi-Square was used to determine the significance of differences in E.A.C.E. performance between school grade and type. The E.A.C.E. results were given on an ordinal scale - Division 1, Division 2, Division 3, Division 4 and Fail, and sample frequencies for individual categories could be calculated by simple summation.

The only difficulty with this technique in the comparison of two independent samples is the calculation of the expected frequencies. The method is shown in the

following table.

Table	$\chi^2$ Technique for E.A.C.E. Results				
	SAMPLE A		SAMPLE B		A + B
	O	E	O	E	
Division 1	$A_1$		$B_1$		
Division 2	$A_2$	X	$B_2$		$A_2 + B_2$
Division 3	$A_3$		$B_3$		$A_3 + B_3$
Division 4	$A_4$		$B_4$	$X_1$	$A_4 + B_4$
FAIL	$A_5$		$B_5$		$A_5 + B_5$
	$\sum O_A =$		$\sum O_B =$		$\sum O_A + \sum O_B$

The expected frequencies are found by multiplying the sum of the row by the sum of the column in which the observed frequencies occurs and dividing by the sum of all the observed frequencies.

For example, the expected values X +  $X_1$  are given by the following equations:-

$$X = \frac{\sum O_A (A_2 + B_2)}{\sum O_A + \sum O_B}$$

$$X_1 = \frac{\sum O_B (A_4 + B_4)}{\sum O_A + \sum O_B}$$

The test can only indicate if there are significant differences between the distributions and not that one sample mean is significantly greater than the other. Therefore, it was decided to set the rejection level at 0.001.

3(iii) Likert Scale analysis

There are several methods of analysing Likert Scale data. Common to all techniques is the procedure of assigning values to the response categories, strongly agree, to strongly disagree. In this case, the category "strongly agree" is assigned 1 point, "agree" 2 points and so on.

A composite statistic for the item may be calculated by multiplying the response frequencies by the assigned values, summing these scores and dividing by total number of respondents.

Normally, Likert scales are designed to examine attitudinal responses in one particular dimension. The individual items of the Likert scale may then be analysed for internal consistency. In general the top 25% item scores and bottom 25% are examined for significant differences by t-test.<sup>(3)</sup>

In the context of this study one is searching for differences in attitudinal responses between school grade and location. It is not necessary to examine the validity of the uni-dimensionality for individual items. The Likert scale scores are calculated as averages for each school and then compared between school grade and location by the Mann-Whitney 'U' Test.

3(iv) Content Analysis

Open attitudinal items produce responses which are highly variable in terms of meaning and content between individuals.

Numerical codification is clearly impossible to achieve and the problem of representative classification is compounded by the need to produce a precise categorised definition of attitudes and opinions by school rather than by the individual.

Content analysis is concerned with identifying the content or meaning of particular linguistic configurations, constructs and so on, and classifying them accordingly. (4)

Such analyses cannot be statistically precise for;

"... most methods of content analysis are based explicitly or implicitly on the intuitive understanding of language of those who analyse and classify the data". (5)

The validity of results is always questionable since a common understanding between the producer of the text and the analyst cannot be assumed with any degree of confidence, particularly in a situation of cultural differences.

Nevertheless, content analysis may be employed with rewarding results provided that the system subscribes to the following stages:-

Firstly, the greatest possible precision is essential in the formulation of key hypotheses. A pilot survey is very important in this respect for it will indicate the likely responses to a particular question. Misunderstandings and irrelevances will be avoided by careful analysis of pilot data.

Secondly, the units of analysis must be defined. In this case thought-concepts were the object of examination as opposed to sentences or individual words.

Thirdly, a system of categories must be defined so that each item refers to only one dimension of meaning and that the categories are mutually exclusive and exhaustive.

To demonstrate the use of content analysis in this context, one can consider question D4:-

"Your ability, intelligence and hard work are important in passing exams. Write down any other things which you think are important in passing exams"

"You do better in exams if you ....."

Respondents were required to complete the sentence. The purpose is quite clear from the question itself - how do the students evaluate factors other than "ability, intelligence and hard work" in contributing to their exam performances. The system of categories is:-

- 1) Other personal factors e.g. obedience, patience, faith etc.
- 2) School Facilities e.g. laboratory, library, equipment etc.
- 3) Teachers e.g. punctuality, ability, diligence etc.
- 4) Family matters e.g. school fees, parents need respondent's help, required to help younger brothers and sisters, et.

Individual texts may be analysed for references pertaining to these categories and scored accordingly. These values are summated for each school and an impression may be formed of differences between school grade and location by calculating average sample scores.

#### 4. Analysis of Kenya E.A.C.E. Results 1978

The E.A.C.E. Results are given by school name and Province. The scores themselves are separated into the following grades; Division 1, Division 2, Division 3, Division 4 and Fail. In order to be accepted for a Form V place in maintained schools, students must obtain a Division 2 pass or higher. It is possible, however, to continue study with lower passes in private schools.

The majority of students achieving a Division 1 pass will continue up to E.A.A.C.E. but only 1/3 to 1/2 of

Division 2 pupils will be able to find a place in a government school. In addition, entry to an E.A.A.C.E. course depends upon options taken at E.A.C.E. and scores in the relevant subjects.

In consequence, like the C.P.E. for primary level, the E.A.C.E. is the most important event of junior secondary education. The majority of students believe that their examination system ensures equal opportunity to proceed to higher education.

It was decided to compare E.A.C.E. performance between schools of different grade, type and location to test this popular notion.

The E.A.C.E. results could be matched with school grade and type by referring to the Ministry of Education Secondary School Inspectorate List and Examination Centres List.

4(i) E.A.C.E. Performance by Province

The most striking feature of Table 22 is the overwhelming advantage of Nairobi and Central Provinces in terms of E.A.C.E. candidacy places per population. Western Province is the only other region above the national average in this respect. This ranking coincides with the overall pattern of economic development in Kenya. The least developed North-Eastern Province has the lowest number of places per population.

TABLE 22  
Number of E.A.C.E. Candidates 1978 per Population  
and Province

Province	Population	E.A.C.E. Candidates	No. candidates per 1,000 population	Rank
Nairobi	863,000	6,173	7.2	1
Central	2,315,000	13,569	5.9	2
Rift Valley	3,033,000	7,433	2.5	7
Coast	1,333,000	3,554	2.7	6
N.E.	275,000	176	0.6	8
Western	1,947,000	8,444	4.3	3
Nyanza	3,076,000	11,313	3.7	4.5
Eastern	2,585,000	9,592	3.7	4.5
	15,427,000	60,264	3.9	

Notes:

1. Population figures for 1979 from "Population Projections by District, 1970-1980", Kenya Statistical Digest X(3), 1972 pp 3-4, using Series A

In terms of performance (Division 1 plus Division 2) the most successful Province was Nairobi followed by Coast, Central and Rift Valley. When composite scores are considered in Table 23 the positions are as follows; Coast, Nairobi, Rift and Central. It should be noted that the results for N.E. Province are not significant enough to be included in this analysis since there are only 4 schools in the area.

It is suggested that performance variation may be due to the differences in the proportion of Grade A schools in each Province.

This may be tested by calculating the product moment correlation coefficient between the 2 sets of data in Table 24. The statistic  $r$ , 0.748, is significant at the 0.10 Level. This shows that E.A.C.E. Performance is significantly related to the percentage of Grade A schools in the Provinces. The relationship will become clearer upon analysis of E.A.C.E. performance by school grade.

4(ii) E.A.C.E. Performance by School Grade

Table 25 and 26 illustrate the differences in performance between the school grade samples.

The significance of differences between the distributions for A, B, C and D schools may be determined by  $\chi^2$  tests upon the raw data. The results of the analyses are shown diagrammatically in Table 27.

TABLE 23E.A.C.E. Performance, 1978 by Province

Province	Div I %	Div 2 %	Div 3 %	Div 4 %	Fail %	Composite Scores
NAIROBI	12.6	19.3	25.2	23.8	19.0	2.82
CENTRAL	7.8	17.7	27.3	26.9	20.3	2.66
RIFT VALLEY	7.6	18.9	30.6	24.8	18.1	2.73
COAST	10.8	20.3	30.3	30.2	8.4	2.95
N.E.	4.0	20.5	35.2	28.4	11.9	2.76
WESTERN	3.5	12.8	26.6	30.4	26.7	2.36
NYANZA	4.0	12.5	25.3	28.4	29.8	2.33
EASTERN	5.3	13.8	25.3	29.2	26.4	2.42
Average	6.7	15.9	26.9	27.7	22.8	2.56

## Notes:

- Composite scores calculated by assigning points as follows:  
Div 1 = 5, Div 2 = 4, Div 3 = 3, Div 4 = 2, Fail = 1

TABLE 24

Correlation between Provincial E.A.C.E. Performance  
and Percentage of Grade A Schools

Province	E.A.C.E. Composite Score	% Grade A Schools	A - $\bar{A}$	B - $\bar{B}$
Nairobi	2.82	36.1	+0.26	+24.1
Central	2.66	9.8	+0.10	- 2.2
Rift Valley	2.73	11.9	+0.17	- 0.1
Coast	2.95	24.6	+0.39	+12.6
Western	2.36	9.8	-0.20	- 2.2
Nyanza	2.33	8.3	-0.23	- 3.7
Eastern	2.42	9.2	-0.14	- 2.8
Average	2.56	12.0		

$$\sigma_A = 0.23$$

$$\sigma_B = 10.49$$

$$r = \frac{1}{n} \frac{(a - \bar{A})(B - \bar{B})}{\sigma_A \sigma_B} = 0.748$$

Test Significance by  $t = r \frac{n-2}{1-r^2}$

$t = 2.52$  with 5 degrees of  
freedom - significant at 0.10

## Notes:

- Percentages of Grade A schools from Ministry of Education Inspectorate List.

N.B. Figures for N.E. Province are excluded

TABLE 25

E.A.C.E. Performance 1978 by School Grade

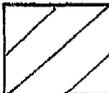
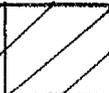
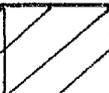
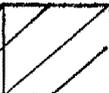
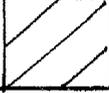
(Raw data)

School Grade	No. of Schools	No. Div 1	No. Div 2	No. Div 3	No. Div 4	No. Fail	Totals
A	126	2,360	3,686	4,069	2,063	660	12,838
B	160	952	2,690	4,094	3,055	1,609	12,400
C	264	601	2,234	4,602	4,770	3,639	15,846
D	490	134	942	3,399	6,692	7,727	18,894
Unregistered	9	5	30	53	87	111	286
Totals	1,049	4,052	9,582	16,217	16,667	13,746	60,264

TABLE 26E.A.C.E. Performance by School Grade(Percentage values)

School Grade	Passing Div 1 or Div 2 (%)	Passing E.A.C.E. (%)
A	47.1	94.9
B	29.4	87.0
C	17.9	77.0
D	5.7	59.1

TABLE 27Chi-Square Analysis of E.A.C.E.Performance by School Grade

A				
B	✓			
C	✓	✓		
D	✓	✓	✓	
	A	B	C	D

Test Scores  $\chi^2$ 

A-B = 1,336.3

A-C = 4,302.6

A-D = 11,330.6

B-C = 905.5

B-D = 5,791.5

C-D = 2,547.7

at 0.001 with d.f. = 4

Significant = ✓

Not Significant = X

The Chi-Square analysis reveals highly significant differences between the distribution of results of differently graded schools. The  $X^2$  scores are very much above the critical values for a 0.001 rejection level with 4 degrees of freedom.

The results show that a student at a Grade A school has approximately a 50% chance of obtaining a Division 1 or 2 pass, over 8 times as high as a student in a Grade D school. Similarly, a Grade A pupil is virtually certain to pass E.A.C.E.; almost twice as sure as a Grade D student.

This analysis shows that the commonly held notion that a secondary school place guarantees an equality of opportunity in passing E.A.C.E. to be quite erroneous.

4(iii) E.A.C.E. Performance by School Type

Secondary schools may be of three types; government maintained or assisted, private and unaided.

Differences in performances must be analysed within school grade samples to eliminate the effect of this variable. Grade A schools are not included in this analysis since very few are privately run and none at all are unaided.

Tables 28, 29 and 30 show that for B, C and D schools there are highly significant differences between

350  
TABLE 28

E.A.C.E. Performance by School Type -

B Grade Results

School Type	Passing Div 1 or Div 2 (%)	Passing E.A.C.E. (%)
Government	34.0	90.8
Private	11.3	72.0
Unaided	23.8	83.2

Chi-Square analysis of significance

	G	P	U	
GOVERNMENT	/ / /	/ / /	/ / /	<u>Test Scores <math>X^2</math></u> G - P = 1129.1 G - U = 98.0 P - U = 138.0  Significance at 0.001
PRIVATE	✓	/ / /	/ / /	
UNAIDED	✓	✓	/ / /	
	Significant = ✓			

TABLE 29

E.A.C.E. Performance by School Type -

C Grade Results

School Type	Passing Div 1 or Div 2 (%)	Passing E.A.C.E. (%)
Government	22.7	83.6
Private	9.0	54.1
Unaided	6.8	67.3

Chi-Square analysis of significance

	G	P	U	
GOVERNMENT	/ / /	/ / /	/ / /	<u>Test Scores <math>X^2</math></u> G - P = 872.3 G - U = 814.7 P - U = 113.9  Significance at 0.001
PRIVATE	✓	/ / /	/ / /	
UNAIDED	✓	✓	/ / /	
	Significant = ✓			

TABLE 30

E.A.C.E. Performance by School Type -D Grade Results

School Type	Passing Div 1 or Div 2 (%)	Passing E.A.C.E. (%)
Government	7.9	60.7
Private	3.6	51.1
Unaided	5.5	60.3

Chi-Square analysis of significance

	G	P	U
GOVERNMENT	/	/	/
PRIVATE	✓	/	/
UNAIDED	✓	✓	/

Test Scores  $X^2$ 

G - P = 118.6

G - U = 34.0

P - U = 115.1

Significance at 0.001

Significant = ✓  
 Not Significant = x

government, private and unaided schools. The  $\chi^2$  scores indicate that the ranking in terms of E.A.C.E. performance is in each case, as follows:-

1st : Government

2nd : Unaided

3rd : Private

The differences are less important at the Grade D level probably because government assistance in these sort of schools may only take the form of one or two qualified teachers and some teaching aids. Nevertheless, government maintenance is very important at any level. Loreto Secondary in Kiambu District is a maintained grade D school. There were 40 E.A.C.E. candidates entered in 1978 of which 13 obtained Division 1 passes (32.5%) and no failures were recorded.

Clearly, private schools below grade A produce the worst results. Kisii Progressive College, a grade C private school entered 117 candidates in 1978 and recorded a 100% failure rate. Another example is Yalta Secondary, a grade D school in western Kenya where 82.4% of the 17 candidates failed E.A.C.E.

In support of these conclusions we can, in addition, consider the E.A.C.E. results in 1978 of the schools included in the survey, sample as analysed by the Mann-Whitney 'U' Test.

4(iv) The E.A.C.E. Performances of the Surveyed Schools

The breakdown of performance by school grade is shown in Table 31. The results are analysed in terms of percentages passing at Division 1 and Division 2 and percentages passing E.A.C.E. The Mann-Whitney 'U' test is employed to determine significance of differences in performance between school grade and location.

The analyses by school grade in Tables 32 and 33 confirm the national survey conclusions although the differences between B and C, and C and D were insignificant at the 0.01 level.

It is interesting that results are higher for rural schools in the A and B samples. These differences are significant particularly for the B graded category. It is difficult to comment upon these observations since the influence of school type is not considered. The performance of the schools in the Nairobi B graded sample is influenced by the high proportion of private schools in this category. A suggestion has been made that rural schools in the A and B grades are often boarding and this contributes considerably to better examination performances.

However, the value of the survey sample analysis is that it confirms the conclusions of the national data as regards the importance of school grade, by an

TABLE 31

E.A.C.E. Performances of the Surveyed  
Schools, by School Grade

E.A.C.E. Performance	SCHOOL GRADE			
	A	B	C	D
Div 1 (%)	36.6	5.9	2.4	0.2
Div 2 (%)	30.0	17.1	15.7	4.6
Div 3 (%)	23.5	30.8	27.7	13.1
Div 4 (%)	7.7	28.2	21.4	36.6
Fail (%)	2.2	18.0	32.9	45.4

TABLE 32

Percentage Passing Div 1 and Div 2; Mann-Whitney 'U'

Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>				
A					A-B z = 4.19
B	✓				A-C z = 3.32
C	✓	x			A-D z = 4.58
D	✓	✓	x		B-C U = 48.0
	A	B	C	D	B-D U = 27.0
					C-D U = 16.0

Significant = ✓  
Not Significant = x

1. Significance at 0.01 Level by School Location

RURAL

	<u>Scores</u>		
	A	B	
URBAN	A		A(urban) = 59.0% A(rural) = 75.6%
	B		B(urban) = 8.7% B(rural) = 35.4%

Test Scores

A; urban-rural U = 18  
B; urban-rural U = 2

TABLE 33

Percentage Passing E.A.C.E., Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>				
A					A-B z = 3.02
B	✓				A-C z = 3.21
C	✓	x			A-D z = 3.93
D	✓	✓	x		B-C U = 46.0
	A	B	C	D	B-D U = 29.0
					C-D U = 22.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	x	
	B		✓

Scores  
A(urban) = 98.0%  
A(rural) = 98.1%  
B(urban) = 75.4%  
B(rural) = 92.3%

Test Scores  
A; urban-rural U = 54.0  
B; urban-rural U = 5.0

alternative statistical test.

The analyses of the E.A.C.E. results in 1978, for the surveyed schools and Kenya as a whole reveal highly significant differences in performance between schools of different grades and types. Students at a grade A maintained school have a considerable advantage over other secondary school pupils. In the survey sample the top performances were recorded by Alliance High School, Kiambu, Ngandu High, Nyeri and Alliance Girls in Kiambu District, all maintained Grade A schools.

Respective percentages passing Division 1 or Division 2 were 97.0, 93.6 and 91.1. The question we must now ask is why this occurs. What are the factors involved? What are the differences in school facilities and standards which produce such divergent performances? The analyses in the following sections seek to answer these questions.

5 Standards, Facilities and Teachers - Differences  
between Schools

Performance in the E.A.C.E. at Form IV varies markedly between region, urban-rural location, school type and grade. Many of these differences are statistically significant particularly those relating to school grade.

This section considers some factors - differences in school standards, facilities and teachers - which may be responsible for these relationships.

5(i) C.P.E. performances of the students included in the sample

Entry to secondary school depends in theory, exclusively on performance in the primary C.P.E.

For each examination, Mathematics, English and General Knowledge; grades are awarded from A to D (Fail).

Nominal scores are assigned to these grades; 12 for A, 11 for A- and so on. The sum of these values for the three papers gives the C.P.E. points score. The maximum possible would be 36 and the lowest, 9.

The majority of schools recruit their Form 1 entrants on the basis of these scores - although some prefer to consider the raw scores obtained in each examination.

National schools such as Alliance High, Alliance Girls and Nairobi School have a policy of selection based upon regional quotas. The top students are taken from each Province. This means that pupils in an educationally disadvantaged region such as North East Province which obtains consistently lower scores at C.P.E. are considered on a regional scale rather than national.

Alliance High, for example, in 1979 recruited only

students scoring over 30 points and the successful entrants averaged 33 points.

Provincial schools such as Nyeri High, Kagumo High and Kangaru School recruit from their respective Provinces only.

Clearly, Grade A schools have first choice of applicants. In consequence, competition to enter these schools is fierce. Although Headmasters should select students on the basis of C.P.E. results; in practice only 70-90% of places are filled in this way, throwing the remainder open. This commonly results in headmaster's offices being besieged by anxious parents at the beginning of every academic year.

The extent of selection based upon non-meritocratic principles is difficult to assess but it must be considerably higher in lower grade schools particularly those outside the government maintained system.

Schools graded C and D will recruit students provided they have passes in at least 1 subject at C.P.E. The policy of private schools of this level is to simply take any applicants who can provide sufficient evidence that their fees will be paid.

Information on the C.P.E. performances of 1979 Form 1 entrants to the surveyed school sample is recorded on the School Summary Sheet in Appendix 1. These figures

are averaged for school grade samples in Table 34. The scores show that C.P.E. standards of Form 1 entrants vary in relation to school grade. However, there are insignificant differences between B and C. Most importantly, if one considers the highest and lowest individual scores, then it is apparent that some students now studying at Grade D schools were adequately qualified to attend a Grade A school in this particular sample. This overlap suggests that entrance to schools is not purely meritocratic and that some other factors are involved.

Nevertheless, the overall differences in abilities as shown by C.P.E. performances, must be a major contributor to the variations in E.A.C.E. results at Form IV.

In the questionnaire, respondents were asked to indicate their grades at C.P.E. A nominal scale of points was assigned to these grades and performances were averaged for each school in each subject and recorded in Table 35.

In each subject, scores averaged for the school grade samples indicate a clear relationship with grade.

The average scores (Mathematics and English and General Knowledge) were tested for significance of differences between school grade and location by the Mann-Whitney 'U' Test.

TABLE 34

C.P.E. Performance of 1979 Form 1 entrants  
to schools included in the Survey

C.P.E. Scores	SCHOOL GRADE			
	A	B	C	D
Average Top Scores	35.1	28.1	29.3	24.0
Average Lowest Scores	25.5	19.6	21.3	14.8
Average Scores	29.2	23.2	24.0	18.5
Top Individual Scores	36	35	33	27
Lowest Individual Scores	20	12	16	9

Source: School Summary Sheet

TABLE 35

C.P.E. Performance of Form IV students involvedin the questionnaire survey - School Averages

No.	SCHOOL GRADE															
	A				B				C				D			
	M	E	G/k	Av	M	E	G/k	Av	M	E	G/k	Av	M	E	G/k	Av
1	4.43	5.97	4.03	4.81	3.02	3.81	3.34	3.39	3.10	3.28	3.10	3.18	2.24	2.76	2.37	2.46
2	6.93	6.80	6.06	6.60	3.03	2.77	3.43	3.07	3.80	4.10	3.60	3.83	2.40	2.98	2.74	2.71
3	5.74	7.43	4.81	6.01	2.39	3.19	2.35	2.64	4.97	4.77	4.26	4.67	4.15	4.27	3.90	4.11
4	5.21	7.64	4.29	5.71	3.76	4.16	3.92	4.34	4.12	3.91	2.91	3.64	3.79	3.09	2.97	3.28
5	3.52	4.82	4.18	4.17	3.96	4.29	4.21	4.15	3.80	4.20	3.10	3.70	3.05	4.23	2.90	3.90
6	5.13	6.51	4.51	5.38	5.0	5.26	4.97	5.08	3.90	4.10	3.0	3.67	3.40	3.60	3.50	3.50
7	5.93	6.71	4.56	5.73	6.24	5.55	5.19	5.66	4.30	4.20	4.34	4.28	2.70	4.0	3.50	3.40
8	7.10	6.70	6.55	6.78	4.90	4.80	4.60	4.80	4.12	3.82	4.10	4.01	4.41	4.80	3.65	4.28
9	7.14	6.69	6.74	6.86	3.31	3.46	2.69	3.15	3.90	4.10	3.20	3.73	2.90	3.20	3.10	3.07
10	6.47	6.26	5.68	6.14	6.53	5.35	5.60	5.85					2.82	3.41	2.56	2.93
11	7.76	7.36	7.48	7.53	4.70	5.10	3.50	4.43					3.60	3.20	3.50	3.43
12	7.21	7.31	6.72	7.08	4.60	5.30	3.90	4.60					3.40	2.80	3.20	3.13
13	5.65	5.80	6.20	5.88	4.70	5.20	4.20	4.70					2.40	2.72	2.50	2.54
14	6.21	4.53	4.21	4.98	4.60	4.70	3.90	4.40					3.02	3.20	2.90	3.04
15	6.34	5.31	5.12	5.59	5.30	4.70	3.92	4.64					2.70	4.10	2.82	3.21
16	6.10	7.30	5.31	6.24	5.02	4.26	3.78	4.35					3.10	2.60	2.40	2.70
17	7.20	7.30	6.10	6.87												
18	6.82	7.20	6.12	6.71												
19	6.42	6.70	5.55	6.22												
20	7.20	6.50	5.62	6.44												
21	6.52	6.73	4.81	6.02												
Av.	6.24	6.55	5.46	6.08	4.44	4.49	4.06	4.33	4.00	4.05	3.53	3.86	3.13	3.44	3.12	3.23

## Notes:

1. Coding:- M = Mathematics Score, E = English Score,  
 G/k = General Knowledge Score, Av. = Combined Average  
 Scores are calculated by assigning points to the following grades; A=8, A- =7,  
 B+ = 6, B = 5, B- = 4, C+ = 3, C = 2, C- = 1, Fail = 0.

TABLE 36

C.P.E. Combined Average Scores - Mann-Whitney 'U' Test  
to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>				
A					A-B z = 4.51
B	✓				A-C z = 4.19
C	✓	x			A-D z = 5.12
D	✓	✓	✓		B-C U = 43.0
	A	B	C	D	B-D U = 38.5
					C-D U = 25.5

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	<u>Scores</u>	
	A	B
URBAN	x	
RURAL		x

A(urban) = 6.29  
 A(rural) = 5.86  
 B(urban) = 4.51  
 B(rural) = 4.27

Test Scores

A; urban-rural U = 43.0  
 B; urban-rural U = 26.0

Table 36 reveals that the differences are significant with the exception of B contrasted with C. There is, however, no significance in the differences between urban and rural schools for the A and B samples.

The evidence of these tables would suggest that performance in E.A.C.E. at Form IV depends simply on the ability of the students as measured by their C.P.E. results. In Chapter 2, for instance, evidence was presented indicating that C.P.E. is a biased measure of ability. It should be noted, also, that this conclusion is based on results averaged by school, and there is considerable overlap in individual performances between the grade samples; an observation which casts doubt on the assumption that the selection system is completely meritocratic.

Although this relationship is statistically significant one cannot maintain that ability at Form I, as indicated by C.P.E. results, determines E.A.C.E. performance exclusively.

One cannot visit a representative sample of schools in Kenya without being impressed by the variations in facilities, standard and teachers' qualifications.

These differences will be quantified and considered in the following sections.

5(ii) School Standards and Facilities

There are enormous differences in standards and facilities between secondary schools in Kenya. These are related primarily to school grade. Description or statistical analysis alone fails to adequately convey the scale and importance of these variations.

Photographs 1 - 27 have been added to provide visual assistance in understanding these differences. Full abbreviated details of the individual schools included in the sample are given in the School Summary Sheet (Appendix 1). Brief descriptions of selected schools containing additional information provided by interviews with the Headmasters or senior staff are given with the photographs.

The photographs and descriptions convey a useful impression of the differences in standards and facilities, but it is important to quantify and analyse these more accurately.

During the course of a visit to a school a tour was conducted in the company of the Headmaster or one of the teaching staff. Ten items were selected to compare school facilities and standards and points from 1 - 5 awarded (excellent to poor) according to impressions gained on this informal inspection.



PHOTOGRAPH 1

Socio-Economic Inequalities between Kenyan School-Children

(A Group of Boys, 10-14 years of age, from Braeburn International School in Nairobi). This private school charges relatively large fees and enrolment is heavily weighted towards the white, ex-patriate and Asian communities. Only wealthy Africans can afford to send their children to this school.



PHOTOGRAPH 2

Socio-Economic Inequalities continued (Young girls catching fish near Waa Beach about 10 miles south of Mombasa). These Giriama are particularly disadvantaged in terms of educational facilities.



PHOTOGRAPH 3

Socio-Economic Inequalities continued (Primary school children at Kiriti School in Nyeri District). All of the students are poor and drawn from the immediate locale. They walk 1 - 6 miles to school and since no lunch is provided they eat their first hot meal in the evening after working several hours on the shamba.



PHOTOGRAPH 4

Socio-Economic Inequalities continued  
(Ol Molo child and mother on the shores  
of Lake Turkana in north Kenya). The  
nearest primary school is 10 miles away  
and this serves an enormous sparsely  
populated catchment area.



PHOTOGRAPH 5

Nairobi School (Front view, administration block and sports fields) - Grade A, maintained. Founded in 1929 as a European school; now enrolling 880 students, almost all Kenyan Africans. The school attempts to take students from all Kenyan Provinces from Form I - IV but selection at Form V is based purely on merit. Very good facilities and examination results with some recent new structures.



PHOTOGRAPH 6

Jamhuri School (Front facade) - Grade A, maintained on Forest Road, Nairobi. Originally founded in 1920 as an Asian School, moving to its present site in 1927, enrolling now over 1,000 students. Has a tradition of providing bursaries for very poor students (now about 40). There are some very old structures but some new classrooms, a swimming pool and a pavillion. The laboratories are particularly well stocked. The school is very successful in examinations and about half the Form VI enter Nairobi University every year. There are plans to build a new central library.



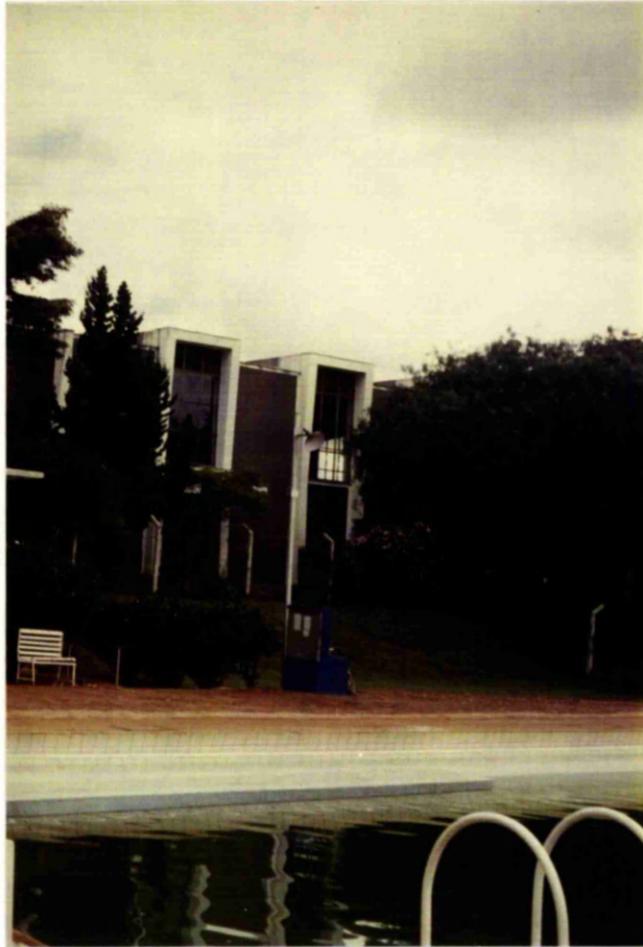
PHOTOGRAPH 7

Jamhuri School (3 Form IV students outside some of the new classrooms).



PHOTOGRAPH 8

St. Mary's School (Front view of older buildings housing administration section) - Grade A, private in Muthangari, Nairobi. Founded in 1939 to cater for the catholic European community. It now accepts all races but two-thirds are catholic and the school is mainly run by Irish Fathers. Fees are high and many of the African students belong to very wealthy and prominent families. There are 3 relations of the late Jomo Kenyatta and 2 of Mwai Kibaki's (Vice-President) sons currently studying at the school. There are over 900 students including the primary section from 30 countries. All are day scholars and some even stay in hotels. The facilities are extremely good and examination results are always among the best in Kenya. In terms of C.P.E. the school was first in Kenya in 1976, second in 1977 and first in Nairobi in 1978. The 1978 E.A.C.E. results were second top in Kenya for a boy's school.



PHOTOGRAPH 9

St. Mary's School (Swimming pool and new science block) The sports facilities are particularly good. School teams won the Kenya swimming and golf championships in 1978 and came second in tennis.



PHOTOGRAPH 10

Loreto Convent, Msongari ( New Chapel and Italian design structures ) - Grade A, private in Lavington, Nairobi. Founded in 1921 by Catholic Missionaries and now exists on fees, overseas funds and contributions from the catholic community. All girls are day-scholars and drawn from the wealthier strata of the community. Entry for Form 1, therefore, is not judged solely by C.P.E performance. Examination results are generally very good and the 1978 E.A.A.C.E performance was the best in the country. The school is very well maintained and set in pleasant grounds adjoining the exclusive Muthangari Estate.



PHOTOGRAPH 11

Parklands Secondary School (Front view) - Grade A, maintained in Parklands, Nairobi. Founded as a private school for Asians in 1955 becoming a government school in 1973. About 25% of the students are Asian. The school is not in the same class as St. Mary's School - the building structures are old apart from one new administration block and the sports fields are poor - but the laboratories, library and general standards are good.



PHOTOGRAPH 12

Nyeri High School (Staff Room and Central School Library) - Grade A, maintained in Nyeri District. Founded as a government school in 1969 but harambee effort has raised money to finance school development projects such as an Assembly Hall. This is one of the top 3 boy's schools in the District and draws some of the best students from Central Province. It has very impressive science and library facilities and achieves very good examination results in both E.A.C.E. and E.A.A.C.E. All students are boarders and the teachers also live on the compound.



PHOTOGRAPH 13

Nyeri High School (Student Dormitories)



PHOTOGRAPH 14

Nyeri High School (Playing fields) - definitely the best in the District.



PHOTOGRAPH 15

Alliance Girls High School (New Gymnasium, playing fields, looking towards Alliance High School on other side of valley) - Grade A, maintained in Kiambu District. One of Kenya's top national girls schools, founded in 1948. It has many old-fashioned classrooms but 5 new laboratories.



PHOTOGRAPH 16

Alliance Girls High School (Some of the impressive sports facilities).



PHOTOGRAPH 17

Visa Oshwal Girls Secondary School (Front view) - Grade B, private in Parklands, Nairobi. Founded in 1959 by the Shah Community as an Asian school but now takes African girls, enrolling 360 pupils on a day-scholar basis. Standards are quite good - each class has a library and laboratory facilities are adequate. It will eventually be upgraded to A status upon establishing a Form V and Form VI. The main problem is expansion although the major concern at present is in building a central library.



PHOTOGRAPH 18

Kiambu High School (Modern open plan classrooms) - Grade B, maintained in Kiambu District. Opened in 1976 - very modern facilities. It has, however, experienced difficulty in acquiring equipment and staff shortages exist.



PHOTOGRAPH 19

Uthiru Secondary School (Front view) - Grade B, maintained in Kiambu District. Founded in 1965, now enrolling over 500 pupils. The major problem is congestion. The school needs 3 new classrooms and 2 new laboratories. There is also a need for dormitory facilities and staff houses.



PHOTOGRAPH 20

Thunguma Secondary School (View of Classrooms and library) Grade C, private, in Nyeri District. Founded in 1967 as a purely commercial venture enrolling over 500 pupils at present. Thunguma is untypical of most low graded private schools in operating a Form V, but, in essence, the general standards are not much above others of its type. The owner is a building contractor who has initiated several educational ventures. The school also has a coffee nursery and woodwork factory which are used to raise further finance and are not open to student participation. The grounds of the school are non-tarmaced and the office is raised on stilts to avoid flooding. Conditions are unpleasant and the dormitories are very spartan and dirty. However, the laboratory facilities are reasonably good. Most students have some difficulty in paying fees and are often sent home.



PHOTOGRAPH 21

Kiriti Secondary School (offices, the Headmaster, Mr. J. Mugo and one Form IV student) - Grade D, unaided in Nyeri District. Founded in 1972 with only a Form I. There is no laboratory but the possibility exists of raising finance for this in the future. All the students are Kikuyu from the immediate locale and drawn mostly from the adjoining primary school. The school received government aid in the form of 3 teachers in 1978 and there are also 2 Norwegian volunteers. The main problems are the lack of dormitories, staff houses, science equipment and good road access.



PHOTOGRAPH 22

Thunguma Secondary School (The owner, Mr. C. Kamara on the right; the Head, Mr. P. Omwenga in the middle and the Form IV master on the left). The open land behind them is the playing field. The coffee nursery may be seen to the left.



PHOTOGRAPH 23

Kiriti Secondary School (View of the Primary Section a few hundred yards down the valley).



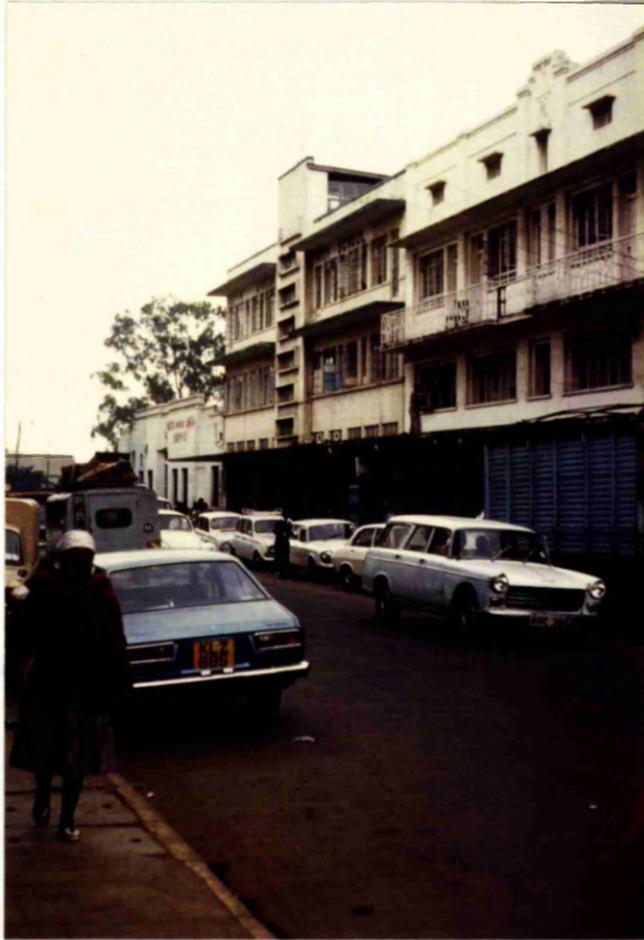
PHOTOGRAPH 24

Kimathi Secondary School (View from the rear down the valley) - Grade C, maintained in Nyeri District. Founded in 1967 as a harambee school but in 1970 it was taken over by the government although 2 more harambee streams were opened in 1974, enrolling over 480 day-scholars at present. Laboratory facilities are just adequate but there is no library and, like many schools of its type, keeping staff for any length of time is difficult without the provision of staff houses. In addition, access to the school (note the mud road) is particularly difficult especially in wet weather.



PHOTOGRAPH 25

Kennedy High School (View from the street above shops in the middle distance) - Grade C, private, in Mfangano Street, Nairobi. Originally founded in 1961 but the present management took over in 1973. It enrolls 600 pupils on the first floor of an apartment block. Downstairs there is a bar with a jukebox and upstairs, a section of the Pan-African High School. Congestion is pronounced, the laboratory is under-equipped, there are no sport, leisure or extra-curricular activities and most teachers are under-qualified. The standard of education offered is very low and in many ways the school is simply a means of exploitation.



PHOTOGRAPH 26

Pan African Girls High School (View from the street above the shops in the middle distance) - Grade D, private, in Mfangano Street, Nairobi. Founded in 1968 for day-scholars and now enrolling about 300 students. It is part of a group of schools owned by the Kenyan minister, Dr. Kiano. Problems here are similar to those at Kennedy High although the general facilities and examination results are worse.



PHOTOGRAPH 27

St. Mary's Girls Secondary School (View from the street) - Grade D, private on Tom Mboya Street, Nairobi. The school operates two enrolments; one from 8.00 a.m. to 1.00 p.m. and the other from 1.00 p.m. to 6.00 p.m. Congestion is severe but the administration is quite efficient and the classrooms are tidy, clean and adequately equipped. There is no laboratory but the school concentrates on commerce and secretarial arts.

As noted before, the author has no experience of school inspection and, therefore, the points should not be considered as absolute indicators for the individual items but as a means of comparison and ranking. Furthermore, the data is based upon impressions and information from, quite often, uninformed sources and is not considered entirely accurate in that duplication of the procedure by another researcher would produce slightly different results.

However, these inaccuracies and difficulties are minimised by employing the data relatively. It is suggested that total scores (all 10 items) are a reasonably good index to compare schools by grade and location.

Table 37 shows the scores for all 10 items averaged for the grade samples. In terms of total scores, it reveals that the A sample average is over twice that of D. If one considers individual school scores, given in the School Summary Sheet, the gap is even higher. Out of a maximum 50 points, both Alliance High and St. Mary's School (grade A) scored 49. The lowest scores of the entire sample, 13 were produced by Kirichu Secondary and Federal High (both grade D schools in Nyeri District).

TABLE 37

School Inspection - Average Points,  
by item and school grade

ITEM	A	B	C	D
Buildings	4.24	3.94	3.78	3.06
Services	4.10	3.44	2.56	2.06
Cleanliness	4.24	3.75	2.89	2.50
Leisure	4.24	2.25	1.33	1.63
Laboratory	4.67	3.81	1.88	1.25
Library	4.24	2.50	1.89	1.31
Equipment	4.57	3.75	1.81	2.38
Sports	4.29	2.38	1.31	1.69
Ventilation	4.10	3.31	1.56	2.31
Visits-Transport	3.29	2.06	1.11	1.13
Total Average	41.6	31.7	25.2	19.3

## Notes:

1. These scores are averaged for the school samples. Score of 5 = excellent, 4 = Good, 3 = Average, 2 = Below Average, 1 = Poor.

Individual scores for schools are given in the School Summary Sheet in Appendix 1

TABLE 38

School Inspection - Individual School Totals, Mann-Whitney

'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>				
A					A-B    z = 4.00
B	✓				A-C    z = 4.16
C	✓	✓			A-D    z = 5.15
D	✓	✓	✓		B-C    U = 27.0
	A	B	C	D	B-D    U = 12.5
					C-D    U = 24.5

Significant =            ✓  
Not Significant =        x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	x	
	B		x

Scores

A(urban) = 44.0  
A(rural) = 39.0  
B(urban) = 29.0  
B(rural) = 32.9

Test Scores

A; urban-rural U = 23.5  
B;urban-rural U = 22.0

The individual school total scores may be tested for significance of differences by Mann-Whitney 'U' Test.

Table 38 shows that all the tests between grades are significant particularly those involving Grade A schools. In contrast, the differences between urban and rural locations are not significant for either A or B samples.

Research over several months, which involved visits to schools not included in the survey sample gave the impression of massive differences in school standards and facilities between grades although there was some overlap between B and C. Analysis of inspection points confirms this observation. These differences are significant enough to suggest that they are partly responsible for variations in E.A.C.E. performances.

In the next section, we consider teaching staff as an additional factor.

5(iii) Teaching Staff at the Surveyed Schools

The importance of the teaching staff on examination performances cannot be over-estimated. Examples can be found where an individual teacher has had overwhelming influence on his pupils' results.<sup>1</sup>

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1. Dr. Alan Peacock of Kamwenja Teacher Training College in Nyeri cites the example of a science teacher at Kimathi Primary School who, without facilities and equipment, teaches an ingenious and informative science course which has provided exceptional results in the C.P.E. General Knowledge Papers.

Questionnaire responses indicated that, in criticism of their own schools, the students usually ranked their complaints of the teaching staff highest.

Respondents felt strongly that their teachers should be trained graduates, preferably Europeans<sup>1</sup> with many years experience. In addition, many students were critical of their teacher's methods, punctuality, diligence and interest.

Teaching standards vary enormously from school to school. In St. Mary's School all teachers are trained graduates and 64% are foreign, mostly Irish priests. In Federal High, a grade D private school in Nyeri District only 17% are trained and there are no graduates or foreign teachers.

Clearly, the top government A schools have their pick of the teachers as well as of the students. Teaching at a school such as Alliance High is equivalent in prestige to a similar position at one of Britain's famous public schools. Furthermore, these schools generally provide accommodation for all staff on the compound. These houses, usually modern, well equipped and spacious, are a great attraction to potential staff

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1. European teachers are generally found in the top grade A government schools although volunteers teach in poorer schools. Students felt that Europeans (and Asians) are better qualified and more diligent in their work.

particularly where the teacher belongs to a different tribe to the local people, since housing is usually scarce and there are numerous cases of teachers being attacked and robbed because of their tribal origins.

Indeed, Kenya's biggest teacher training centre at Kenyatta University College does little to attract students to lower graded schools. An analysis of 626 teacher training postings for June 1979 by school grade, type and location reveals grossly disproportionate distribution.

Table 39 shows that over 50% of the students are posted to schools in Nairobi and Central Province which contain together 23% of Kenya's schools. In contrast, Nyanza and Coast Provinces are severely under-represented in Postings. Very few trainees were deployed in remote outlying Districts and none at all, for example, in Trans-Nzoia, West Pokot and Turkana.

Table 40 shows that 73.5% of students were posted to A and B graded schools which make up only 17.3% of the Kenya total. Only 5.7% taught in grade D schools.

In addition, analysis of the raw data reveals that in B, C and D schools 83.5%, 86.0% and 33.0% respectively were deployed in government maintained schools which under-represents private and unaided schools.

TABLE 39

K.U.C. Teaching Practice Postings, by  
Province compared to National Averages

Province	Postings as % of total	No. provincial schools as % of national total
Nairobi	23.3	4.2
Central	30.0	19.9
Eastern	8.9	18.2
Rift Valley	10.7	11.7
Nyanza	16.5	24.4
Western	10.5	4.6
Coast	-	16.6
N.E.	-	0.4

## Notes:

1. Number of Schools in each Province and Provincial Percentages are from Inspectorate Secondary School List, 1978

TABLE 40

K.U.C. Teaching Practice Postings, by  
School Grade compared to National Averages

School Grade	Postings as % of total	National Averages
A	45.1	7.6
B	28.4	9.7
C	20.1	16.9
D	5.7	60.0
Unregistered	0.6	14.8

## Notes:

1. No. of Schools in each Grade are from the Inspectorate Secondary School List, 1978

This policy clearly gives the trainee teachers a distorted view of the Kenyan educational system by introducing them mainly to conditions found in government A and B schools.

It is to be expected, then, that the better qualified teachers are found in the highest grade schools. In harambee schools, teachers are employed by the committee which organised the fund-raising for the initial development. There is some indication of nepotism in this procedure since those teachers are rarely trained and selection cannot always be based on qualifications and merit. In lower grade private schools conditions are generally worse. There is a high level of staff turnover and part-time teachers are more common. Salaries are lower at this level and attract applicants with often less educational experience than their pupils.<sup>1</sup>

Students also complain about the behaviour of teachers at this level. Punishment can be over severe and absenteeism is a serious problem.

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1. Pupils at Ruringu High School in Nyeri (Grade D/Private) complained that one of their mathematics teachers could not answer E.A.C.E. problems himself and often marked wrong answers correct and vice-versa. The teacher in question had not been educated beyond E.A.C.E.

There are repeated suggestions of misconduct particularly in situations involving female boarders.<sup>1</sup> At a less serious level, respondents frequently pointed out that their teachers seemed disinterested in the pupils work and disinclined to get involved in extra-curricular activities or unpaid tuition outside school hours.<sup>2</sup>

In support of these observations statistical analysis to determine significance of differences in staff qualification between school grade and location was carried out on the data supplied on the School Information Sheets. The sheets indicate the ratio of students to teacher and the percentage of trained, graduate and foreign teachers, and average results are given in Table 41.

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1. At several schools, pupils claimed that male teachers used female students in return for higher marks or money to pay school fees. In Nyeri District, it was claimed that many of the girl boarders at Kiganjo Amboni school obtained money for school fees from prostitution. Furthermore a member of staff transported the girls to and from the British Army base at Nanyuki 14 miles away in return for a commission on the takings.

At Kiriti School in Nyeri, one of the Norwegian teachers has started a domestic science course mainly to provide sex education to girls who are frequently used by the African male staff.

2. It is a common complaint that teachers canvas for paid tuition work by neglecting their job during school hours.

TABLE 41

1. Student/Teacher Ratio
2. % trained teachers
3. % foreign teachers
4. % graduates

By School Grade

Items	A	B	C	D
Student/ Teacher Ratio	22.7	26.2	28.8	27.4
% trained	97.1	84.3	55.1	36.3
% foreign	29.6	21.6	9.6	6.8
% graduates	78.6	57.2	38.5	11.4

5(iv)a Student/Teacher Ratio

Table 42 reveals that differences between school grades are insignificant with the exception of A against C.

In fact, grade D Harambee schools have some of the better scores; 10.2 for Ichichi School in Murang'a District and 17.8 for Kikuyu Township School in

Kiambu District. The worst scores were Grade D, Private; 43.6 and 46.0 for Federal High and Ruringu High respectively, both in Nyeri District. In both these schools over-crowding was clearly in evidence.

Interestingly there is a significant difference between urban and rural A schools with the urban sample having the advantage.

5(iv)b Percentage of trained teachers

This is a highly significant variable. The figure for the A sample is almost three times that of the D. All tests between grade sample scores in Table 43 were shown to be significant although the differences between location were not.

5(iv)c Percentage of foreign teachers

The results were analysed in Table 44. This variable was significant only between A-C, A-D, B-D. It is clear that A and B schools have a wide lead over C and D in this respect. In the sample of 21 A schools, 6 had over 40% foreign teachers. It should be noted that

TABLE 42

Student/Teacher Ratio, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>				
A					A-B z = 2.19
B	X				A-C z = 3.03
C	✓	X			A-D z = 2.39
D	X	X	X		B-C U = 51.5
	A	B	C	D	B-D U = 126.0
					C-D U = 56.5

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	<u>Scores</u>
URBAN	A	✓		A(urban) = 20.4 A(rural) = 25.3
	B		X	B(urban) = 26.4 B(rural) = 26.0

Test Scores

A; urban-rural U = 14.0  
B; urban-rural U = 22.0

TABLE 43

Teachers - % trained; Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>				
A					A-B z = 3.14
B	✓				A-C z = 4.28
C	✓	✓			A-D z = 5.10
D	✓	✓	✓		B-C U = 7.0
	A	B	C	D	B-D U = 9.5
					C-D U = 30.0

Significant = ✓  
 Not Significant = ✗

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	B	<u>Scores</u>
	B	A	

A(urban) = 97.5  
 A(rural) = 96.7  
 B(urban) = 79.1  
 B(rural) = 86.7

Test Scores

A; urban-rural U = 52.5  
 B; urban-rural U = 19.5

TABLE 44

Teachers - % foreign; Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>				
A					A-B z = 1.09
B	X				A-C z = 3.10
C	✓	X			A-D z = 2.96
D	✓	✓	X		B-C U = 34.0
	A	B	C	D	B-D U = 55.5
					C-D U = 65.5

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

		RURAL		<u>Scores</u>
		A	B	
URBAN	A	X		A(urban) = 31.1
	B		X	A(rural) = 28.0
				B(urban) = 28.6
				B(rural) = 20.2

Test Scores

A; urban-rural U = 46.0  
B; urban-rural U = 17.0

TABLE 45

Teachers - % Graduates; Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	A	B	C	D	
A					A-B z = 3.42
B	✓				A-C z = 3.33
C	✓	X			A-D z = 5.10
D	✓	✓	✓		B-C U = 32.0
	A	B	C	D	B-D U = 0.0
					C-D U = 18.5

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	
URBAN	A	X		A(urban) = 87.1
	B		X	A(rural) = 69.4
				B(urban) = 58.4
				B(rural) = 56.7

Test Scores

A; urban-rural U = 26.5  
B; urban-rural U = 26.5

TABLE 46

Teaching Qualifications at Aided and Unaided  
Secondary Schools - 1977

	AIDED		UNAIDED	
	No.	%	No.	%
<u>TRAINED</u>				
Graduate	2,120	44.0	514	27.1
Approved	364	7.6	262	13.8
S1	1,880	39.0	591	31.2
P1	38	0.8	188	9.9
P2	-	-	-	-
P3	-	-	-	-
P4	-	-	-	-
Other	416	8.6	341	18.0
TOTAL	4,818	-	1,896	-
<u>UNTRAINED</u>				
Graduate	197	30.8	362	6.8
E.A.A.C.E.	307	48.0	3,082	57.9
E.A.C.E.	84	13.1	1,563	29.3
K.J.S.E.	-	-	-	-
C.P.E.	-	-	-	-
Other	52	8.1	320	6.0
TOTAL	640	-	5,327	-

## Notes:

1. CENTRAL BUREAU OF STATISTICS 1978  
Economic Survey 1978. Government Printer. 175
2. "Approved" = completed the equivalent of University education  
S1 = grade 1 Secondary School qualified  
P1 = grade 1 Primary School qualified

the majority of European teachers are placed in A schools and that the B sample includes foreign teachers mainly of Asian origin.

There are no urban-rural significant relationships for this index.

5(iv)d Percentage of Graduate teachers

Upon analysis of the sample scores in Table 45, this index proved to be significant in every case except B-C. The A sample contained 7 schools with scores over 90% while the D group possessed 6 schools without any graduates at all. Again, there are no significant urban-rural differences.

The tests outlined in Tables 42 to 45 show that the most significant indices are the percentages of trained and graduate teachers. The z and U scores were significant beyond the 0.01 level in almost every case. National data confirm these conclusions.

Using 1977 figures Table 46 shows that 88.3% of teachers in aided schools are trained compared to only 26.2% in unaided schools. In addition, 42.5% are graduates in government schools compared to 12.1% in harambee schools.

We have shown in the previous sections that there are considerable variations in E.A.C.E. performance

between region, school type, grade and location from the analysis of national data and the survey sample. These differences were related to the general ability of the students as measured by their C.P.E. results upon entry to secondary school. Analysis of the C.P.E. scores of the respondents at Form IV level (C.P.E. in 1975) and the highest, lowest and average C.P.E. scores of 1979 Form 1 entrants for the school sample, revealed significant differences between the grade samples. However, the overlap in scores between differently graded schools suggested that selection may not be entirely meritocratic.

Although the better qualified students enter higher graded schools, this is not a sufficient explanation of the wide differences in E.A.C.E. performance at Form IV. Other factors must be involved.

The factors considered here were school standards and facilities, and teaching staff qualifications. Significant differences between grade samples were recorded for both items. In terms of the teaching staff characteristics the most significant indices were the percentages of trained and graduate teachers.

There can be no question that a student's chances of obtaining good grades at E.A.C.E. are related to the

grade of the school he attends. In general, the higher the school grade, the better the living conditions, facilities, equipment and teaching. The national E.A.C.E. survey demonstrates that the opportunity for students at C and D schools to reach higher secondary education and University are extremely restricted.

It would be interesting to test this assertion by tracing the schools attended by current students at the University of Nairobi.

5(v) University Students Survey

In 1979 a perception study using Nairobi University students was conducted by the Department of Geography under Dr. A. Ferguson. There were a total of 1,016 respondents. In Table 47 the provinces of origin of these students are compared with the Provincial populations.

The figures reveal that a disproportionate percentage of students originate from the Nairobi, Central and Western Provinces. Central Province for example, provided 30.3% of the University students while containing only 15.0% of Kenya's total population. A statistic of 0.13 for number of students per 1,000 population is almost twice the figure, 0.072 of the nearest competitor, Western Province.

TABLE 47

Nairobi University Perception Study -  
Respondents' Province of Origin compared  
with Provincial Population

Province	No. of Students	% of Total Number	Population	% of Total Population	Students per 1,000 head of Population
Nairobi	55	5.5	863,000	5.6	0.064
Central	301	30.3	2,315,000	15.0	0.130
Rift Valley	124	12.5	3,033,000	19.7	0.041
Coast	50	5.0	1,333,000	8.6	0.038
N.E.	-	-	275,000	1.8	-
Western	141	14.2	1,947,000	12.6	0.072
Nyanza	169	17.0	3,076,000	19.9	0.055
Eastern	152	15.3	2,585,000	16.8	0.059
	992		15,427,000		

## Notes:

1. Population figures for 1979 from "Population Projections by District, 1970-1980", Kenya Statistical Digest X(3), 1972 pp 3-4, using Series A.
2. Total no. 992 = 1,016 less 22 no answers and 2 from outside Kenya.

TABLE 48Schools Attended up to E.A.C.E. by Nairobi University,Geography Department entrants 1978, by school grade

School Grade	No. of Students	% of Total	National Average
A	58	46.4	7.6
B	35	28.0	9.7
C	24	19.2	16.9
D	8	6.4	60.0
Unregistered	-	-	14.8
	125		

## Notes:

1. Figures for "National Average" from Ministry of Education Inspectorate List 1978

In addition to these regional inequalities there are significant differences between grade in terms of the schools attended by University students up to Form IV.

Applicants for entry to the Geography Department of the University of Nairobi are required to complete a registration form giving name, address and schools attended from Form I to Form IV and Form V to Form VI. A random sample of 125 forms were analysed for 1978 entry (total number 250). Table 48 shows the results in terms of the grades of the schools attended up to E.A.C.E. in comparison with the national averages for these grades.

Almost 50% of the sample were educated at Grade A schools, over 6 times the national average for this grade. Similarly, the percentage attending grade B schools is almost 3 times the Kenya average.

Furthermore, the raw data reveal that 105 (84.0%) attended government maintained schools and an additional 7 (5.6%) entered assisted institutions. Only 5 and 8 respectively, were educated at private and unaided schools, well below the national average for these types.

This brief survey confirms the assertion that students at higher grade schools have more likelihood of

reaching University than their counterparts in the lower grades. In addition, provincial inequalities have emerged in the data and the importance of attending a government maintained rather than an unaided or private school has been stressed, although this conclusion essentially duplicates the observations of differences between school grading.

It will be noticed that the survey considered the schools attended up to E.A.C.E. only. Beyond Form IV the majority of students, are placed in the limited number of government grade A and B schools which have established sixth forms. Very few take E.A.A.C.E. in private or unaided schools.

There are, however, considerable differences between schools in terms of E.A.A.C.E. performance and entrants to University and College. For example, Murang'a High School in 1978 (Grade B) placed 23 in Nairobi University of K.U.C. out of a Form VI of 57 - a success rate of 40.4%. Tumutumu Girls (B) in Nyeri achieved only 23.3%. In contrast, Ngandu Girls, probably the most respected girls school in Kenya, succeeded in placing 100% of its Form VI in University. Alliance High School which consistently produces the top E.A.A.C.E. performance in Kenya produced 101 students with 3 Principal passes and 2 subsidiary passes, a 100% success rate. All these candidates won places in Universities.

The previous sections have furnished strong evidence that there are highly significant inequalities within the Education structure. Although the secondary school grading system is designed to stream students of different abilities it is a common assumption held by educationalists in the Ministry, parents and students, that a secondary school place guarantees equality by virtue of the national E.A.C.E.

It is clear, that the enormous variations in E.A.C.E. performance are related not only to student's ability (as measured by C.P.E. at primary level) but also to the standards, facilities and teaching abilities of the staff. These variables are related to school grade. It is suggested that although there are considerable inequalities between;

1. Provinces
2. Urban/Rural Location
3. Type of School

the most important index is school grade.

In addition, if the Kenyan education system is "elitist" one would expect to find significant differences between schools of different grade and location in terms of the student's personal socio-economic, educational, cultural and familial background so that wealthier students have a better chance of attending a top graded government school, obtaining better

results at E.A.C.E. and progressing to higher education.

This assertion is tested in the following section through the analysis of questionnaire data.

6 Analysis of Questionnaire Responses

6(i) General Details

6(i)a Province of Residence

Item A1 is concerned with the address of the respondents. It became apparent that a considerable percentage of responses exhibited inconsistencies and inaccuracies except with regard to the Province of residence. Table XI gives provincial residence by school grade for all the surveyed schools and shows, as one would expect, that the majority of respondents were born in Central Province and Nairobi. If the data are analysed for urban and rural schools separately as in Table X2 and Table X3 they reveal that the urban schools take the majority of the Nairobi born students and respondents born in Western, Coast and Nyanza Provinces. Although Nairobi schools are far more cosmopolitan than those in rural areas there are still very few respondents from North-Eastern and Coast Provinces.

The most significant conclusion to be drawn from these tables is that rural schools are far less cosmopolitan than those in Nairobi. If one considers those schools

in Embu District, an average of 91.1% of respondents were born in Eastern Province. Similarly for those schools in Nyeri, Murang'a and Kiambu Districts an average of 86.3% of respondents were born in Central Province. If this statistic is calculated for individual school grades A, B, C and D, the following figures are produced; 74.9%, 97.7%, 75.1%, 92.5%. These may be compared with the equivalent figures for Nairobi schools (percentage of respondents born in Nairobi); 59.0%, 24.9%, 13.8%, 10.1%.

6(i)b Respondent's Tribe

Tables X4, X5 and X6 analyse the respondents' tribes by school grade for urban, rural and all locations. As expected the over-whelming majority of respondents are Kikuyu (61.6%) with 10.6% Embu, 7.7% Luo, 5.4% Luhya, 5.4% Kamba and 4.9% Asian and other nationalities.

It is interesting to note that in Nairobi schools, although the Kikuyu are the largest tribe, they do not number over 50% of the total except in the case of the Grade D category. There are considerable numbers of Luo and Luhya in Nairobi schools with Kamba slightly less significant and they are found mainly in the Grade B and C private schools. Very few Asian students were found outside Nairobi in this survey and none at all in C or D schools. In fact, this category

accounted for 20% of the respondents in Nairobi A schools.

In the rural sample, respondents from tribes other than Kikuyu and Embu were generally found at Grade A schools. The rural schools, particularly those of low grade, recruit students from the immediate area and often exhibit complete tribal homogeneity. For example, 85.1% of respondents in the Embu District sample belonged to the Embu tribe. Similarly, 87.6% of Central Province respondents were Kikuyu although this figure was significantly lower in Grade A schools (73.4%).

6(i)c Respondent's Age

Within the same Form IV class one may quite often find students from 16 to 19 years of age. The oldest respondent claimed to be 20 and the youngest, 15. Table X7 shows the average ages for individual schools. By comparing B and C values, the 'U' Tests in Table X8 and X9 demonstrate that the respondents in A schools are significantly younger than those in (B + C) and D schools. This is probably due to the lower level of class repetition of students in higher grade schools.

6(i)d Respondent's Sex

The total of 2126 respondents included 1,109 males (52.2%) and 1017 females (47.8%). There were differences between the school grade categories. In

the B sample as Table X10 reveals 69.3% were males whereas in the D category, 73.9% were females.

6(i)e Respondents per School

The average number of respondents per school was 34.3 but this hides the wide range of individual values from 6 in one Harambee school to 56 in a Nyeri Private School.

6(ii) Socio-Economic Background

Items B1, B2, B3, B4, B5, B6, B7, B9, B10, B11, B12, B14, B15 and B16, in the questionnaire referred to the respondent's socio-economic background.

6(ii)a Father's Household

In those cases where the 'father' was dead or absent the items referred to the 'Household Head'. Tables X11, X12 and X13 show individual school average responses to Items B1, B2 and B3, which are:-

B1 - Number of People in Father's Household

B2 - Number under 15 in Father's Household

B3 - Number of Children for which Father is paying School Fees.

For each item, the average figures for the Grade A sample are lower than B, C and D. The differences are quite considerable. For example, the Grade A average figure for B1 is 8.22, in comparison with 9.54, 9.40 and 10.48 for B, C and D respectively.

In Table X14, composite scores are calculated for the individual school average responses to B1, B2 and B3. The 'U' Test in Table X15 shows that differences between grade samples are all significant with the exception of B-C. The z scores are high enabling  $H_0$  to be rejected with a confidence of less than 0.01. Urban-rural differences were not significant for the A and B samples.

This means that the respondents in lower grade schools belong to larger families and their fathers have more responsibilities to other children. These factors will almost certainly affect the respondent's educational experience particularly when the parents of Grade D children tend to be poorer than those in higher grades (as will be shown later) and usually find it necessary to sacrifice or curtail the education of one child to pay for another's.

In coming from smaller families with parents facing smaller costs in educating their children, students at higher grade schools have an advantage over their colleagues in other grades.

Item B4 was intended to discover whether the respondent's fathers required assistance in paying school fees. The students generally found difficulty in answering the question and tended to confuse school scholarships with government bursaries. Inconsistencies and

anomalies were common. For example, government assistance is only available in maintained schools but students in private and harambee schools claimed to hold a bursary. Since the data are unreliable no analysis is given.

6(ii)b Father's Education

The level of education achieved by the respondents' fathers was measured by Items B5 and B9 which are:-

B5 - Languages spoken by Father (English, Kikuyu, Swahili, Others) fluently, partially or not at all

B9 - Academic stage reached by Father (no schooling, some primary, up to Standard VII, up to Form II, up to Form VI, and University or College)

The raw data demonstrated that Kikuyu is spoken by the Kikuyu and very few other tribes. In addition, the category 'Others' was mostly completed by respondents of tribes other than Kikuyu. Consequently, these items may not be used to analyse differences in level of education.

Table X16 shows the percentage of respondents' fathers speaking Swahili (Fluently, or not at all) by individual school averages. Table X17 gives the 'U' Test analysis of variations in fluent Swahili.

Significant differences are noted for A-D, B-D and C-D. The average figure for A, 58% compares with 49.4% for B, 45.8% for C and 20.9% for D.

The differences between urban-rural locations are not significant at the 0.01 level.

Table X18 gives the 'U' Test analysis of variations in no Swahili. Similar relationships are noted here. The differences are particularly marked between the Grade D sample and the rest. The average for this category was 47.6% compared to 8.9% for A, 14.4% for B, and 11.9% for C.

Urban-rural differences are not significant.

Table X19 shows the percentage of respondents' fathers speaking English (Fluently or not at all) by individual school averages. The 'U' Test analysis of figures for fluent English is given in Table X20. The significant relationships are identical to those for fluent Swahili. The data reveals that 55.4% speak fluent English in the grade A sample, 27.8% in B, 24.5% in C and 8.2% in D.

It is interesting to note that the urban-rural difference for the A sample is significant. The scores reveal that 82.9% are fluent in Nairobi and only 22.4% in the other Districts.

The analyses of no English values in Table X21 produce similar results.

In summary, the data suggest that the respondents' fathers proficiency in Swahili and English exhibit significant differences between school grade samples. Furthermore, as one might expect, proficiency in English is higher in Nairobi than in the rural Districts. This finding is clearly an important one. Communication in Kenya is increasingly carried out in English and Swahili as opposed to the vernacular, and for schoolchildren, ability in English is extremely important in teaching and examinations. Children at higher grade schools, particularly in Nairobi have a better chance to improve their proficiencies in these languages by learning from their parents.

The raw data relating to the respondents' fathers achieved academic levels are shown in Table X22. These figures may be used to calculate representative "composite scores" for individual schools in Table X23. A 'U' Test analysis in Table X24 reveals that there are significant differences between all grade samples, except B-C. In addition, the urban score for the A sample is significantly higher than the rural value.

These conclusions relate to all 6 categories included in the item. It was interesting to substantiate the

findings with additional analyses of individual categories.

A 'U' Test analysis of category 6 (University or College Education) in Table X25, proved identical to Table X24. The results for category 1 (No Schooling) in Table X25 were similar, with the exception of A-C which is insignificant, in this case.

Differences between grade samples are highly significant for this item. For example, 35.3% of Fathers had had University or College Education, in the A category, compared with 8.0% in B, 6.5% in C and 0.5% in D. Furthermore, the value of 35.3% averages the urban and rural sample scores which were 48.0% and 21.4% respectively.

These results for B9 endorse those of B5. Students in higher grade schools, especially in Nairobi are more likely to have fathers with a high level of education and linguistic ability. The influence of these factors upon the ability and achievement of pupils is a matter for the educational sociologists but there can be no doubt that they are considerable advantages particularly where, as we have shown, the differences between grade samples, are highly significant.

6(ii)c Father's Occupation

Item B6 referred to the respondents' fathers' occupations. Responses were categorised as follows; Professional, Skilled/Top Administration, Semi-skilled/Administration, Unskilled and Farming. Individual school percentages for these categories are shown in Table X26. Composite scores for individual schools may be calculated by assigning points to category percentages. These scores are given in Table X27 and analysed by 'U' Test in Table X28.

All relationships are significant with the exception of A-B. In addition the composite score for the urban A sample is significantly greater than the rural sample.

Clearly, respondents in higher grade schools particularly those in Nairobi are more likely to have fathers in the "Professional" and "Skilled/Top Administration" occupational categories. For example, 25.8% of the A sample fall in the top "Professional" category, compared to 4.9% in B, 2.5% in C and 1.2% in D. In contrast, 30.7% of the A sample are farmers, 39.4% in B, 49.9% in C and 62.7% in D.

It should be noted that the overwhelming majority of fathers with professional occupations live in Nairobi.

6(ii)d Father's Businesses

In Item B7 respondents were asked to indicate whether their fathers owned businesses. It is understood that affirmative answers may be recorded where the father has only a share in the operation (as in a family business) and that a "shop" business may be anything from a village duka to a Nairobi super-market.

Nevertheless, the data show that 40.6% of the A sample have businesses compared with 19.8% for B, 14.5% for C and 9.6% for D (Table X29). A 'U' Test analysis of these scores in Table X30 revealed significant relationships between A-B, A-C, A-D and B-D. In addition, the A Nairobi sample (49.6%) was significantly higher than the A rural category (30.8%)

Although it would be unwise to treat these figures with too much confidence the differences between grade samples are quite considerable and suggest that the higher the school grade the more likely it is that the respondents' fathers own businesses. Furthermore, the level of ownership is higher in Nairobi and the scales of these operations are likely to be considerably larger.

6(ii)e Father's Acreage of Land

In Item B10, respondents were asked to indicate the acreage of land owned by their fathers by checking

one of the following categories; less than 1 acre; 1-2 acres; 3-4 acres; 5-9 acres, 10-19 acres, 20-49 acres, 50-99 acres, 100 or over. Category percentages for individual schools are shown in Table X31. These values may be converted into composite scores as in Table X32. They show that the grade A sample scored 4.04, compared with 3.37 for B, 3.04 for C and 2.55 for D.

A 'U' Test analysis in Table X33 demonstrates that all relationships are significant with the exception of B-C. Urban-rural differences are not significant.

The scores indicate that, statistically speaking, students in higher grade schools have fathers who own a greater acreage of land.

6(ii)f Land Owned away from the Local Shamba

It is quite common for people to own more than one shamba, sometimes as a considerable distance from home, and often leased to tenant farmers. Item B12 required the respondents to indicate whether some other land was owned by his/her father away from the local shamba. In the case of an affirmative answer, respondents were asked to give the address of the plot (Item B13).

Table X34 shows that an average of 36.8% in the A sample possessed other land, compared to 22.6%,

17.4% and 11.4% for B, C and D respectively.

A 'U' Test analysis of these scores in Table X35 reveals significant differences between A-B, A-C, A-D and B-D. In addition, the figures for the A urban sample (average 43.8%) are significantly larger than the rural sample (average 29.1%).

Once again, the data suggest that students in higher grade schools especially in Nairobi are more likely to have fathers owning some land apart from the local shamba.

It is interesting to use the B13 data to calculate, for those owning other land, the percentages outside the District of residence. Table X36 shows that an average of 45.3% of other land is owned outside the District, for the A sample, compared to 29.7% for B, 17.7% for C and 12.8%. Analysis of these scores in Table X37 reveals significant differences between A-B, A-C, and A-D.

It is more likely that land owned outside the District of residence will be farmed by hired labourers rather than by the family and consequently these figures may be used to measure the affluence of the respondent provided it is used relatively rather than absolutely.

The findings confirm the conclusions drawn for the analysis of Item B12 data.

6(ii)g Father's Acreage of Cash Crops

In Item B14 respondents indicated the acreage of tea, coffee, vegetables and fruit cultivated by their fathers. A checklist of 9 categories was provided; None, less than 1 acre, 1-2 acres, 3-4 acres, 5-9 acres, 10-19 acres, 20-49 acres, 50-99 acres, 100 acres and over.

Table X38 shows the category percentages for individual schools, combining the acreages of all 4 cash crops.

These values have been converted to composite scores in Table X39 and produce grade sample averages of 1.97, 1.58, 1.60 and 1.41 for A, B, C and D. However, analysis of these differences in Table X40 reveals that only A-B and A-D are significant at the 0.01 level.

Furthermore, urban-rural differences are insignificant for both A and B samples.

6(ii)h Labourers Employed

In Item B11, respondents indicated the number of labourers employed by their fathers. A checklist of 6 categories was provided; None, 1 Labourer, 2 Labourers, 3-4, 5-9 and 10 or over.

Table X41 shows the category percentages for individual schools.

These values have been converted to composite scores, by the usual procedure in Table X42, producing grade sample averages of 2.52, 1.83, 1.79 and 1.54 for A, B, C and D respectively.

Table X43 gives the 'U' Test analysis of score differences. In terms of grade, A-B, A-D, B-D, C-D proved significant. In addition, the A urban sample scores (average 3.18) were significantly greater than A rural (average 1.81).

The findings suggest, once more, that students at higher grade schools, particularly in Nairobi are more likely to have fathers employing more labourers than in the lower grade samples.

6(ii)i Dairy Cows Owned

In Item B15 respondents indicated the number of dairy cows owned by their fathers. A checklist of five categories was provided; None, 1-2 cows, 3-4 cows, 5-9 cows, 10 and over.

Table X44 shows the category percentages for individual schools.

These values have been converted to composite scores in Table X45, producing grade sample averages of 2.42, 2.23, 2.10 and 1.87 for A, B, C and D respectively.

Table X46 gives the 'U' Test analysis of score differences. In terms of grade the A-C, A-D, B-D, C-D differences proved significant.

However, an unusual result in the light of previous findings is noted in the analysis of differences between the urban and rural B samples. The rural sample scores (average score 2.35) are significantly greater than the urban figures (average score 1.97).

6(ii)j Grade Cattle Owned

In Item B16 respondents indicated the number of grade cattle owned by their fathers<sup>1</sup>. Table X47 shows the average number of grade cows per father per school. Average figures for the A,B,C and D samples are 2.82, 1.68, 1.04 and 0.75 respectively.

Table X48 gives the 'U' Test analysis of score differences. In terms of grade the A-B, A-C, A-D, B-D differences proved significant.

In addition, the A urban sample scores (average 3.55) are significantly greater than the rural scores (average 2.03).

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1. "Grade" cattle refers to any commercial breed (such as Jerseys or Freisans) other than the local humped variety.

6(ii)k Summary

These items have been designed to measure the socio-economic background of the respondents. The most remarkable feature of the analyses is the consistency in results. In terms of school grade, the values and scores were higher for A than B, C, D and so on for every item. The Mann-Whitney 'U' tests revealed significant differences usually between A - (B+C), A-D and (B+C) - D.

In terms of school location, the urban A sample scores were often significantly higher than the rural A values. On the other hand, the analysis of the B sample revealed only 1 significant difference in the 14 items.

The consistency of the results and the high level of significance of differences between grade sample and location scores allows one to conclude that in moving from lower to higher grade schools particularly to grade A Nairobi schools, one may expect to encounter students who:-

- 1) are younger
- 2) belong to smaller families
- 3) have fathers with better linguistic proficiencies and educational levels
- 4) have fathers employed in higher level occupations and owing more businesses

- 5) have fathers who own more land, cash crop acreages, dairy cows and employ more labourers.

One can suggest from this that, in general A, (B+C) and D graded schools recruit their students from a substantially different strata of the socio-economic spectrum. In addition, many of the pupils studying at Nairobi A schools may be considered to be the elite in comparison with others in the total sample.

7 Educational Experience

7(i) Number of Years at Present School

Table X49 shows the average figures for individual schools which are analysed for significant differences in Table X50.

At Form IV, the maximum number of complete years at the present secondary school would be 3. The grade A sample averages 2.94 whereas the figures for B, C and D are 2.79, 2.41 and 2.37 respectively. Analysis reveals 4 significant differences in sample scores; A-C, A-D, B-C and B-D which is sufficient to confidently conclude that the level of mobility (moving from one school to another) increases down the grades.

Clearly, students who are able to complete their junior secondary education at the same school have an advantage over others who may have to move around. At schools of

lower grades, payment of fees is a major difficulty for students and this presumably accounts for the higher level of mobility.

7(ii) Total Number of Years of Education

In Item C2, respondents indicated the total number of complete years at nursery, primary and secondary schools. Average figures for individual schools are given in Table X51 and analysed for significant differences in Table X52.

The grade sample averages are 11.64, 11.38, 11.54 and 11.17 for A, B, C and D respectively. Analysis reveals 3 significant differences in sample scores; A-D, B-D and C-D.

This suggests that the respondents have had significantly less education in Grade D schools than in the Grade A, B and C samples. This is surprising in that the rate of class repetition is higher in lower grade schools (as will be shown later). Therefore, the higher figures for the A,B and C samples must be due to a greater propensity to attend nursery school at those levels.

7(iii) Number of Other Secondary Schools Attended

Table X53 shows the number of other secondary schools attended per respondent, averaged for individual schools. These scores are analysed for significant differences in Table X54.

The grade sample averages are 0.173, 0.379, 0.696, 0.883 for A, B, C and D respectively. Analysis reveals 5 significant differences in sample scores; A-B, A-C, A-D, B-C and B-D.

This shows that the level of mobility (moving from one school to another) increases as one moves from higher to lower grade schools. This confirms the findings of (iii) above.

There is in addition, a significant difference between the urban (average 0.548) and rural scores (average 0.303) of the B sample. This suggests that a greater level of mobility exists in the Nairobi schools of this grade than in the rural Districts. The probable explanation may be in the number of B private schools in the Nairobi sample which often recruit students who have just moved to the area.

7(iv) Classes Repeated

In Item C6, respondents indicated the total number of classes repeated at both primary and secondary level. The numbers repeated per respondent, averaged for individual schools are shown in Table X55 and analysed for significant differences in Table X56.

The grade sample averages are 0.318, 0.660, 0.656 and 0.741 for A, B, C and D respectively. Analysis

reveals 3 significant differences in sample scores; A-B, A-C and A-D.

Clearly, the rate of repetition decreases as one moves from lower to higher grade schools.

In addition, the urban scores (average 0.217) are significantly lower than the rural scores (average 0.428) for the grade A sample.

This figure, for the Nairobi urban respondents, of 0.217 is extremely low (1 in 5 respondents have repeated a class) and demonstrates the advantage enjoyed by this category of students in terms of both academic ability and capacity to pay school fees.

7(v) Pre-School Tuition

In Item C7, respondents indicated the level of tuition in Writing, Reading and English they received before beginning Primary school. A checklist of 3 categories was provided; 'None', 'Some' and 'A Lot'.

Tables X57, X58 and X59 show the category percentages for individual schools, for tuition in Writing, Reading and English respectively.

These values have been converted to composite scores by the usual procedure in Tables X60, X61 and X62 and then analysed for significance of score differences in Tables X63, X64 and X65.

In terms of Writing, the composite scores were 1.77, 1.72, 1.67 and 1.58 for the grade A, B, C and D samples respectively. However, analysis reveals only 2 significant differences in sample scores; A-D and B-D. In addition, there is a significant difference between the urban (average 1.90) and rural scores (average 1.64) of the A sample.

In terms of Reading, the composite scores were 1.83, 1.66, 1.68 and 1.53 for the grade A, B, C and D samples respectively. Analysis demonstrated 3 significant differences in sample scores; A-B, A-D and B-D. There are also significant differences between the urban and rural scores of the A and B samples.

In terms of English, the composite scores were 1.73, 1.54, 1.48 and 1.35 for the grade A, B, C and D samples respectively. Analysis reveals 3 significant differences in sample scores; A-D, B-D and C-D. Furthermore, a significant difference in notes between the urban ( average 1.92) and rural scores (average 1.51) of the grade A sample.

Table X66 combines the composite scores recorded for English, Writing and Reading and analysis in Table X67 reveals 3 significant differences in sample scores; A-D, B-D, C-D. In addition significant

differences in urban and rural scores are noted for both A and B grade samples.

These results conclusively demonstrate that pre-school tuition in Reading, Writing and English becomes more common as one moves from lower grade to higher grade schools and from the rural districts to Nairobi. In consequence, a student at a higher grade school, particularly in Nairobi, has an advantage over others upon starting school, and presumably this form of tuition from parents will continue throughout his school career.

7(vi) After-School Tuition

In Item C8, respondents indicated whether they received tuition outside school hours in English, Mathematics, Science, History/Geography and Languages. Table X68 gives the percentages of respondents receiving such tuition averaged over the 5 subjects and by individual school.

The figures show that the level of tuition is small over the entire sample but exhibits marked differences between grade samples. The composite scores were 9.73%, 9.05%, 8.54%, and 3.62% for the A, B, C and D samples respectively. Analysis in Table X69 reveals 3 significant differences in sample scores; A-D, B-D and C-D, showing that the level of after-

school tuition increases significantly as one moves from lower to higher grade schools.

There were no significant differences between urban and rural samples.

7(vii) Summary

These items have been designed to measure something of the educational experience of the respondents. Once again the most noticeable feature of the analyses is the consistency in results.

This consistency and the high levels of significance calculated for differences in grade sample scores allows one to conclude that in moving from lower to higher grade schools one may expect to encounter students who have:-

- 1) had more years of school education
- 2) a lower level of class repetition
- 3) a lower level of mobility (changing schools)
- 4) had more pre-school tuition in English,  
Writing and Reading
- 5) more after-school tuition.

In addition, the strong advantage of Nairobi respondents over their rural counterparts in terms of pre-school tuition should be noted.

One can suggest from this that these factors in unison must operate for the advantage of students in higher grade schools. They are more likely to have had nursery education and pre-school tuition and reached Form IV without repeating a class or moving school but with the assistance of after-school tuition in certain subjects.

8

#### Conclusion

The rapid increase in the number of unaided and low-graded private schools was due to the very early realisation that education was the key to social mobility, the passport out of the shamba and village life to skilled non-manual employment in the towns. These developments widened the access to educational opportunities at the secondary level but they were not based on the belief that education should be the right of any child - that education is an end in itself. Rather, it was founded on the promise that widened access increased the competitive chances of children to secure further education and procure lucrative employment. Therefore, the schools outside the government sector followed the traditional pattern in terms of organisation, direction and curricula and indeed, they are generally more formal than those maintained by the State.

The school's function is not seen as one of teaching skills which would be useful to the students in the immediate local economy. The entire direction of schooling is urban-oriented and skilled/professional in terms of occupational aspiration levels. The curricula is related only to the national examinations and entry to the next educational level.

As the 1972 Curriculum Report commented:-

"The highly selective opportunity channels, with C.P.E. typifying the worst features, have been allowed to distract the curriculum and even the narrow syllabuses and teaching techniques have been confined to easily tested knowledge or methods" (6)

In joining the formal system, the unaided and private schools are assuming that they can compete on equal terms with those schools maintained by the State and at the top end of the grade spectrum.

The Kenya formal education system is highly selective in nature and pyramidical in structure. As David Court put it:-

"The education system is hierarchical in structure, predominantly academic in content, formal in style, sequential in nature, exclusive in consequence, urban in orientation and international in reference" (7)

Passage from one stage to the next is controlled by national examinations and it is, therefore, assumed that the system is purely meritocratic.

This chapter, I believe, demonstrates that this assumption is invalid. There are enormous variations in school standards, facilities, teaching staff qualifications and examination results. These variations have been measured by a variety of techniques and by a number of different statistical indicators. The data show, in a remarkably consistent manner, in terms of entry to Form V - VI and University that students are far more likely to succeed in higher rather than lower graded schools and in state maintained rather than private and unaided schools.

There are some (students, parents and education-  
alists) who still argue that this system is meritocratic in that entry to each level is determined by examination performance. It is indeed true that, in general, students at higher graded schools (Forms I-IV) did obtain better C.P.E. results in Standard VII than those in lower graded schools. However, in opposition to this argument we may make four important observations.

Firstly, there is considerable overlap in the C.P.E. results obtained by students at differently graded schools so that some students, at unaided schools for example, were adequately qualified for

entry to a good government school.

Secondly, we have seen in Chapter 2 that C.P.E. is a rather poor indicator of ability and biased towards urban and middle-class students. As a rule of thumb, one may say that C.P.E. performance depends as much on familial background and the standard of school attended as intrinsic talent.

Thirdly, even if C.P.E. does measure intellectual ability accurately and there are real differences between students at the various types of secondary school we must then ask how much bigger these differences will be after four more years of education in the light of the wide variations in school standards.

Fourthly, if the system is purely meritocratic one would expect to find representative proportions of students from each level of the socio-economic spectrum in Kenyan society in each type of school. The analyses of questionnaire responses show this not to be true. The wealthy pupils are found mainly in the government and top-graded schools and the poorer in the unaided and low-graded private schools.

The data suggest that the formal school system is very far from being meritocratic. There are, in

addition to the regional and tribal variations noted in Chapter 2, structural and spatial inequalities in that, as a general rule, it is an overwhelming advantage to be born into a wealthier family with urban (Nairobi) connections. In 1974, the Kenya Government in fact agreed that the formal education's:-

"... highly selective nature and exclusive orientation towards the modern urban sector are in fundamental contradiction to the social and cultural values upheld by the Government". (8)

The harambee movement and the rapid increase in secondary school places in unaided and private schools was, it now seems, based on an unwarranted assumption that the students attending such institutions could compete for further education places on equal terms with students in the higher graded and aided schools.

The movement was originally seen, and applauded as such, as a means of promoting development, essentially in the rural areas, by training students in skills appropriate to their finding useful secondary and tertiary occupations within the local economies. This may have been what the slogan 'Harambee' is all about but for the

participants it means something else. In practice, the spirit of "self-help" becomes transformed to a tendency to "help yourself" - in this case, to the social mobility education offers.

Has the course taken, therefore, been the wrong one? Are the students at these schools wasting their time? What are the implications for economic development in Kenya? Before answering these questions it is important to examine the attitudes, aspirations, values and perceptions of Form IV students and evaluate to what extent they have been generated by formal education.

We deal with this in the following Chapter.

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They define content analysis as:-  

"... any methodical measurement applied to text for social science purposes, or, any systematic reduction of a flow of text, that is, recorded language, to a standard set of statistically manipulable symbols representing the presence, the intensity or the frequency of some characteristic relevant to social science."
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CHAPTER 5DATA ANALYSIS AND RESULTS 2 - STUDENT ASPIRATIONS,  
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CHAPTER 5DATA ANALYSIS AND RESULTS 2 - STUDENT ASPIRATIONS,  
ATTITUDES, PERCEPTIONS AND VALUES

1

Introduction

As we saw in Chapter 1, one of the most important aims of "education for development" was recognised to be the orientation of student values, aspirations and attitudes to national development policy, goals and manpower requirements.

In Chapter 2 we noted that most research in this field had concentrated on occupational preferences and rural-urban migration. It was, therefore, decided to examine these features in the context of Form IV Kenyan students and in the light of previous findings in addition to evaluating attitudes towards and perceptions of economic development, educational and employment goals and elitism in Kenyan society.

The questions we must ask ourselves in examining the data are firstly to what extent is formal school education responsible for the attitudes we are measuring; and secondly, are these attitudes and ambitions appropriate to the needs of the Kenyan economy and are the attitudinal goals of "education for development" being achieved?

The form of data analysis was described in Chapter 4 but, in some ways, the questionnaire items were

experimental and should not be treated as absolute indications of attitudinal and aspirational trends. In the first place, the data were compiled by individual school averages and do not account for internal variation and secondly, the same attitudes may be measured by different, variously worded, items. However, the results were treated relatively in comparison between school grades and locations and as such they contain some very interesting findings which are outlined in the following sections.

2 Educational Aspirations

2(i) Percentages Wishing to Continue Education

In Item D1, respondents indicated whether or not they wished to continue their school career. Table X70 shows the individual school averages. The grade sample average figures were 96.8%, 94.0%, 89.0% and 85.0% for A, B, C and D respectively.

It should be noted that these aspiration levels are highly unrealistic. Only an average of 10% of the Form IV year may expect to reach Form V. However, we have seen that students at higher grade schools have more chance than others but it is unlikely that almost 97% of grade A pupils will carry on to senior secondary education.

Table X71 analyses these scores for significant differences and indicates 3 in the matrix; A-C, A-D,

B-D. This shows that as one moves from lower to higher grade schools the percentage of students wishing to continue education increases significantly.

There are no significant differences between urban and rural scores in either the A or B samples.

2(ii) "Hoped-For" Educational Levels

In Item D2, respondents indicated the educational levels they hoped to reach. The responses were coded into 4 categories; Second Degree level (Ph.D, M.A., M.Sc., etc.), First Degree (B.A., B.Sc., B.Ed. etc.), Form VI and Form IV.

Table X72 shows the category percentages for individual schools which are converted to composite scores in Table X73.

The grade sample average figures were 3.41, 3.11, 3.06 and 2.90 for A, B, C and D respectively. Although the level of aspiration decreases, as one would expect, down the grades it should be noted that 76.9% of grade A respondents hoped to obtain a first or second degree; a highly unrealistic figure when probably no more than 5% of grade D students at Form IV continue to University.

When these scores are analysed in Table X74, significant differences are recorded between; A-B, A-C, A-D and B-D.

There are no significant differences between the urban and rural scores of the A and B samples.

The results show that the level of education "hoped-for" increases significantly as one moves from lower to higher graded schools.

However, it is important to remember that the level of aspiration is very high for the entire sample.

2(iii) "Expected" Educational Levels

In Item D3, respondents indicated the educational levels they expected to reach. The responses were coded into the same categories as D2 above.

Table X75 shows the category percentages for individual schools which are converted into composite scores, in Table X76.

Once more, the grade sample average values show the typical gradation from high to low grade; 2.75, 2.25, 2.14 and 2.11 for A, B, C and D respectively.

When these scores are analysed in Table X77, significant differences are recorded between A-B, A-C and A-D.

Differences between the urban and rural scores of the A and B samples proved not to be significant.

The results allow one to conclude with an acceptable degree of confidence, that the levels of education

"expected" by the respondents, increase significantly as one moves from the lower to higher grade samples.

However, perhaps the most significant findings are the extremely unrealistic expectations of the respondents, particularly in the lower grade schools. For example, 39.4% of the grade D respondents expected to obtain a first or second degree, compared with 36.6% for C, 45.9% for B and, 66.1% for A.

Many top grade A schools succeed in getting 80 - 100% of their Form VI into University but it is probable that, only in schools like Alliance High, Alliance Girls and Lenana School, may over 50% of the Form IV students expect to reach University.

The analysis of University of Nairobi, Department of Geography candidates in Table 48 shows that only 6.4% were educated at grade D schools up to Form IV.

This statistic may be compared with the "expected" level of 39.4%

If one divides the percentage expecting University education by the proportions entering the Department of Geography, for the grade samples, the following figures which are an indication of the differences between reality and expectation, are produced.

<u>Grade</u>	A	: 1.42
	B	: 1.64
	C	: 1.91
	D	: 6.16

A value of 1.0 would indicate that the level of expectations matches reality. It is clear from this that the expectations held by grade D students are far more unrealistic than those of their colleagues in higher grade schools.

2(iv) Summary

The consistency in findings and the high levels of significance calculated for differences in grade sample scores allow one to conclude that in moving from lower to higher grade schools an increase will be observed in the following items:-

- 1) Percentage wishing to continue Education
- 2) "Hoped-For" levels of Education
- 3) "Expected" Levels of Education

In all analyses, no significant differences between urban and rural scores were recorded for either the A or B samples.

However, it is essential to bear in mind that these aspiration levels are unrealistic for the entire sample but the differences between ambition and reality become more pronounced as one moves from higher to lower graded schools.

3 Occupational Aspirations3(i) "Hoped-For" Occupational Preferences

In Item E1, respondents indicated the occupations they would like to have, circumstances permitting, giving their first three preferences.

The occupations are scored by prestige values.<sup>(1)</sup> Table X78 shows the prestige scores averaged by individual schools for the 1st, 2nd and 3rd preferences. School average prestige scores are calculated from these 3 values and analysed by 'U' Test in Table X79.

The grade sample average composite scores were 66.3, 62.8, 60.3 and 57.8 for A, B, C and D respectively showing a decrease in the prestige levels of "hoped-for" occupational preferences as one moves from higher to lower grade schools.

Analysis reveals 5 significant differences in sample scores in the matrix; A-B, A-C, A-D, B-D and C-D.

There are, however, no significant differences between urban and rural scores for either the A or B samples.

It is possible, therefore, to suggest with confidence that "hoped-for" occupational preference prestige levels increase from low to high graded schools.

It is important, however, to point out that these prestige levels are highly unrealistic for the majority of respondents in the sample. The results are, of course, averaged for individual schools and fail to reveal the wide range of prestige scores from 78 (surgeon, professor, judge etc.) to 28 (housewife, small farmer, labourer). A grade D average score of 53.9 shows that the majority of respondents expect to be employed in administrative and skilled occupations.

The impression gained from these findings and more informal questioning is that as one moves from higher to lower graded schools particularly outside Nairobi, the students have far less knowledge of the employment market and their selling power within that market.

It is clear, that most students at Grade D schools will find themselves employed as farm labourers in the rural Districts or as shop assistants, labourers, porters and so on in Nairobi (if at all) after completing Form IV.

Their aspirations and expectations are far more unrealistic than those held by their colleagues in higher graded schools.

3(ii) "Expected" Occupational Preferences

In Item E2, respondents indicated the occupations they would expect to have, taking into account all personal circumstances (such as academic ability, educational and family background).

Table X80 shows the prestige scores averaged by individual schools for the 1st, 2nd and 3rd preferences. School average prestige scores are calculated from these 3 values and analysed by 'U' Test in Table X81.

The grade sample average composite scores were 62.8, 58.4, 56.3 and 53.9 for A, B, C and D respectively showing a decrease in the prestige levels of "expected" occupational preferences as one moves from higher to lower graded schools.

Analysis reveals 6 significant differences in the sample scores in the matrix; A-B, A-C, A-D, B-C, B-D, C-D.

There are, however, no significant differences between the urban and rural scores for either the A or B samples.

One can, therefore, suggest, with a high level of confidence, that "expected" occupational preference prestige levels increase from low to high grade schools.

3(iii) Percentages Wishing to Work in Nairobi

In Item E8, respondents indicated whether they would prefer to work in Nairobi rather than their own District. Those students who regarded Nairobi as their "home" were asked to give their preference or otherwise for Nairobi rather than any other location in Kenya.

Table X82 shows the percentages preferring Nairobi averaged for individual schools. Grade sample averages were 60.8%, 48.4%, 41.4% and 40.4% for A, B, C and D, respectively.

These scores are analysed in Table X83 which reveals only 3 significant differences in sample scores: A-C, A-D and B-D.

However, there are highly significant differences between the urban and rural scores for A and B samples. For example, 80.6% of the students in Nairobi A schools preferred Nairobi compared to 38.9% in the rural A schools.

The results allow us to suggest that:-

- 1) Students at Nairobi schools would prefer to work in Nairobi to a greater degree than those in rural schools

2) The level of preference for Nairobi is high throughout the entire sample and indicates that the city is perceived as a major centre for employment where opportunities, for administrative and skilled occupations, are far greater than in the rural areas of Central Province and Embu District.

3(iv) Visits to Nairobi

The high proportion of students across the entire sample who would prefer to work in Nairobi raises an important question. Clearly, Nairobi is perceived as an important centre of development where employment opportunities are concentrated - but upon what information is this impression based?

In Item E4, respondents indicated the number of visits they had made to Nairobi in the last 12 months.

In Table X84 the average number of visits per respondent are given by individual schools.<sup>1</sup>

Grade sample averages were 4.79, 4.50, 2.31 and 2.04 for A, B, C and D respectively.

Analysis in Table X85 reveals 3 significant differences in sample scores; A-C, A-D and B-D.

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1. Note that respondents at Nairobi schools were not required to answer this Item.

One can conclude, with some degree of confidence, that students at higher graded schools have made significantly more visits to Nairobi and presumably have more information about employment opportunities.

It is important to note that the Item was applicable only to students in rural schools and that grade sample scores (average figures 38.9%, 43.8%, 38.2% and 37.0%; A, B, C and D show no significant differences).

One may tentatively suggest that the tendency for students at higher grade schools to prefer Nairobi for employment is tempered, in the rural areas, by the greater level of information they possess about the city. It will be shown later that, although Nairobi is perceived as a centre of employment, most respondents are reluctant to take on the responsibilities and difficulties in working in the City.

One should also remember that visits to Nairobi also depend on the distance to the city. For example, the highest value in the A sample was recorded by Alliance High School - the nearest to Nairobi. (7 miles). Furthermore, the two highest values in the B sample were noted for the 2 nearest schools; Kiambu High (12 miles) and Urhiru Secondary (8 miles).

3 (v) Employment Survey

It was shown above that the occupational preferences of most students were highly unrealistic particularly in the case of respondents in lower grade schools.

It was decided to conduct a survey of job opportunities in terms of educational requirements to demonstrate how unrealistic the students' expectations are.

The national newspaper the "Standard" prints a daily appointments section. These advertisements were analysed for alternative days and months beginning 3.1.1977 to 29.11.1977 and from 3.1.1978 to 30.6.1978.<sup>1</sup>

A total of 143 sections and 2,369 appointments were considered. Individual advertisements were analysed for requirements in:-

- 1) Educational qualifications
- 2) English reading and writing ability
- 3) Relevant job experience
- 4) Other Specifications

Table 49 reveals that only 16.4% of the appointments specified educational qualifications below senior secondary education. Almost half of the advertisements required professional and commercial qualifications of degree standard and higher.

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1. In 1977 the months were January, March, May, July, September and November. In 1978, January, February, March, April, May and June were analysed.

TABLE 49

Job Opportunities Survey - Educational  
Qualifications required by Applicants

Qualifications	No. of Adverts	% of Total
Up to and including C.P.E.	42	1.8%
Up to and including E.A.C.E.	345	14.6%
Up to and including E.A.A.C.E.	231	9.8%
Professional and Commercial Qualifications	1060	44.7%
First and Second Degrees	691	29.2%
	2369	

Source:

The "Standard" January - November, 1977 and  
 January - June 1978.

McMillan Library Archive Section, Nairobi

In addition, 2040 (86.1%) required a high standard of proficiency in English reading and writing. The majority of appointments also indicated the number of years of relevant job experience required. Up to 2 years was specified in 44.5% of the advertisements, up to 3 in 33.4% and up to 5 years in 19.6%.

Furthermore, 1159 (48.9%) jobs specified additional qualifications such as specific A-levels and driving ability.

The survey quite clearly demonstrates that in order to find jobs which meet their expectations, students must be educated to at least degree level and, in addition, work for a number of years in a less prestigious position to gain experience.

It is unfortunate that most of the respondents believed that they would find employment in white-collar occupations in the towns. In general, they were aware of the strong competition for these sorts of jobs and were prepared to work towards higher qualifications. Sadly, the students were confident that they had an equal chance to progress to senior secondary education, when it is patently apparent that students at higher grade schools have a considerable advantage.

In conclusion, then, the survey has emphasised the importance of academic qualifications for professional, business and administrative occupations in Kenya. Therefore, very few of these prestigious jobs will be filled by the poorer students at lower grade schools where the facilities and standards do not provide them with an equal chance of progressing to higher educational levels.

4 Attitudes - Likert Scale and Ranking Data

4(i) Question D7

Composite scores for Likert Scale Data were calculated by assigning points to the agree-disagree scale categories as follows; "Agree Strongly" = 1, "Agree" = 2, "Undecided" = 3, "Disagree" = 4, "Disagree Strongly"

Average scores were computed for individual schools for every Item in the list.

Grade sample average scores are given in Table X86 for Items A-H in Question D7.

In the analyses for significance of difference between sample scores, Items A, C, E and F were grouped together<sup>1</sup> and composite figures calculated.

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1. All items refer to "family background"; A = "Have Wealthy Parents", C = "Have Wealthy Relatives or Friends", E = "Have Parents who have Professional or Managerial Jobs", F = "Have Parents who are important in local politics".

Table X87 shows that A, B, C scores indicate general agreement; 2.70, 2.93, 2.77 whereas the D score suggests slight disagreement; 3.09. Significant differences are recorded between A-B, A-D, B-D and C-D.

One can suggest, therefore, that agreement with these statements (that family background influences entry to top government schools) increases as one moves from low to high grade schools.

However, the average scores are not very much smaller or larger than 3.0 and consequently we may conclude that feelings on these questions are not very strong.

Item B is analysed separately.<sup>1</sup> Average scores indicate disagreement across the entire sample; 3.70, 3.93, 4.00 and 4.29 for A, B, C and D respectively.

Analysis in Table X88 reveals significant differences between A-D, B-D and C-D showing that D respondents disagree with the importance of "living in a Big Town" to a greater extent than A, B and C respondents.

In addition, there is a significant difference between the urban (average 3.34) and rural scores (average 4.09) in the A sample. Nairobi respondents, it seems,

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1. "Live in a Big Town"

regard urban location as more important than respondents in the rural areas.

For Item D, average scores, once again, indicate disagreement across the full sample; 3.86, 3.73, 3.74 and 3.99 for A, B, C and D respectively.<sup>1</sup>

Analysis in Table X89 reveals significant differences between B-D, and C-D showing that disagreement with the suggestion, that secondary school entry is influenced by tribe, is stronger in the lower grade schools.

Average scores for Item G<sup>2</sup> show a similar pattern to Item D; 3.10, 3.06, 3.00 and 3.52 for A, B, C and D respectively.

Table X90 shows significant differences between A-D, B-D and C-D showing that respondents in D schools disagree with the statement whereas A, B, and C respondents are undecided and that this difference is statistically significant.

For Item H<sup>3</sup>, average scores indicated strong disagreement across the full sample; 4.50, 4.23, 4.39 and 4.48 for A, B, C and D respectively.

- 
1. "Are a Member of a Prominent Tribe"
  2. "Were Educated at a Government Grade A school"
  3. "Are a Boy"

Analysis in Table X91 reveals no significant differences between sample scores within the matrix.

Question D7 was designed to measure attitudes towards suggestions that entry to top government schools and colleges is influenced by family, tribal and educational background, sex and urban location.

In general, the results were disappointing in that average scores indicated only slight disagreement or agreement for every Item with the exception of Item H.

It is interesting, however, that respondents at D schools disagreed that family background was an important factor. These respondents, of course, belong to much poorer families than those attending higher grade schools.

This pattern was repeated throughout the data - disagreement was much stronger for D than in A, B and C.

It is curious, that, when it is quite clear that the dice is loaded against students at D schools, the respondents repeatedly denied the importance of factors in secondary selection other than those related to academic ability.

It is impossible to say whether the students have no

knowledge of structural inequalities in the educational system or that they are denying such inequalities to defend their perceptions of the equality of opportunities. There is probably an element of truth in both of these suggestions.

4(ii) Question D10

Grade sample average scores are given in Table X92 for Items A-F in Question D10.

For Item A average scores indicate disagreement across the entire sample; 3.22, 3.31, 3.26 and 3.21 for A, B, C and D respectively.<sup>1</sup>

Table X93 shows that there are no significant differences between sample scores within the matrix.

However, there is a significant difference between the urban (average 3.44) and rural scores (average 2.98) for the A sample.

The rural respondents are undecided on this question. The urban students disagree that the landless have less chance to get better education.

Item B<sup>2</sup> average scores indicate slight agreement for A, B, C with D undecided; 2.69, 2.90, 2.96 and 3.09 for A, B, C and D respectively.

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1. "The Landless"  
2. "The less Prominent Tribes"

Table X94 reveals only one significant difference in sample scores; A-D. In addition, there are no significant differences between the urban and rural scores for either the A or B samples.

However, if the Likert Scale Scores for "Tribally Mixed" Schools are compared with those for "Mainly Kikuyu" Schools<sup>1</sup> (excluding Embu Schools) an interesting result is discovered.

The average score for the "Tribally Mixed" sample was 2.57 compared with 3.24 for "Mainly Kikuyu" schools. The differences were significant with a z score of 5.70. This shows that Kikuyu respondents denied the importance of belonging to a "Prominent Tribe" (such as the Kikuyu) while respondents from a mixture of tribes, in general, believed this factor to be of considerable influence.

Item C<sup>2</sup> average scores indicate disagreement across the entire sample; 3.60, 3.56, 3.58 and 3.77 for A, B, C and D respectively.

Table X95 reveals only 2 significant differences in sample scores, B-D and C-D.

- 
1. As defined in the "School Summary Sheet"
  2. "The Unemployed"

There is, however, a significant difference between the urban (average 3.73) and rural scores (average 3.45) for the A sample.

It is extremely difficult to suggest explanations for these findings. The most remarkable feature of the data is the general disagreement across the entire sample, and differences in the strength of disagreement are less important.

The average scores for Item D<sup>1</sup> show a similar pattern; 3.49, 3.94, 3.87 and 3.92 for A, B, C and D respectively.

Table X96 shows significant differences between the sample scores of A-B, A-C and A-D, suggesting that disagreement with this statement is considerably less among the respondents at A schools.

In addition, there is a significant difference between the urban (3.33) and rural scores (3.66) of the A sample. Curiously, this shows that respondents in the more remote areas feel more strongly that people living a long way from towns do not have less chance to get better education.

Item E<sup>2</sup> average shows, once again, the typical pattern; 3.41, 3.47, 3.56 and 3.72 for A, B, C and D respectively.

- 
1. "People Living a Long Way from Towns"
  2. "People Attending Harambee Institutions"

Table X97 shows that there are only 2 significant differences in sample scores in the matrix, A-D and B-D.

Significant differences are also noted between the urban and rural scores for the A and B samples but in opposite and contradictory directions.

Average scores for Item F<sup>1</sup> are 3.28, 3.37, 3.32 and 3.61 for A, B, C and D respectively. Table X98 reveals 3 significant differences in sample scores in the matrix; A-D, B-D and C-D showing that the respondents in D schools disagree more that poor English speakers have less chance to get better education.

There is an interesting difference between the urban (average 2.97) and rural scores (average 3.62) for the A sample. This shows, as one might expect, that the importance of speaking good English is recognised more in Nairobi than in the rural areas.

Question D10 was designed to measure attitudes towards suggestions that certain groups of people have less chance to get better education.

In general, the results were disappointing with consistent disagreement recorded for every Item.

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1. "People who do not speak English Well"

However, there were a number of interesting findings:-

- 1) Although disagreement was noted for each item and for each grade sample, respondents in lower grade schools disagreed to a greater extent. This is, a somewhat unexpected finding since students, especially at D schools, do have less chance to get better education and belong to the groups mentioned in the question.
- 2) In general, rural respondents disagreed more than their Nairobi counterparts.
- 3) Respondents in "Mainly Kikuyu" schools denied the suggestion that certain tribes have more chance to get better education whereas those in "Trially Mixed" schools agreed with the statement.
- 4) The importance of speaking good English was recognised to a greater extent by Nairobi students.

The analysis of Question D7 and D10 show that, although feelings are not very strong on these subjects, we can draw the general conclusion that the majority of students do not know of or believe there to be structural and spatial inequalities in the Kenyan educational system, and it is interesting that those students in the lower grade schools who have far

less chance in the educational market, are the strongest believers in equality of opportunity.

4(iii) Question E6

Question E6 was designed to discover which factors the respondents believed to be important in getting a "good job". Grade sample average scores for Items A-F are given in Table X99.

For Item A<sup>1</sup>, average sample scores were 1.40, 1.37, 1.37 and 1.33 for A, B, C and D respectively showing strong agreement across the sample. Table X100 reveals no significant differences between sample scores. The importance of having "better qualifications" is realised by respondents throughout the sample.

Similarly, Item B<sup>2</sup> produced sample average scores of 1.62, 1.70, 1.64 and 1.93 for A, B, C and D respectively. Table X101 reveals 3 significant differences in sample scores; A-D, B-D and C-D showing that although the importance of having "some job experience" is realised by respondents throughout the sample, the level of agreement is lower for the D respondents.

For Item C<sup>3</sup>, average sample scores were 2.36, 2.56, 2.72 and 2.78 for A, B, C and D respectively.

- 
1. "Have Better Qualifications"
  2. "Have Some Job Experience"
  3. "Speak Better English"

Table X102 reveals 3 significant differences among sample scores for A-C, A-D and B-D, showing that the value of speaking better English is realised by all respondents but particularly by those in higher grade schools.

It is interesting that the urban scores for the A and B samples show that the importance of English in getting a job is seen more by Nairobi students than those in rural schools. This finding confirms that of the conclusions based on the analysis of Item F in Question D10.

Average sample scores for Item D<sup>1</sup> show disagreement across the entire sample; 3.34, 3.50, 3.74 and 3.88 for A, B, C and D respectively.

Analysis in Table X103 shows that the level of disagreement is significantly lower amongst the higher graded schools.

Interestingly, the Nairobi students in A schools disagree less than those in the rural areas (urban average score - 3.24, rural score 3.45) showing that they feel that Nairobi (a "Big Town") has more employment opportunities. This finding confirms the results obtained from the analysis of E8 (Percentages wishing to work in Nairobi) where 80.6% of the Nairobi

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1. "Move to a Big Town"

A respondents preferred to work in the city rather than anywhere else.

Average sample scores for Item E<sup>1</sup> show that the majority of students were undecided on this question; 2.63, 3.01, 3.03 and 3.06 for A, B, C and D respectively.

Table X104 reveals 3 significant differences in sample scores, A-B, A-C, A-D suggesting that the students at A schools feel that career information is important whereas B, C and D respondents are uncertain.

Item F<sup>2</sup> average sample scores show that respondents throughout the entire sample felt that the help of friends or relatives was important in getting a job; 2.60, 2.45, 2.40 and 2.46 respectively for A, B, C and D.

Table X105 reveals no significant differences in sample scores.

The 6 items which the respondents had to consider are factors generally regarded as important in getting a job. It was encouraging that the majority of students were aware of their importance. There were very few differences between grade and location sample scores.

- 
1. "Have more Information About Jobs when Leaving School"
  2. "Have Friends or Relatives Who Will Look for A Job For You".

However, it is curious that the respondents generally felt that moving to a "Big Town" was not important. Clearly, the students identified Nairobi as the "Big Town" and it will be shown later that they prefer to find employment in the District and Provincial Centres before graduating to the City.

4(iv) Question E7

In Question E7 respondents were required to rank 6 "town characteristics" in order of importance. The scale was designed to discover which features are most important, for these students, in defining a town.

Table X106 gives the ranking scores<sup>1</sup> and composite rank values<sup>2</sup> for each individual. Item averaged for the grade samples.

Analysis of ranking scores in Tables X107, X108, X109, X110, X111 and X112 show remarkable consistency throughout the data. There are an inconsequential number of significant differences in sample scores.

The results show that respondents throughout the entire sample regard "Good Social Services" and "Many Industrial and Office Jobs" as the two most important features defining a town. It is clear

- 
1. Calculated in the same way as Likert Scale Scores.
  2. The ranking scores are ordered and assigned ranks, which are averaged for grade samples

that the respondents regard the size of the town; "At least 5,000 people" and "At least 10,000 people", as unimportant.

It is interesting to note that "towns" are seen as having many jobs, and informal discussions based on this question revealed that the majority of students hope to begin work in a small urban centre, no larger than 10,000 in population and then move to a regional town such as Nyeri or Thika.<sup>1</sup>

5 Attitudes - Open Questions

5(i) Question C4<sup>2</sup>

It is a common practice to dismiss students who fail to pay tuition and equipment and uniform fees so that they can return home and collect the required money.

This was the reason for missing school most frequently mentioned in the responses. In addition, students commonly referred to family difficulties such as the need to help at harvest time and parental decisions to curtail the education of one child so that he/she can find employment and help to pay for the education of younger brothers and sisters.<sup>3</sup>

- 
1. Respondents found this question difficult to answer and there was considerable discussion directed by the author to clear up these difficulties.
  2. "Apart from illness write down the most common reasons why you miss school"
  3. One respondent at St. Mary's Boys School, Nyeri reported that; "there was much work at home, poor parents need a help from you, lack of understanding from parents".

The levels of fee-paying difficulties were calculated for each school and the data revealed marked contrasts between the grade samples.

In the grade A sample, several groups reported no difficulties - for example, at Nairobi School, St. Mary's, Loreto High, Msongari and Kenya High. In all other Nairobi schools no figures over 20% were recorded. Significantly, higher values were noted in the rural A sample.

For example, Kagumo and Nyeri High recorded 39% and 43% respectively. Giakanja School produced the top figure for this sample with 79% mentioning fee difficulties and 55% having other problems at home.

For the Grade B sample, figures ranged from 40% to 90% with the majority over 60%. The highest values were produced by the 3 private Nairobi schools; Sharda High, City High and Raval's Secondary. Respective scores were 77%, 85% and 87%.

Values for the Grade C sample varied from 40 - 100% and 70 - 100% for the Grade D schools with the majority over 80% and all respondents mentioning some problem associated with money.

Clearly, difficulty in paying fees is an extremely common problems and is found in almost all schools. In Grade D schools virtually all students have monetary

problems and the majority have to miss school to help their parents over difficult times. In higher grade schools students miss school for only a few days and rarely whole terms. It is significant that for the grade A sample, the problem is considerably less important in Nairobi schools.

5(ii) Question D6<sup>1</sup>

Reasons given in response to this question were mostly related to the paying of fees in Form V and Form VI. Very few students considered the difficulties in obtaining a place in higher education and the need for passing E.A.C.E. with Division 1 or 2. In consequence, the majority of respondents did not give reasons associated with school facilities and teaching. In only 1 case out of 62, did a substantial number of students complain of the school's failings.<sup>2</sup>

The same problems were found in almost all schools. In the first place, the parents simply could not afford to pay more fees. Secondly, the students assistance was required on the father's farm and

- 
1. "A lot of people are unable to reach the education level they desire even if they have enough ability. For your own case, I would like you to list the reasons, in order of importance, which prevent you getting as much education as you would like."
  2. This was the private D graded "Pan-African High School" in Nairobi. In this instance, the students pointed out that they were obliged to compete only for Arts courses at A-level because their laboratory facilities were inadequate and allowed them to take only "General Science" at E.A.C.E.

thirdly the parents often pressurise their children to start earning in order to help educate the younger brothers and sisters.

It was apparent that these sorts of problems are more common for students in lower graded schools, and this pattern confirms the findings of Question C4.

Respondents in Nairobi A schools had very few difficulties of this sort with one respondent remarking that;

"I am too lazy, otherwise I am able in so far as I am intelligent and have plenty 1 of money"

The problems become more frequent among the students of lower grade schools. The following are typical responses:-

"I have no father. My mother is illiterate and doesn't have much money for school fees and all she wants is for me to get any job" 2

"My father cannot afford fees, the sooner I leave school the better to assist my father with other young children, not good to exploit 3 money since my father is nearing his grave"

"Since my father is just a farmer the less money he gets wouldn't be enough for further 4 studies"

- 
1. Loreto High, Msongari
  2. Kiambu High School, B - maintained
  3. Kennedy High School, Nairobi, C, Private
  4. St. Mary's Girls School, Nairobi, D - Private

5(iii) Question D4<sup>1</sup>

This item was designed to estimate the extent to which students realise the importance of non-personal factors in doing better in examinations such as; good teachers, adequate equipment and books, good facilities for study and, of course, parents who can pay the fees and encourage the student to continue his education.

However, in the majority of cases, students mentioned other personal factors, some of which were outside the group "ability, intelligence and hard work".

Typical responses in this category were;

"Have faith and deep concentration to the teachers"

"Pray to God for much effort"

"Good handwriting and a good pen"

"Wake up early the day of the exams"<sup>2</sup>

In terms of the non-personal category, the general impression gained from the content analysis is that students at higher grade schools, where facilities are better, are more aware of the importance of these factors.

At Giakanja School (Nyeri, grade A) 76% of the respondents referred to school facilities and 49% to

1. Your ability, intelligence and hard work are important in passing exams. Write down any other things which you think are important in passing exams. "You do better in examinations if you ...."
2. First 2 from St. Mary's Boys, Nyeri, B, Private.  
Second 2 from Nyeri Baptist School, B, Private.

the teachers. Equivalent percentages at Kenya High were 40% and 36%.

Typical responses in this category were;

"if you (1) have no external problems e.g. lack of school fees, (2) if the teachers in the school are qualified and ready to co-operate and help the students, (3) if the facilities are fine" 1

"Live in a well-off family so as to get what you like" 2

It is interesting, that during informal conversation around this question students at lower grade schools repeatedly emphasised personal factors such as diligence, courage, faith, obedience and so on and seemed surprised that examination performance is strongly associated with school grade and type.

5(iv) Question D5<sup>3</sup>

Response rates for this question were very poor, especially in the Grade C and Grade D schools. In general, rates were below 70% and sometimes below 50%. Only about 10% mentioned more than 1 subject and in Grade A schools the students seemed to be quite content with the choice of subjects already available.

- 
1. Alliance High School, Kiambu
  2. St. Mary's Boys School, Nyeri
  3. "What new subjects would you like to see taught in Kenya?"

In all schools the emphasis was on languages from Japanese to Hindi and "American" to "Scottish". It is particularly interesting that a considerable number of respondents in A schools wished to see Greek and Latin introduced into the school syllabus.

Very few technical subjects, agricultural or veterinary courses were recommended. Agriculture was a popular choice only at Kiambu High school where the compound is surrounded by lucrative coffee estates. Similarly, there was a strong interest in technical courses at Alliance High School, presumably because of the school's promotion of electronics and engineering.

It is pertinent to note that interest in agricultural, veterinary and technical courses of relevance to rural development was lowest among the respondents in rural Grade D schools who have the smallest chances of finding employment outside that sector of the economy.

5(v) Question D8<sup>1</sup>

This item was originally inserted at a half-way stage of the questionnaire to simply revive the students' interest which may have been flagging at this point.

Nevertheless, analysis of the responses reveal some interesting attitudes, despite the enormous range of answers many of which were specific to particular schools.

---

1. "What changes or improvements would you like to see in your school?"

In the first place, in almost every day school a substantial number of respondents suggested that dormitories be introduced. The students, generally feel that there would be more time to study in boarding schools, producing better results.<sup>1</sup>

Secondly, students complained about their teachers especially in the lower graded schools, particularly as regards their qualifications, but experience, devotion, ability, methods, morality and punishment were also mentioned.

Typical responses in this respect were;

"More competent personalities to be elevated to prominent positions in the administration of the school to curb falling standards."<sup>2</sup>

"I would like to see new graduate teachers - 60% of teachers in our school are the ones who have resigned their work from other schools".<sup>3</sup>

Thirdly, a common suggestion at lower grade schools was that bursaries should be operated to help needy students. One boy at Kennedy High School wrote, perhaps autobiographically, that;

"they must help poor people - some are very clever but they don't have the money to go to school".

- 
1. At Uthiru School in Kiambu District, the majority of students have to rent houses in the vicinity and cook for themselves. At Sharda High, the school is operated in 2 shifts; morning for boys and afternoon for girls.
  2. Nairobi School
  3. Langata High School, Nairobi

Furthermore, it was interesting that several students took the opportunity to point out some rather dubious practices in their schools such as bribery, corporal punishment and over-charging on tuition fees. An example of this is the following from Langata High School;

"To stop those Headmasters who like to be given money in order for him to allow a pupil to school".

5(vi) Question D9<sup>1</sup>

Content analysis of the responses to this Item showed no appreciable differences between the grade samples.

The most popular suggestions were related to improvement of teaching staff. Typical examples of this type were;

"Mostly to advise the teachers the way they should be teaching because there are some who seem as they didn't go to college" 2

"To encourage teachers not to be absent during teaching hours" 3

"To sack teachers who only want to beat us and not teach seriously." 4

- 
1. "If the Government of Kenya decided to improve the education available to this District, what would you advise it to do?"

Nairobi students were not required to answer this question.

2. Uthiru School, Kiambu
3. St. Mary's Boys School, Nyeri
4. Siakago Girls School, Embu

The students also felt strongly that the Government should take over private and harambee schools, generally not because this would improve the facilities and standards but because lower fees would be introduced as a result.

It was interesting that a significant number of students at lower grade schools suggested changes in selection policy demonstrating an awareness of inequalities within the educational system which is not evident from the Likert Scale data. For example, one student believed that schools should be;

"considering students for their hardwork and intelligence and not admitting students<sub>1</sub> through back doors"

However, in general, the responses were often specific to the school from which they were drawn and did not relate to any of the educational policies which are designed especially for rural areas such as Village Polytechnics and Adult Education Centres showing, one might suggest, the selfishness and aloofness of secondary school students, characteristics which become clear in conversation.

---

1. Kangema Secondary, Murang'a

5(vii) Question E3<sup>1</sup>

The most common dislike about rural areas is the lack of job opportunities, particularly office occupations. The students were unanimous in their distaste for shamba work. One respondent at Murang'a High did not like;

"working in the shamba, looking and caring for the livestock"

A considerable proportion of responses related to the nature of the people, their ignorance, insularity and values. Typical examples are;

"the people there don't think" <sup>2</sup>

"they are remote and the people there are <sup>3</sup> uncivilized"

The students were critical of the remoteness and communications of rural areas. They felt that the villages are poorly served by shops, health centres and social services;

"villages are too muddy and new shoes <sup>4</sup> get older before usual time"

- 
1. "Most people think that towns have far better job opportunities and living conditions than the rural areas. If you were to move from your village to a big town what sorts of things would affect your decision?  
Things I do not like about the rural areas .....  
Things I like about towns ....."
  2. Alliance School
  3. Nyeri Technical School
  4. Kangaru School, Embu

In addition, village life was seen to be hard without the opportunity to pursue leisure activities;

"some places have got no films which are very good and you're to work all day and you'll not look like a respectable person" <sup>1</sup>

In general, it is clear that the majority of students found the life in the villages hard, dirty, boring with little reward. The tone of the responses suggests that they feel this sort of life to be below a person of their educational level. Indeed a considerable number felt that, by virtue of their education, they no longer belonged in their home village.

In contrast, the towns were seen to be centres of employment with good social services, communications, shops and educational facilities. Typical responses were;

"Big salary given in towns and also dressing<sub>2</sub> smartly in offices in Town"

"most of the occupations I expect to have are<sub>3</sub> found in the towns"

"Houses are made with concrete floors"<sup>4</sup>

"Towns have good tarmac roads, a lot of<sub>5</sub> job vacancies and good schools"

- 
1. Nyeri Technical School
  2. Kamama Secondary, Murang'a
  3. Giakanja School, Nyeri
  4. Kirichu Secondary, Nyeri
  5. Federal High, Nyeri

In addition, towns are believed to have very good leisure and recreational facilities;

"You can never get bored in towns" <sup>1</sup>

"Cinemas are available in towns where to kill time and discos where you make your body fit after dancing" <sub>2</sub>

Furthermore, there are opportunities to further one's education and learn more about Kenya and world events;

"People are civilized and know a lot" <sup>3</sup>

"In fact, sometimes one becomes bright and aware of what is going on" <sub>4</sub>

"There is a lot to learn, especially if you are industrious" <sub>5</sub>

There can be very little doubt from an analysis of responses to this Item that the students prefer the towns to the villages mainly because of the better (perceived) job opportunities, social services, living conditions and leisure facilities.

5(viii) Question E5 <sup>6</sup>

Responses to this item show a good knowledge of the problem faced by the rural areas of the survey area.

The answers were codified into 12 categories and

- 
1. Kikuyu Township School, Kiambu
  2. Siakago High, Embu
  3. St. Mary's Boys School, Nyeri
  4. Nyeri High School
  5. Alliance Girls, Kiambu
  6. "if the Government of Kenya were to spend a certain amount of money on the rural development of the District what would you advise them to do? Give a list of things you would like to see done and rank them in order of importance." Nairobi respondents were not required to answer this question.

ranked according to their total frequencies of appearance.

The development of water supplies and communication filled the top 2 positions - a priority shared by the District Councils in their Development Plans.

The other 10 categories are ranked as follows; increasing the number of schools and improving the quality of facilities and teaching staff, agricultural development and advice, sewage and electricity services, medical services, industrial development, more and better supplied shops, better accommodation, development of technical centres, more adult education classes and better recreational and leisure facilities.

Although the respondents exhibited an understanding of the difficulties faced by their Districts it is significant that they placed the development of technical and agricultural education centres very low on their lists of priorities. During conversation around this topic, it was apparent that most students did not believe that their education should be orientated towards rural development and were opposed to changes in their curricula which would teach skills of more relevance to the local economy. Very few respondents felt that they had a responsibility to help

in the development of the villages by working in the rural areas. They generally believed that they could 'do their bit' by furthering their educational career and getting as good an office job as possible.

5(ix) Question E8<sup>1</sup>

For those respondents who did prefer to work in Nairobi the most important factor influencing their decision was their belief that Nairobi offers better skilled, administrative and clerical job opportunities with bigger salaries. Some typical responses were;

"In Nairobi, there are many offices and industries where you can work but there are none in my District except the common<sub>2</sub> ignorant farmers"

"I prefer to work in Nairobi because it is<sub>3</sub> better to work than nothing"

"The reason is that what I am planning to learn won't be of any use in the rural areas and the whites have influenced students that they feel town is the most suitable place to work, which is wrong. If I had learned in an agricultural institute I would very much liked to help my people improve their standard of living"<sup>4</sup>

Second in importance was Nairobi's higher standard of living, better accommodation, good social services, communications and recreational facilities. As one boy commented;

"You do not get dirty walking in the streets"<sup>5</sup>

- 
1. "Would you Prefer to Work in Nairobi rather than your own District?"
  2. Uthiru Secondary School, Kiambu
  3. Sharda High School, Nairobi
  4. Thunguma Secondary School, Nyeri
  5. Kiambu High, Kiambu

and another;

"I would be visiting many big stores or<sub>1</sub>  
cinemas at any time"

For a considerable proportion of respondents, Nairobi, quite simply, offered a change of scenery and a chance to learn and improve one's education by being in Kenya's biggest and most important city. One respondent put this attitude quite succinctly;

"I will be happy seeing many interesting<sub>2</sub>  
things which I have not seen before"

A decision to work in Nairobi is affected by both "pull" and "push" factors. It was interesting that these respondents believed that their independence would be threatened by staying in the villages and that Nairobi offered them an opportunity to break out of the close knit community relationships. Indeed the impression gained was that an educated young man or woman no longer belongs within the village community and there can be no doubt that many students regard themselves as somewhat above their "uncivilized" relatives. Two typical responses were;

"When I am in Nairobi no-one will be  
coming to disturb me because the fare<sub>3</sub>  
is a lot of money"

"If I am in my own District my relatives  
will be popping in at any time and asking<sub>4</sub>  
me to help them"

- 
1. Nyeri Baptist School
  2. Temple Road Secondary School, Nyeri
  3. Giakanja School, Nyeri
  4. Murang'a High School

For those respondents who did not wish to work in Nairobi the major deterrents were the high standard of living and the expense of accommodation, electricity, water heating, public transport and the cost of going "home". Several typical responses of this type were;

"Nairobi is very expensive but in my home I would get water free and house free" 1

"The problem of working in Nairobi makes me feel that working there is dangerous. The cost there is so high for someone who has little sisters and brothers to help after my education" 2

"the facilities are only available to people of high class" 3

Second in importance were the respondent's feelings of obligation to help their parents and relatives in the development of the local economy. Some responses were;

"I would like to serve the rural areas which seem to have been forgotten" 4

"... if I am a teacher I would like to be remembered in my District and to bring development on it" 5

"In Nairobi I have no relatives and so I can get a lot of problems before I get my salary. But in my home area I will be helped by relatives" 6

- 
1. Langata High, Nairobi
  2. Kagumo High, Nyeri
  3. Giakanja School, Nyeri
  4. Alliance High School
  5. Kangaru School, Embu
  6. Kiganjo Amboni School, Nyeri

Most of the other reasons given related to the respondent's fears of city life; congestion, crime, pollution and so on. A typical response was given by a respondent at Kagumo High School, Nyeri;

"the environment is not that good due to air pollution and of many social crimes arising around the city"

The responses show that the students are aware of the pitfalls of working in Nairobi but the attraction is stronger for an equally sized group. It should be noted that those respondents preferring to work in their own Districts would not be content with village life and hope, as remarked earlier, to find employment in the smaller District and Provincial centres.

6

#### Analysis of the Oral Questionnaire Responses

The purpose of the oral questionnaire was described in Chapter 3.

Items 1 - 3 were designed to measure perceptions of the legitimacy of the class structure and Items 4 - 7 related to the shape of the class structure.

If one refers to the list of Items in Appendix 6 it is clear that agreement with Items 1 and 2 and disagreement with Item 3 would indicate that class structure in Kenya is seen as legitimate.

Since Item 3 is orientated in the opposite direction to 1 and 2 the scoring system is reversed. Scores

are calculated in the same way as Likert Scale data and averaged for the individual schools. The diagram in Table 51 shows that scores of less than 3.0 indicate that the respondents regard the class structure as "legitimate". On the other hand, scores above 3.0 suggest that the system is seen as "illegitimate".

Item scores by individual school are given in Table 50 and then averaged over the 3 items and then according to grade and location.

Table 51 indicates that respondents at A (urban and rural), C and D (rural) schools regard the class structure as "legitimate". In contrast, students at B (urban and rural), C and D (urban) schools see the system as "illegitimate".

Turning to Items 5 to 7, it should be apparent that agreement with Items 4 and 6 and disagreement with Items 5 and 7 would suggest that Kenya's class structure is seen simply as "us" and "them" - a dichotomy rather than a hierarchy of socio-economic groups.

It was necessary to reverse the scoring of Items 5 and 7. The item scores for individual scores are shown in Table 50 and averaged over the 4 items. Composite scores by grade and location are shown in

Table 52 revealing that respondents at C and D (urban and rural) see the class structure as dichotomous, whereas students at A and B (urban and rural) regard the system as more of a hierarchy.

Julienne Ford constructed a typology of class ideologies based on this sort of analysis (see Diagram 2).

Her system defined 4 possible models:-

Model 1; "Power"	- Dichotomy, Illegitimate
Model 2; "Deference"	- Dichotomy, Legitimate
Model 3; "Instrumental Collectivist"	- Hierarchy, Illegitimate
Model 4; "Prestige"	- Hierarchy, Legitimate

The analysis of item scores in this study show that respondent's perceptions may be classified into these models as follows:-

Model 1;	C and D urban schools
Model 2;	C and D rural schools
Model 3;	B, urban and rural schools
Model 4;	A, urban and rural schools

However, it should be noted that the average scores are not significantly different from 3.0 (Undecided) - the exceptions are the A respondents (legitimacy and shape) and C and D rural respondents (legitimacy).

Therefore, it is dangerous to comment upon these findings with too much confidence.

TABLE 50

Oral Questionnaire - Item Scores, by Individual School

Grade	Location	Number	Item Scores										No. Respondents
			1	2	3	Av.	4	5	6	7	Av.		
A	R	1	2.05	2.35	2.90	2.43	3.73	3.43	3.45	3.28	3.47	40	
A	R	2	2.36	2.23	2.62	2.40	3.38	3.31	3.82	3.13	3.41	39	
A	R	3	2.11	2.31	3.22	2.55	3.53	3.36	3.50	3.39	3.45	36	
B	R	4	3.38	3.17	3.19	3.25	3.43	3.14	3.29	3.19	3.26	42	
B	R	5	3.26	3.18	3.44	3.29	3.18	3.38	3.82	3.38	3.44	34	
C	R	6	2.03	2.63	2.80	2.49	2.91	2.80	2.71	2.71	2.78	35	
C	R	7	2.53	2.53	2.81	2.62	3.26	3.02	3.14	2.98	3.10	43	
D	R	8	2.48	3.28	2.88	2.88	2.68	2.85	2.75	2.50	2.70	40	
D	R	9	2.41	2.78	2.43	2.54	2.86	2.76	2.97	2.32	2.73	37	
D	R	10	2.48	2.52	2.75	2.58	2.98	2.95	2.73	2.86	2.88	44	
A	U	11	2.19	2.25	2.88	2.44	3.94	4.00	4.03	3.25	3.81	32	
A	U	12	2.29	2.38	2.60	2.42	3.67	3.93	3.43	3.00	3.51	42	
A	U	13	2.30	2.47	3.00	2.59	3.03	3.67	2.83	3.20	3.12	30	
B	U	14	3.44	2.97	3.29	3.23	3.12	3.41	4.15	3.18	3.45	34	
B	U	15	3.38	2.98	2.96	3.11	3.19	3.53	3.02	2.94	3.17	47	
B	U	16	3.91	3.11	3.06	3.36	3.21	2.70	3.17	3.11	3.05	47	
C	U	17	2.78	3.38	3.58	3.25	3.00	2.58	2.93	3.05	2.89	40	
C	U	18	3.00	3.25	3.10	3.17	2.50	2.23	2.75	2.50	2.50	40	
D	U	19	3.21	3.07	3.00	3.09	3.12	2.79	2.72	2.84	2.87	43	
D	U	20	3.34	3.03	3.08	3.15	2.87	2.74	2.74	2.97	2.83	38	
											783		

## Notes:

- Location: R = Rural (Nyeri Schools)  
U = Urban (Nairobi Schools)
- Scoring is reversed for Items 3,5 and 7

TABLE 51

Items 1,2,3 - Perception of the Legitimacy of  
the Class Structure - Composite Scores by Grade  
and Location

Grade	Rural	Urban
A	2.46	2.48
B	3.27	3.23
C	2.56	3.21
D	2.67	3.12

Scoring System

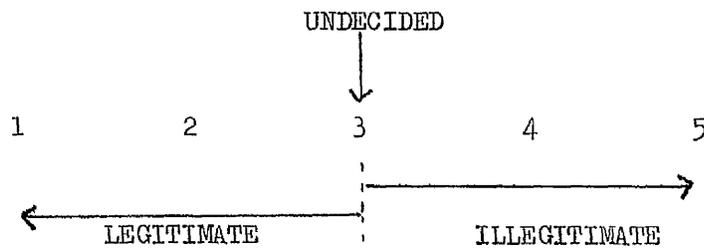
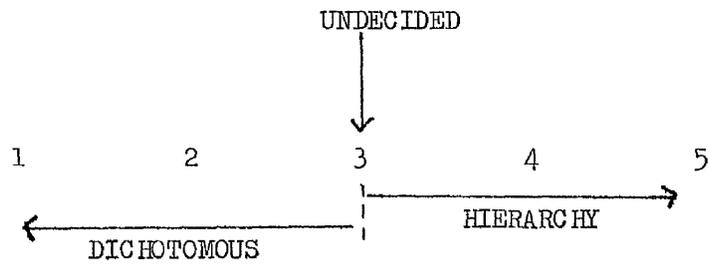


TABLE 52

Items 4,5,6,7 - Perception of the Shape of the  
Class Structure - Composite Scores by Grade and Location

Grade	Rural	Urban
A	3.44	3.50
B	3.35	3.22
C	2.94	2.70
D	2.77	2.85

Scoring System



Nevertheless, it is interesting to discover that respondents at A graded schools in both Nairobi and Nyeri see Kenya's class structure as a legitimate hierarchy when it is quite clear that they have a far greater chance to join the top stratum of that hierarchy by virtue of their education at top schools. In contrast, those students at C and D rural schools believe the system to be a legitimate hierarchy where the elite have deserved to reach their position because of ability and hard work.

This study was not intended to be a high-powered statistical analysis of class perceptions but as a simple quantitative test designed to confirm (or otherwise) observations and impressions gained from the school visits and informal conversations with the students.

Although the respondents seemed to be aware of socio-economic inequalities in Kenya the data showed that, in general, the system was not seen as an illegitimate one. Only in some C and D graded Nairobi schools did a significant number of students feel that the dice was loaded against them.

It was particularly interesting that many respondents at grade A schools pointed out that the socio-economic structure in Kenya was mirrored by the educational

system and that those at the top had achieved their position by natural ability and hard work and this model encouraged healthy competition and ensured efficient selection for higher education and high-level occupations.

7

#### Conclusion

The questionnaire data analyses and informal conversations with the school students show, quite clearly, that junior secondary education is seen, by the majority, as solely a means of securing a place in higher educational levels and eventually procuring a good skilled non-manual, preferably urban, job.

In general, the Form IV students' ambitions are unrelated to the present capacity of the Kenyan economy to fulfill them but it is important to note that the educational and occupational expectations at lower graded schools are almost as high as those at higher graded schools and, therefore, the level of aspirational realism decreases as one moves from better to poorer schools. Only a very tiny percentage of pupils at harambee and low graded private schools will obtain a place at Form V and they will be obliged to look for work with only an E.A.C.E. qualification.

As the job opportunities survey demonstrated, it will be virtually impossible for them to compete for the types of jobs they feel they deserve by virtue of their qualifications and training. Therefore, although about 50% intend to find employment in Nairobi and probably a further 40% in the smaller towns, they will, for the most part, be forced to return to their rural homes. One could say, then, that 4 years of secondary education has not provided them with any relevant skills or trades to enable them to find self or wage employment in the rural economies.

Formal education in the unaided and poor private schools is, therefore, in this sense somewhat of a waste of time for the students. The urban and middle-class orientation of this form of education encourages the students to expect skilled, non-manual jobs in the towns and, with the dice loaded against them, one may argue that the schooling is no more, sadly, than a means of exploitation.

Furthermore, there is no doubt that a Form IV student, no matter what type of school he attends, sees himself as a member of the educated elite and this has many unfortunate consequences for development in Kenya.

In general, rural students, although aware of the specific problems in their own locales, do not feel

that they have any particular role to play in the development process and would prefer to escape the rural areas entirely.

As Kenneth King put it:-

"It is quite understandable, therefore, that boys and girls who are in this sense the aristocracy of the school population should think of themselves as "big people". (2)

and as Maleche and Krystall argue:-

"Too often training and experiences in school lead students to see as the aim of education the satisfaction of feeling superior to others. Too seldom does formal education produce the desire to benefit the community or the country" (3)

Kenya has only a very small number of senior secondary and higher education institutions and competition for the very limited places is intense. Candidacy for the very slowly increasing number of salaried jobs in the modern sector is, in consequence, based almost entirely on educational qualifications.

One would, therefore, expect this system to be biased towards the top-graded government school educated and middle-class Kenyan. There are, of course, cases of poor rural students making it to a Nairobi responsible office job but such instances are rare and it is perfectly clear that their opportunities are circumscribed not so much by their

intrinsic intellectual ability but by their educational and socio-economic background.

As Maleche and Krystall comment:-

"Thus, a system ostensibly for the country as a whole, a system which consumes 33% of the national budget, is a system which seems designed for those few whose backgrounds mark them as potentially high-level manpower even before school entry" (4)

The expansion of secondary school places has not, therefore, made the system appreciably fairer or less competitive and it seems that the harambee movement and the growth of the private section have only succeeded in frustrating young students by generating aspirations which cannot be met and turning them against the rural/agricultural sector of the Economy.

In this sense, it is apparent that widened access to educational opportunity, widely praised in Kenya, is not related to Kenya's manpower needs and development priorities and in the case of the rural areas the effects have been more detrimental than beneficial.

Before suggesting and evaluating possible remedies and alternatives it is crucial to understand that the existence of inequalities and the biased education system is not, in general, recognised by the students. The analyses of the Likert Scale and Oral Questionnaire data showed this to be very much the case. As a result, the harambee and private school expansion is

likely to continue at its present remarkable pace since the demand is still there, and the government would find it difficult to alter a system which the parents and students believe in and have contributed so much to.

The question to ask is why inequalities, which are quite apparent in Kenya, are not readily identified. It is a very important observation to consider and the brief examination of class, education and politics in Chapter 6 seeks to provide some answers.

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CHAPTER 6SOCIAL CLASS, EDUCATION AND POLITICS IN KENYA1. Introduction

It has been suggested that inequalities in the Kenyan education system are related primarily to socio-economic background. The successful - the highly educated - are disproportionately drawn from the wealthier and modern sectors of society, and yet, the system's selection procedures are claimed to be entirely meritocratic.

The question we will be examining in this Chapter is whether this situation is entirely accidental or partly, a necessary consequence and objective of the highly selective and pyramidal system.

The concept of class is evaluated in the context of Africa, in general, and Kenya. It is suggested that the elite theory is no longer valid and that interpretation of Kenyan society is more appropriately based on class identification and relations.

Kenyan society, it is suggested, contains a bourgeoisie, comprised of 'comprador' and 'bureaucratic' sections, effectively alienated from a proletariat-peasantry class with a 'petty-bourgeoisie' located in the middle.

It is further argued that this class structure determines local and national politics. In particular, Kenya's one-

partyism is seen in the context of control of the party and, therefore, political decision-making, by the bourgeoisie and this arrangement guarantees the continuation of class relations.

The education system must be related to Kenya's class and political structure. Control of the system effectively ensures control of social mobility and, if our interpretation of Kenyan politics is correct, this means that the bourgeoisie is able to select candidates so that class relations remain intact and political stability is endorsed.

This analysis provides an explanation of structural inequalities in terms of selection within the highly selective and competitive educational system.

## 2. The Concept of Class in Africa

Conceptualisations of class may be of three types:-

- (1) Functionalist - social classes are regarded as identical with social strata and are differentiated in accordance with criteria selected for a given society. In consequence, this is an arbitrary definition of classes.
- (2) Weberian - relates the existence of classes to the market situation and defines class as an agglomeration of people whose life chances are similar as they are determined economically by a like ownership of property or a like level of acquisition.

- (3) Marxist - classes are related to the prevalent mode of production, the ownership of the means of production, the division of labour and the relationship between labour and capital. (1)

Until recently, the application of class theory to African situations has been limited to functionalist and Weberian conceptualisations and since the 'classes' are not necessarily seen to be economically and politically opposed these studies have not been particularly fruitful. Class analysis has been hindered, then, by the inappropriateness of classical Marxist prescriptions to Africa but the difficulty of applying Marx's theory lies not in only inherent inadequacy but in a too rigid interpretation of his guidelines and terminology.

Marx wrote mainly about the situation in industrialised and urban Victorian Britain where he saw that the formation of classes was related to the generation of capital and the employment of wage-labour. He therefore wrote that;-

"The essential condition for the existence, and for the sway of the bourgeois class, is the formation and augmentation of capital; (2) the condition for capital is wage-labour"

Marx's classes, then, were the product of the particular conditions of that time and place;-

"The owners of mere labour-power, the owners of capital, and the landlords, whose respective sources of income are wages, profit and ground-rent, in other words, wage labourers, capitalists and landlords, form the three great classes of modern society, resting upon the capitalist mode of production" (3)

Marx further recognised that awareness of these positions and realisation that they are opposed by the respective classes would lead to a form of "class awareness".

When such a group translated solidarity into collective positive action to radically transform the class structure it displayed what Marx termed, "class consciousness", becoming a "class for itself" as opposed to a "class in itself". Political struggle, was for Marx, the purest means of investigating class relations.

At first sight, therefore, it would seem that Marxist analysis and categories are inappropriate in African situations where:-

- (1) The economy is not based entirely on the capitalist mode of production but on several different forms. There is, in general, a modern, mostly urban, industrialised capitalist sector linked to a traditional rural subsistence sector via several hybrid forms where the capitalist mode has partially developed in agricultural production, processing and marketing.
- (2) The proportion of the population depending entirely on selling their labour power is very small. Most wage-labourers possess some land producing for subsistence.

- (3) Land, for the most part, is not a commodity.
- (4) Affinities between people are familial, kinship and ethnic based before socio-economic.
- (5) Politics are personalised and the concepts of individualism and meritocracy in selection are strong. These have been clearly demonstrated by Lloyd for Nigeria<sup>(4)</sup> and Levine for Ethiopia.<sup>(5)</sup>
- As a result, political power is justified and rationalised by 'noblesse oblige' and the participation of poor people in politics operates, not by collective solidarity, party formation and competition, but by clientelism and other forms of reciprocity.
- (6) Political struggle is mostly between elite sects and does not actively involve the common people.<sup>(6)</sup>

As a result, class analysis in the African context has been somewhat limited but Marx never indicated that the class relationships he studied were the only ones possible.

In Marx's writings, the central determining factor of class position is the individual's relationship to property. An owner has the power to dictate the conditions under which labour uses his property. Without working, the capitalist can expropriate the product of labour. Property, then, confers monopoly power on owners, defining social and political relationships within society.

The property system is an aspect of the economic structure and this may be understood as a reflection of its technological base. The economic system, including the methods of production, exchange and property, is dependent on the stage of economic progress of that society which, in turn, is related to the tools available for production in a particular historic time. The property system and social classes, are, therefore, a consequence of the division of labour, necessitated by the economic system.

Therefore, class conceptualisations are historically specific, and, in the analysis of class in Africa, it is not Marx's categories which are applicable but his methodology.

It is possible, then, to analyse class according to the following definition as;-

"... basic groupings of individuals in a society, opposed to one another by virtue of the role they play in the productive process, from the point of view of the relations they establish among themselves in the organisation of labour and in respect of property."<sup>(7)</sup>

Nevertheless, the study of African society has been dominated by elite theory. In 1966, for example, Lloyd argued that;-

"Classes in the classic Marxist sense of property owning and non-owning groups exist neither in traditional nor modern African society."<sup>(8)</sup>

... and that the present situation could best be understood in terms of elite dominance.

The African elites were seen to have;-

- (1) A distinct way of life - differentiated according to occupation, relationship to capital, residence, ownership of property, education and standard of living. Lloyd's 1974 study of the Yoruba demonstrated this quite clearly. <sup>(9)</sup>
- (2) A common ethically based root - but internal relations were increasingly dependent on societal background and economic objectives leading to the breakdown of traditional familial and kinship co-operation. Ties with rural and traditional life were often maintained for political and economic reasons designed to reinforce contemporary rather than traditional ends. <sup>(10)</sup>
- (3) Dominance of political and decision-making powers.
- (4) The means of organisation to protect their interests. Hanna and Hanna's 1975 study of African University students, for example, demonstrated that state control over education ensured that selection to the elite could be rigidly controlled, thereby ensuring the peaceful, efficient amalgamation of the highly educated into society. <sup>(11)</sup>
- (5) A close relationship with developed countries which tended to reinforce their privileged position. <sup>(12)</sup>

The true proletariat, on the other hand, were judged to be;-

- (1) Very small and confined mainly to isolated sectors of the Economy and certain locations.
- (2) Derived primarily from the satellite relations between the basically subsistence societies and the developed industrialised centres, rather than from a single specific relationship at the point of production.
- (3) Divided into 4 sub-divisions;- those who sell their labour-power; those who use their own and their families' labour-power to produce their livelihood from the land; the traders and the unemployed. <sup>(13)</sup>
- (4) Unorganised <sup>(14)</sup> and unconsciousness of common interests and objectives. Lloyd, in 1966, suggested that the proletariat did not see the disparity in wealth, power and prestige in society as illegitimate or rectifiable;-

"A conflict of interests between the elite, on the one hand, and the peasantry and wage-earning townsmen, on the other, would be expressed only when it were demonstrated that the privileges of the elite impeded the development of the economy and this retarded the rise in standard of living of the masses." (15)

Gutkind's 1973 study of unemployed men in Lagos between 1966 and 1971 also showed that the workers lacked leadership and organisation; their awareness of class, socialism and exploitation was minimal and their only hostility was to the very rich who paraded their wealth conspicuously. <sup>(16)</sup>

(5) Inextricably linked with the land thereby denying them true proletarian status.

In addition, class consciousness was seen to be circumscribed by the tendency for organisation and group solidarity to be based on familial and ethnic lines<sup>(17)</sup> and the extent of clientelism, personalisation, noblesse oblige and reciprocity in politics.<sup>(18)</sup>

As a result, it has been common to regard African countries as 'one-class societies' with an easily identifiable and integrated elite, on the one hand, with an amorphous 'mass' on the other.<sup>(19)</sup> However, Marxist-type class analyses have become more common recently for several reasons. In the first place, since the elite theorists wrote, over a decade has passed and the capitalist mode of production has rapidly and increasingly intruded into the traditional economy resulting in a breakdown of traditional societal relations and a rise in the wage-labour workforce. Secondly, detailed analyses of specific situations led to a disillusionment with elite theory and attempts to define and operationalise alternating class conceptualisations in the African context.

Elite theory was seen as static, a historic and non-

dialectical ruling out the possibility of class conflict. In contrast, the proponents of class analysis were able to establish a set of guidelines while defining classes specific to particular times and situations without compromising their Marxist methodology. Martin, for example, lay down three guidelines for class analysis;-

- (1) Class analysis originates in and is linked with the analysis of the mode of production.
- (2) The concept of classes appears as the result of the analysis of the productive forces and of the relations of production.
- (3) The concept of classes requires an essentially dialectical analysis in that social classes should be viewed as the expression of antagonistic relations of the components of the mode of production. (20)

Therefore, class analysis does not necessarily require the presence of a large proletariat. For example, Shivji, by defining classes as;-

"... large groups of people differing from each other by the place they occupy in the historically determined system of social production, by their relation to the means of production; by their role in the social organisation of labour, and, consequently by the dimensions and mode of acquiring the share of social wealth of which they dispose." (21)

... suggested that the focus of analysis may be directed towards any coherent, integrated, aware and ambitious

class. In his study of Tanzanian society, for example, he concentrated on, what he termed, the 'petty-bourgeoisie'.

In addition, it is now considered unnecessary to demonstrate class conflict as a conclusive indication of the existence of classes. Kitching, for example, argues that;-

"Class analysis is perhaps only the most overt and perhaps historically the most untypical form of class struggle, the dominant form in most cases being 'class suppression'. ... In a period of class suppression a crucial tactic of the dominant class is the attempt to impede the development of a combative class consciousness among the dominated. In such a situation the role of class analysis is to explain the particular form of the relationship between the dominant and the dominated which impedes the development of overt class conflict, and to consider the respective probabilities of this situation continuing or being superseded." (22)

In recent years, analyses of African society have demonstrated that 'class' is a much more viable concept than was once thought. As Campbell argued;-

"Capitalist development in Black Africa is still embryonic in the sense that past vestiges - notably the survival of structures such as ethnic solidarity - still mask new structures. However, the solidarity of groups which have emerged as a result of economic and political changes - defined by their relationship to the capitalist system - suggests that ... the concept of class is probably not misplaced." (23)

Several classes have been identified and examined as follows;-

(1) The International-Comprador Bourgeoisie

The purpose of this class is to act as intermediaries between foreign interests and local capitalism thereby extracting a commission and acting to perpetuate and reinforce neo-colonialism. Samoff and Samoff's 1976 study of the coffee-producing Moshi area of the Kilimanjaro region of Tanzania, for example, demonstrated how cash-cropping and the international nature of the market generated a local elite linked very closely to western interests. They described how local decisions came to be dominated by an elite which had key roles in both the local political system and the local economy and therefore kept control over smallholder production, marketing, new technology and access to resources such as credit, labour inputs and education which perpetuated their position. (24)

(2) The National-Bureaucratic Bourgeoisie

This class gains control over the state apparatus and uses it to allocate themselves resources and business opportunities, protect their interests and support the activities of the comprador-bourgeoisie. Rodney<sup>(25)</sup> and Martin<sup>(26)</sup> both argue that the primary function of this class is to legitimise and rationalise the relationship between

local capitalist interests and international capitalism. On the other hand, Shivji, in describing the struggle for control of the State after the Tanzanian Arusha Declaration of 1967, saw the bureaucratic bourgeoisie as an alliance of capitalist groups seeking to prevent the nationalisation of resources and de-capitalisation on a scale large enough to jeopardise their interests and operations. (27) In the same way, in his study of the Ugandan bourgeoisie, Mamdani, defined the 'State' as a class category in carrying out "necessary political, technical and ideological functions" (28) composed of capitalist groups and participating in the process of labour appropriation;-

"At the level of politics, the State unites the ruling class(es) and divides the appropriated class(es). In fact, the ruling class is precisely the class that controls the State; (29) the State is an expression of its unity."

(3) The Petty-Bourgeoisie

This class is composed of various groups from commercial traders to capitalist farmers and the lower levels of the salariat. Their intentions are to increase their role in capital formation and circulation. Although, in general, they are not directly involved in labour appropriation their interests lie not with the proletariat but with the bureaucratic bourgeoisie who control their access to business opportunities. (30) They are, therefore,

heavily involved in local level politics in attempting to guarantee State support for their activities. (31)

(4) The Rural Proletariat and Peasantry

In the 1960's the idea of an amorphous peasantry was heavily supported but rural differentiation has been rapidly increasing with the spread of capitalism and achievement-orientation into the rural areas. Traditional methods of production have been disrupted and replaced by newer forms encouraging the breakdown of social relations based on the former systems. (32) The improvement in transport and communication services, the increased availability of credit and widened access to extension services has lead to a wide disparity between those able to take advantage of capitalist farming and those who were not. Subsequent developments have only served to increase the disparity so that 3 groups are readily identifiable in rural situations;-

- (a) The rural bourgeoisie - who have accumulated large parcels of land and invested in processing and marketing activities.
- (b) The middle peasants - who have only a minor interest in commodity farming and are constantly 'squeezed' by the rich peasantry.

- (c) The poor peasants farming only for subsistence and the rural proletarians who sell their labour as tenant farmers or hired workers.

Hill's 1968 study of North Nigerian groundnut farmers, for example, revealed four categories, which may be loosely compared to those above, based on the amount and number of land and cattle owned, occupation and ownership of technical equipment.<sup>(33)</sup>

(5) The Urban Proletariat

This class is becoming more permanent in residence and traditional forms of solidarity are breaking down. Sandbrook and Cohen's 1976 compilation of studies on the subject, particularly Illife's study of Dar-es-Salaam dockworkers and Jeffries' examination of the Ghanaian trade-union movement, demonstrated that a proletarian consciousness is increasing but overt political action is rare.<sup>(34)</sup> Nevertheless, Chodak sees the urban proletariat becoming a much more organised and influential political force.<sup>(35)</sup>

(6) The Unemployed

This is not strictly a 'class' since it takes no direct part in the productive process but the aspirations of the unemployed to find work may possibly make it into a powerful political force.

Gutkind, for example, has argued that the emphasis on urban/modern sector development will only lead to a continually increasing unemployment problem as the rural economy disintegrates and the modern sector expands too slowly to accommodate all the candidates for employment. (36)

The evidence now suggests that analysis of African society in terms of class is appropriate. The classes are becoming more identifiable and disparate, their positions more entrenched with a low level of social mobility and their interests and objectives directly opposed. In addition, the importance of ethnic and familial solidarity appears to be declining. However, the level of class consciousness is low except in the cases of the national and comprador bourgeoisies. These two classes form an integrated, aware and conscious 'elite' as their advantage in this respect over other classes enables them to use their control of the State to act in a concerted manner to maintain their privileged position. Proletarian solidarity is answered, as Kitching argued, by "class suppression". As Lloyd noted in 1967;-

"... attempts of the urban workers to express their grievances through their trade unions and by utilizing the constitutional method of the strike are met with threats, force and accusation of national sabotage". (37)

Therefore, it may be simpler and more correct to look upon African societies as a bourgeois elite balanced by

a peasant-proletarian class, which may represent several groups, with a petty-bourgeoisie in the middle. As Lloyd put it;-

"... the development of new forms of social stratification in the West African states is producing an incipient class conflict - a conflict between the new elites as the mass of the population, particularly in the urban areas". (38)

Before examining the effects of societal relations on politics and education, a more detailed examination of the Kenyan class structure is given in the following section in the light of these general observations.

### 3. The Kenyan Class Structure

Although social stratification was a feature of tribal culture, class formation and divergence began under colonialism:

In the first place it was those Africans who could take advantage of the colonialists presence by trading, cash-cropping, manufacturing and entering the Civil Service who became far removed from their colleagues engaged entirely in subsistence farming in wage-labouring. However, for the most part, class development was rooted in land reform. The Swynnerton Plan of 1954-1960 generated a polarisation between rural 'haves' and 'have-nots', through;-

- (1) The change of land-ownership from customary tenure to individual freehold. This involved the enclosure and registration of existing rights.
- (2) The consolidation and introduction of exotic, high-yielding livestock and high-priced cash crops.
- (3) The registration of land titles making it easier to buy and sell land.

Therefore, the Swynnerton Plan encouraged and legitimised the concepts of private property and individual ownership of land, thereby promoting rural differentiation which has been slowly gathering pace since the early 1900's. Indeed the development of a bourgeois peasantry has been seen as a conscious policy of the Plan;-

"The final objective ... was ... essentially political; land consolidation and registration were expected to create a stable middle class (39) built around the Kikuyu loyalists."

Post-colonial Government development policy effectively encouraged social differentiation in both urban and rural areas. In the 1960's and early 1970's the emphasis was on rapid economic growth, capital-intensive industrialisation, urbanisation and the creation of a hospitable investment climate for foreign interests. This policy generated a wide rift between those involved in the modern sector and the rural-based peasantry. In addition, land became increasingly regarded as an investment and Africans in possession of substantial capital from trading, manufacturing or tertiary activities tended to accumulate large parcels

of land devoted to cash-cropping and dairying thereby squeezing out the poor rural peasantry and creating a labour force of virtually landless labourers.

Political power in Kenya became the preserve of the rich; the businessmen, Civil Servants, wealthy farmers and professionals, and Government policies tended to demonstrate this group's control over the State apparatus and reflect their particular interests. This bourgeois 'elite' may be seen as consisting of 2 groups - one, linked entirely with foreign interests and capital, and performing the role of commission agent and the other, concerned with accumulating a portfolio of business outlets and investments in the local economy. The Ndegwa Commission Report, of 1970, for example, in its recommendation that public servants should be allowed to develop business interests outside their employment, clearly demonstrates the control of the bourgeoisie over State power.

However, it is not simply a case of alienation between the elite and the proletariat, since the bourgeoisie derives its grass-roots political support from the lower strata of society. For this reason, the 'petty-bourgeoisie' in Kenya is becoming more cohesive and influential. This group of middle-level peasantry and small-scale businessmen maintains its position over the true proletariat by virtue of its involvement in capital formation and

circulation. Since this involvement depends on the continuation of government policy in terms of private enterprise and ownership of property, the petty-bourgeoisie trades its political muscle for a guarantee of support from the true bourgeoisie.

The entrenchment of class in Kenya is, therefore, partly a result of government policy. As early as 1967, Morris, for example, argued that the failure of the government to formulate a 'national strategy for distribution';-

"... would probably lead, in a decade or so, to the consolidation of a professional, managerial and political elite. Land owning, business ownership and political power would increasingly converge and the tax structure will be neither stringent enough in its application, nor sufficiently progressive in principal to dislodge (40) these accumulations of wealth and power."

Subsequent events have proved him to be right since income distribution has become more inequitable and the tax system is completely incapable of alleviating this position. Hodd, for example, produced a report in 1976 on income distribution in Kenya over the period 1963-1972. He used Lorenz curves for the concentration of income ratio and they showed Kenya to have shifted toward a more inequitable situation. (41) Nellis' analysis of the Kenya tax system also showed it to be regressive and containing a number of inequities. In addition, he suggested that the rural-urban terms of trade implied an extraction of revenue from the rural areas. (42)

It now seems that Kenyan society may be understood in terms of a system of classes. Admittedly, there is no evidence of overt class conflict and class consciousness, particularly among the proletariat, is limited. However, the various groups are becoming more integrated, entrenched and therefore easily identifiable. The differences in their relation to capital and production are pronounced and, as a result, their interests are directly opposed even though this may not be conspicuously expressed in political struggle. Therefore, it does not seem to be wrong to consider these groups as classes and research has clearly identified no less than 7 and these are described in the following sections.

3 (i) The Comprador Bourgeoisie

Foreign investment in Kenya is enormously important. The interests go beyond aid and loans to private enterprise and foreign involvement is seen in virtually every sector of the economy and is no longer essentially confined to Nairobi and Mombasa. Kirinyaga, for example, has gone so far as to term Kenya

"the bastion of imperialism in East Africa".<sup>(43)</sup>

In section 4, the concern of the post-independence Government to preserve a good relationship with international capitalism, thereby attracting investment and acquiring markets, is shown to have had crucial influence on certain policies. One of Kenya's primary objectives

has been to establish a stable political climate and silence the early demands for nationalisation and true socialism and therefore attract foreign investment. This development has quite obviously been engineered by and reinforced the position of the 'comprador bourgeoisie'.

Rana has traced the comprador bourgeoisie back to the early capitalist penetration in Kenya which transformed the class positions of the dominant social groups to satisfy its skilled labour needs. Gradually, the colonialists created an auxiliary class allied to its interests, requirements and objectives in its role as a form of commission agent. This group came to dominate, not only the professional and skilled trades but also, artisan production and land ownership. Through its monopoly of higher education, capital ownership and land accumulation, it was able to consolidate and reproduce its position and became distributed, according to wealth and influence, into the bourgeoisie and petty-bourgeoisie. (44)

There is little doubt, given subsequent developments, that the comprador element in Kenyan society gained the upper hand at independence and became allied with state power, through offering its political support derived from the rich peasantry who supported the policy of private ownership of land and capital.

The businessmen, professionals and landowners who comprise

the true comprador bourgeoisie could not maintain or defend their interests without control of government policy at both national and local levels. As a result, it is allied and supported by the bureaucratic bourgeoisie which developed in the commercial and agricultural sectors of the economy.

3(ii) The National-Bureaucratic Bourgeoisie

Since Kenyan politics has been dominated by the economic relationships with international capitalism, most research has concentrated upon the role of the comprador bourgeoisie. However, in order to understand the way in which this class is able to structure economic policy to suit its interests, we need to examine the development of the bureaucratic section of the bourgeoisie and the internal political relations with other classes in Kenya. Swainson, for example argued in 1972 that the over-emphasis on international neo-colonial relationships;-

"tends to obscure the way in which the indigenous classes reproduce themselves, and denies any concept of the relative autonomy of politics within those formations, and the particularities of different social formations." (45)

The national bourgeoisie had its origins in the 1920's and 1930's, investing in land and agriculture but its emergence as an integrated class depended on its gradual take-over of local and national government decision-making and policy implementation through the Civil

Service. This class may be separated into two subdivisions;- the higher bureaucracy, which invested mainly in modern sector property <sup>(46)</sup>, and those involved in commerce, manufacturing and land ownership.

The latter group used its State power to accumulate land and gradually monopolised the commercial sector through its early involvement in trading, control of capital distribution through legislative measures and the deliberate enforced Kenyanisation of this section of the economy.

Therefore, we see that the national bourgeoisie developed upon the rapid indigenous accumulation of merchant capital and gradually moved into the sphere of production. It is important, however, to fully appreciate the crucial relationship between investment in this direction and control of the State apparatus.

The most effective means of understanding this relationship is in relating wealth accumulation with the mode of appropriation of the surplus product. Appropriation is possible through both the process of production and circulation and the most successful are those who both employ labour which produces significant proportions of the surplus product and receive a disproportionate share of the product when it is monetised and circulated.

In this way, it is not difficult to realise that access

to the State is vital for the national bourgeoisie since it is the State which controls the circulation and monetisation of the bulk of the surplus product in Kenya. (47)

This class, therefore, involved itself in government, politics and bureaucracy and independence transformed them into;-

"... the political party bourgeoisie as a result of having control over the State machinery which then gives access by the class to internal economic opportunities, be they land or trade or even distribution and non-substantive managerial partnerships with international firms. (48)

3(iii) The Middle-Level Salarist

Leys has isolated this group as a separate class since they are distinguished by their urban residence, high level of education, pre-occupation with income and status and consciousness of their role in the State apparatus. (49) They are essentially conservative and in aspiring to higher level bureaucratic or professional positions with the resultant opportunities to invest in various businesses and the property and land markets, they find themselves in alliance with and supportive of the national bourgeoisie.

3(iv) The Petty-Bourgeoisie

In 1972 Leys saw the formation of the petty-bourgeoisie as a result of the Kenyan economy's inability to absorb all aspirant capitalists. The economy was still small and externally orientated and the financial task of

inserting individual Africans into the ownership of a significant share of its non-agricultural assets was beyond the means of the government. Consequently, the result of African business activities and of the government's assistance programme has been to foster the emergence of a distinctive stratum of African capitalists which may be known as the petty-bourgeoisie. (50)

Typically, this class uses its small profits from trading to finance land accumulation and the capital from speculation and farming is re-invested in commercial enterprises. Therefore, it is allied to the rich peasantry and foreign investment since this ensures that the supply of capital in circulation is significant enough for it to extract a profitable share. It has significant political power and uses this to guarantee opportunities in business sectors.

Leys has argued that the petty-bourgeoisie is a conscious class because business associations are clearly class-based, cutting across tribal boundaries and in the late 1960's, it concentrated, not upon securing political power but on supporting policies and government representatives in order to gain a monopoly of small-scale businesses and establish themselves as a landed gentry. (51)

It may be appropriate to consider the comprador and bureaucratic bourgeoisies, as a sort of political and

socio-economic 'elite' supported by a 'middle-class' composed of the middle-level salariat and the petty-bourgeoisie. The evidence suggests that these classes are aware of their positions and consciously act to reinforce them. They are characterised by their influence over and control of the State apparatus and their relationship with international capitalism. However, at the other end of the spectrum, the lower strata are not as well developed, integrated or conscious.

3(v) The Urban Proletariat

The development of a true urban proletariat with a proletarian consciousness has been hindered by several factors;-

- (1) Urban residence is rarely permanent and workers tend to return to their village home once or twice a year and, very often, leave the town altogether after several years. In addition, about half of the urban population's growth is accounted for by migration and the proportion of urban residents who regard the town as their 'home' is very small. However, there is some evidence that migration, at least into Nairobi, is decreasing and the population is more stable. Elkan reported in 1976 that labour turnover statistics implied that people are staying in Nairobi longer than a decade ago. There was also a greater stability in residence

and a better sex ratio. (52)

- (2) Urban workers tend to maintain their ties with the village and their land. For many migrants, town work is only a means to acquire capital with which to accumulate land or develop the original shamba. Johnson and Whitelaw reported that the 1971 I.D.S. Survey of African Households in Nairobi discovered that 88.9% of the sample of 1,140 men remitted about 20% of their wages to their family living in the rural areas. (53) It is suggested that most urban-workers have a form of "dual-class identity" and to speak of an urban proletariat is quite inaccurate. (54) As Leys put it;-

"So long as the rural areas alone provide the ultimate security for the mass of urban workers ... the development of a proletarian class-consciousness based on the conditions of urban work seems likely to be delayed and hesitant. (55)

- (3) Urban associations tend to be based primarily on ethnic and kinship affiliations and class-based solidarity is of secondary importance. Ross' 1975 study of Nairobi residents revealed that ethnicity was very important in social organisation and action. His psychometric tests showed that ethnic identification in politics and ethnicity as a basis for informal social organisation are independent of social status as defined by education level and income. However, he did point

out that class-based affiliations operated in the same way and on the same level.<sup>(56)</sup> In his 1973 study of Mathare Valley squatters in Nairobi, he went as far as to characterise the basis upon which community organisation and action took place as 'ethclass';-

"In a sense, what has developed in Kenya is a stratification system based on both class and ethnicity; that is, the elite of two ethnic groups, such as the Kikuyu or the Luo, are antagonistic, and the gap between the elite and the mass in any single ethnic group is also marked."<sup>(57)</sup>

- (4) In a sense, the urban proletariat are a privileged group compared to the rural peasantry and the unemployed so any tendency towards collective action to improve the conditions of work is tempered by their fear of jeopardising the little security they possess.
- (5) The development of class awareness and consciousness is discouraged by the lack of leadership and organisation. Sandbrook has argued that African proletarians exhibit 'trade-union' but not 'political' consciousness. In particular, class solidarity is circumscribed by political clientelism which operates generally on an ethnic basis. As Sandbrook put it;-

"To the extent that clientelism vitiates class-consciousness among the under-privileged and promotes intra-class conflict, it is a support of the inegalitarian status quo."<sup>(58)</sup>

Overt political action by the proletariat is, as a result, exceedingly rare<sup>(59)</sup> and is met with direct government suppression.

It is, perhaps, a little early to speak of a genuine urban proletariat in Kenya but it is in the embryonic stage and as urban residence becomes more permanent and political organisation more integrated and overt, class consciousness would develop considerably.

3 (vi) The Rural Proletariat

Proletarian consciousness is even less developed in the rural than the urban areas. Peasants are very rarely entirely landless, although wage employment is rapidly increasing, and they are not placed in a position of obvious conflict with the interests of other classes. There is no real landlordism, no powerful independent indigenous bourgeoisie and no radical deprived proletariat group.

Trade Union organisations are secondary to ethnic and familial affiliations and in such a situation political clientelism is particularly important.

Rural differentiation is rapidly developing in Kenya but a true proletariat with a political consciousness does not yet exist.<sup>(60)</sup>

3(vii) The Unemployed

Unemployment is, to all intents and purposes, an urban phenomenon and as much as 12 - 22% of the urban population may be unemployed.<sup>(62)</sup> However, the unemployed have no real political consciousness for several reasons;-

- (1) Unemployment for the unskilled is usually only temporary. Workers have many jobs in one year and when out of work can often find some kind of self-employment which provides a very basic living.
- (2) Ties with the village home are maintained and during a period of unemployment, workers tend to return to the shamba if possible.
- (3) The unemployed tend to be organised on a familial and ethnic basis setting up a web of social relationships in which an individual may move around gaining support, advice and information.
- (4) Unemployed organisations do not exist.

Evans has suggested that the unemployed may be considered as a true class only if there is widespread frustration, a consciousness of the links between government policy and their particular condition and there were organisations through which political discontent could be collectivised and strategically channelled.<sup>(61)</sup>

At present, it seems that only the educated unemployed

would be likely to develop a form of class consciousness because of their higher-level aspirations and their greater ability to relate unemployment to government policy.

This section was, by no means, intended to be a comprehensive and exhaustive analysis of the Kenyan class structure. It is only a brief summary of some of the evidence. However, there are some interesting conclusions.

In the first place, there is enormous inequality in Kenya and this is tending to increase rather than decrease. Secondly, political and economic power is controlled by a small 'elite' composed of a bureaucratic bourgeoisie, in control of the strata apparatus and a comprador element, allied to international capitalism. The elite is supported by a middle-class containing several groups all united in their objectives to ensure that capital formation and circulation is engendered and reinforced by government policy.

Thirdly, these classes are aware of their positions and consciously act in support of them. Fourthly, and in contrast, the disadvantaged groups have progressed little beyond 'class formation' and have not developed any form of political consciousness.

Kenyan society, then, may be regarded as a bourgeois alliance opposed to an urban and rural proletariat and peasantry. This class structure provides the framework with which to understand and analyse Kenyan politics and the relationship between education and society.

We begin, in the following section, with some general observations on African politics.

4. Politics in Africa: One-Partyism

This section is not intended to be a definitive analysis of African politics but in the light of the comments upon the Kenyan class structure and politics it is pertinent to examine one feature which is common to almost all African states - that of one-partyism.

There are several reasons behind the development of one-party political structures in Africa;-

- (1) The image of pre-colonial communalism and classlessness is well developed among African politicians. The capitalist exploiter and the unemployed did not, apparently, exist according to this view and they further argue that since political parties are part of the political-social superstructure which articulates basic economic class interests and because there are no distinct economic elements in Africa there is no justification for the existence of more than one Party.<sup>(62)</sup>

- (2) Political party rivalry is regarded as subversive to nationalism and national integration.
- (3) Party rivalry may be based on ethnic lines and thus is judged to be detrimental to national integration. This argument is propounded even if the Party is dominated by one ethnic group.
- (4) The traditional views of social stratification in African society include the ideas of meritocratic<sup>(63)</sup> selection and responsibility to the people by the selected leaders. As a result the concept of clientelism and reciprocity is well developed in African politics. This is not just simple 'noblesse oblige' and patronage but must be seen as a means of social control and perpetuation of political power for a particular group. As Flynn commented;-

"... clientelist politics ... can only be fully understood when seen as an important mechanism of class control imposed from above." (64)

Flynn went on to argue that personalisation of politics, clientelism and reciprocity generate a form of internal dependency which is a type of veiled exploitation.

The one-party state must be understood in terms of either 'elite' or 'class' domination. The dominant groups use

their monopoly of political power to promote and entrench the ideology of classlessness. As Lloyd commented;-

"The elite thus fosters the development of the 1-Party state and such a development accords well with its own image of classlessness...." (65)

The contradiction is, of course, that 1-Party results from classlessness and that 1-Partyism is required to prevent class formation. Nevertheless, 1-Party ideology is firmly rooted in both socialist and capitalist countries and one of its functions is to paper over social differentiation in African society while reinforcing the dominance of bourgeois classes in terms of socio-economic welfare and political power.

The conceptualisation of 1-Partyism is a useful framework with which to analyse Kenyan politics and the employment of education as a means of reinforcing and perpetuating the class structure.

A more detailed examination of Kenyan politics is given in the following section.

##### 5. Politics in Kenya

In order to understand Kenyan politics it is essential to fully appreciate the extent and pervasiveness of the country's relationship with international capitalism and grasp the significance of Kenya's interpretation of 'African Socialism'.

Kenya has, until recently, overtly supported development policies which aimed at generating rapid economic growth through capital-intensive industrialisation and modern sector investment. This emphasis has been so pervasive that the Kenyan economy can no longer be understood in terms of modern and traditional duality. The intrusion of capitalism into the rural agricultural sector has been extremely important and extensive.<sup>(66)</sup>

In 1970, for example, Seidman argued that the Kenyan economy could be characterised by its reliance on high technology and modern sector growth, its inequitable but strategically efficient distributional strategies and its attempts to establish a 'hospitable investment climate'.<sup>(67)</sup>

The Government, in support of these policies, argued that state ownership of resources and industry was not necessary to appeal to the national interest and that an increase in nationalisation as was happening in other 'socialist' countries such as Tanzania, would have a detrimental effect by discouraging overseas private investment and government aid, siphoning government finance off into large annual compensatory payments, and blunting the edge of the incentives for local enterprises to make the most of economic opportunities.

In 1973, a report by the Ministry of Finance and Planning reaffirmed the emphasis on growth and the encouragement of foreign enterprise and investment.<sup>(68)</sup> So great is

Kenya's involvement with overseas interests that several researchers, such as Godfrey and Langdon, have argued that the application of the dependency model in the Kenyan context is not inappropriate. (69)

The recent 1979-1983 Development Plan, despite promising to re-distribute national resources and achieve a more equitable income distribution, stated that the government would continue to concentrate on developing manufacturing industry to the detriment of the semi-monetary sector, aiming at an overall growth of G.D.P. of 6.3% p.a. It was expected that 12.7% of the capital required would be raised overseas from aid and loans. The Plan, however, did not indicate to what extent foreign enterprises, would be involved in the local private capital formation although it is apparent that it would be quite considerable. (70)

Kenya's economic and industrial policies and involvement with international capitalism can be usefully related to its interpretation of 'African Socialism' and this particular ideology gives an insight to Kenya's politics and class structure.

For President Nyerere of Tanzania, African Socialism necessarily included equitable distribution strategies and nationalisation in the rejection of capitalisation, industrialisation and modern sector growth.

In 1968, Nyerere argued that the;-

"... State must have effective control over (71)  
the principal means of production".

and one of TANU's (the ruling party) main objectives was  
to;-

"... gain effective control over the principal  
means of production and pursue policies which  
facilitate the way to collective ownership of (72)  
the resources of the country".

He explicitly rejected monetarism;-

"We made a mistake in choosing money - something  
we do not have - to be the big instrument of (73)  
our development".

and industrialisation;-

"... even if we could get the necessary  
assistance, dependence on it could interfere (74)  
with our policy of socialism".

In the same way, he believed that the focus of development  
should be on the rural-agricultural sector since urban  
development implied that;

"... the largest proportion of the loans will  
be spent in, or for, the urban areas, but the  
largest proportion of the repayment will be  
made through the efforts of the farmers"... and (75)  
... "if we are not careful we might get to the  
position where the real exploitation in Tanzania  
is that of the town dwellers exploiting the  
peasants". (76)

Clearly, Kenya's brand of 'African Socialism' bears very  
little resemblance of Nyerere's recipe. Mohiddin has  
outlined four basic differences;-

- (1) Kenya dismisses Marxism and Marxist socialism  
while Tanzania sees socialism as a necessary  
ideology.

- (2) Kenya does not support nationalisation.
- (3) Kenya welcomes private foreign investment and enterprise.
- (4) Kenya's conceptualisation of the root of under-development is related to the 'dependency' theory while Tanzania accuses 'capitalism'. (77)

Kenya's African Socialism was outlined in Sessional Paper No. 10 of 1965 which set the following objectives of development planning;-

- (1) To ensure Africanisation of the economy and public services.
- (2) To construct socialism rooted in African tradition.
- (3) To be flexible and adaptable to modern conditions, efficient in operation and not hampered by rigidity.
- (4) It must not force Kenya into a satellite relationship with other countries.
- (5) Establish state control of the use of resources but rejects the idea of state ownership of such resources.
- (6) There will be no class distinction as traditional political democracy and state control of resources will prevent the concentration of political and economic power in a few hands.
- (7) Foreign investment would play an increasing rather than a decreasing role in economic development but it should not concentrate political influence in a few domestic hands.

(8) Education would be closely controlled by the State so as to ensure uniform standards and to relate educational development to the needs of the country. (78)

Although the Paper cautions that ultimate objectives, such as political equality, social justice and human dignity, should not be sacrificed to achieve material goals more quickly, the effect has been to set up a form of 'bourgeois socialism' in which capitalism is legitimised and energetically encouraged. African Socialism cannot, therefore, at least in the Kenyan context, be confused with the type of socialism practiced in the Eastern Bloc or China. The paper explicitly rejects the application of Marxian principles to the Kenyan situation.

Marxian socialism and laissez-faire capitalism are both seen as being theoretical economic organisations designed to ensure the use of resources for the benefit of society. Both had settled on the ownership of property as the critical factor in economic organisation and had security or protection against advocated rigid systems based, in one case, on state ownership and, in the other, on private ownership.

The Paper, however, points out that ownership is not an absolute, indivisible right subject only to complete control or none. On the contrary, practical systems have

demonstrated that the resources of a society are best guided into proper uses by a whole range of sensitive controls each specifically designed for the task to be performed. Therefore, although the Paper recognises that Marx's analysis and criticism of the society of his time and place was a valid one, it infers that the situation of a few, sharp class distinctions, unfettered property rights, subsistence living standards for the masses, and exploitation of a large and growing proletariat bears little similarity to Kenya in 1965.

Under colonialism, Kenyans did not have political equality or equal economic opportunities, and their property rights were not always respected. Even so, African traditions have no parallel to the European feudal society, its class distinctions, its unrestricted property rights, and its acceptance of exploitation.

The Paper, therefore, concludes that the historical setting that inspired Marx had no counterpart in independent Kenya. In fact, the Paper goes further to say that as predictive models of what would happen to factory system societies, both Marxian socialism and laissez-faire capitalism have been failures, with the economic systems in actual use throughout the world today bearing little resemblance to either model. (79)

However, despite its ideological appeal and attractive philosophy, Kenyan African Socialism has tended to generate extensive inequality and allow the concentration of wealth and political power into a few hands. Indeed, the history of post-colonial Kenyan politics must be seen in the context of a bourgeois defence of these policies.

The struggle between K.A.N.U. (the eventual ruling party) and the splinter group K.P.U. in the late 1960's, for example, must be seen, as Leys argues, not as a tribal affair (since K.P.U. became largely a Luo party) but as a conflict between socialist and capitalist elements within the political elite. The Kenya Peoples Union was founded in March 13, 1966, in opposition to K.A.N.U. which dominated Congress. Its main leaders were Oginga Odinga who described in his book "Not Yet Uhuru" the true socialist basis of the Party<sup>(80)</sup> and Bildad Kaggia, the Union leader, who became disillusioned with K.A.N.U. because of unemployment.<sup>(81)</sup>

The basic differences between the Parties have been described by Lamb as follows;-

- (1) K.P.U. supported a policy of alignment with the Eastern Bloc and China while K.A.N.U. preferred to maintain strong relations with U.K. and U.S.A.

- (2) K.P.U. advocated nationalisation of public services and land while K.A.N.U. encouraged private enterprise in all sectors of the Economy.
- (3) K.P.U. argued for forceful take-overs of European owned land whereas K.A.N.U. advocated a policy of compensation and buying out.
- (4) K.P.U. were prepared to establish free education and medical care as promised in the 1963 K.A.N.U. manifesto whereas K.A.N.U. believed this to be financially impractical. (82)

K.P.U. was eventually banned on October 30, 1969 and several prominent members were detained without trial. Since then, Kenya has been a 1-Party state and this form of 'Democracy' suits Kenya very well because it encourages the image of classlessness promoted by the politicians. Participation of every Kenyan citizen in the politics of the country is guaranteed by the franchise supported by the Constitution. However, it is crucially important to understand that Kenya's 1-Partyism is largely constructed to perpetuate the political power of a small elite and thereby guarantee the stability and continuation of economic policies which suit the interests of this elite very well. Lamb's 1972 study of the local politics of Murang'a District showed how the political leaders fought over power, wealth and status in the first years of independence and how this then affected the distribution, not only of political power, but of economic

resources.<sup>(83)</sup> In the same way, therefore, the national policies of Kenya may be interpreted in terms of a bourgeoisie protection of its specific interests. The bourgeois control of politics may be seen in several ways and four examples are given in the following subsections.

5(i) Political Elections

Leys has termed Kenyan elections 'circulation of the elite'<sup>(84)</sup> and, at first sight, it is difficult to see how this could be the case since the franchise is guaranteed by the Constitution.

However, in the first place, participation in politics is open only to K.A.N.U. members. The criteria for K.A.N.U. membership is as follows;-

"Any Kenya citizen who is of the age of 18 or above who believes in African socialism and who accepts the objectives, policy, programme and discipline of the Union, shall be eligible for membership, provided that he or she is not a member of any political union or of any organisation whose policy is inconsistent with that of the Union".<sup>(85)</sup>

In 1971, a K.A.N.U. membership drive aimed at enrolling 1 million members and in 1978 a further effort optimistically set a target of 5 million but, by June 1978, it was clear that the figures fell well short. In addition, those who tend to stand for Parliament and succeed fall generally into the wealthier strata of society. In the 1979 campaign, the candidates were generally former politicians, civil servants, businessmen,

professionals, lecturers, teachers and students. Very few common 'wananchi' declared interest in any of the constituencies. Indeed, there is a strong feeling in Kenya that candidates should be screened and short-listed according to their qualifications, abilities and experience. The fact that this would create a Parliament of educated professionals does not seem to worry many people. If anyone is allowed to stand for Parliament (as in say, Britain) Momanyi, for example, argues that;-

"The result is that you find a bunch of useless candidates who spoil the chance of good representatives, and when they are elected they are the ones who doze and daydream during debates". (86)

In any case, the successful campaigners are those who can guarantee to influence national policies to benefit certain constituents and this form of clientelism is very important in Kenya elections. In addition, votes may be bought with beer and money. Candidates who cannot afford to advertise themselves and build up a loyal hard core in travelling through the constituency have very little chance.

Therefore the Kenyan elections tend to select representatives from a very small stratum of the community. But real power is not invested in either Parliament or the Party. As Bwana Shida put it;-

"Every primary school child with a modicum of intelligence can tell you that K.A.N.U. (87) is no more than a cultural party".

The control of political decisions is in the hands of a small group of politicians who have ruled Kenya without break since independence and the death of Jomo Kenyatta has made little change in this situation. In Kenyatta's day Kenyan politics revolved around Mzee's Court at State House, Nairobi, Mombasa and Nakuru or his farm at Gatundu. Favours were sought and given at these informal sessions and K.A.N.U., as a party, was allowed to stagnate. The close circle of prominent politicians led by Kenyatta, Moi, Njonjo, Kibaki, Wayaki, Mungai, Koinange, Ngei and Matano effectively controlled Kenya. Upon Kenyatta's death a radical reshuffling of power was predicted. As it happened, nothing of the sort took place. There were no surprises in the Presidential and National Executive Committee Elections of October 1978. Daniel arap Moi was installed as President closely supported by Charles Njonjo, the Attorney General, Mwai Kibaki, the Vice-President and Finance Minister, Robert Matano, K.A.N.U. Secretary-General, James Okeru, K.A.N.U. Chairman and Justus ole Tipis, K.A.N.U. Treasurer and Home Affairs Minister. President Moi made no immediate ministerial changes and personnel movements were confined to minor political positions, the Civil Service and the Foreign Office.

The preservation of the Kenyatta elite is not surprising in the light of our observations about Kenya's pre-

occupation with social stability and the continuation of the prevalent economic policies.

The October elections were, therefore, highly manipulated as the participation of K.A.N.U. was minimal and the wananchi were simply ignored. Ng'weno has sarcastically commented upon this, what may be termed, electoral pre-destination;-

"The day President Moi announced that he had appointed Mr. Mwai Kibaki as Vice-President, George came to see me."

"You know, I don't think it is such a good idea to run for the vice-presidency of the party, after all", he said.

"What's the matter, George?", I said. "Can't you make up your mind what to do with your political career? First you want to be president; then you want to be vice-president of the party and now you don't think that's a good idea. What would you really like to be?"

"It's not that I don't want to be President or Vice-President of K.A.N.U., but you know how things are. We are in Africa, after all, and we like a consensus and the consensus at the moment suggests that there is no point in anyone opposing Moi and Kibaki for President and Vice-President respectively. It is the African way of doing things, you know." (88)

The control of the political elite would be difficult to break through constitutional means. The National Assembly includes the President and 157 elected, nominated and ex-officio members. There is a provision for 12 members to be nominated by the President to represent special interests and ex-officio posts are effectively permanent. The Speaker, Fred Mati and

Attorney-General, Charles Njonjo cannot be electorally deposed. All other seats have to be contested except President Moi's Baringo Central Constituency and Mwai Kibaki's Othaya Constituency. This is not a provision of the Constitution but they are excluded from competition because of the "people's tremendous reverence".

In addition, there is a good deal of electioneering manipulation. One example is that of the K.A.N.U. elections in March, 1977 in Siaya District. It was claimed that the police and administration had picked the people of their choice.<sup>(89)</sup> A petition to declare the K.A.N.U. results void was refused by the High Court in April, of the same year.

Also in 1977, K.A.N.U. elections were suddenly cancelled in April because of, as Robert Matano put it, "unavoidable circumstances". Despite complaints from delegates the cancellation was never fully explained and the elections postponed indefinitely. John Keen, MP for Kajiado North, commented at the time, that the national officials had;-

"... flaunted every rule in the Constitution causing confusion and uncertainty in the minds<sup>(90)</sup> of delegates and the public at large".

The barring of former K.P.U. members from contesting elections is another example and this is considered in the following sub-section.

The 1979 election also provided many examples of manipulation. In the first place, it was common for local constituency parties to resolve to elect the current representative unopposed. Secondly, prominent politicians made numerous appeals to the people not to support 'disruptive' politicians and 'waste time' by sponsoring several candidates. The classic example was President Moi's flying visit to Narok in May when it became apparent that his Home Affairs Minister's seat was in serious jeopardy. He told a rally at Norak Stadium that;-

"... it was wrong for politicians to undermine the political careers of others". (91)

Mr. Ntimama, the promising candidate, then decided not to oppose Justos ole Tipis. President Moi, furthermore, said that in future elections K.A.N.U. would only allow candidates thought to be capable of winning a seat to contest!

In conclusion, then, it is possible to support Ley's thesis. Political power is invested in an unchanging elite and representation is generally confined to a slowly circulating bourgeoisie.

5(ii) Suppression of Dissidents and Unionists

Overt suppression of political dissidents is not as common in Kenya as in other black African states. Nevertheless it does exist. In June 1966 the

'Preservation of Public Safety Act' was pushed through the House enabling the Authorities to detain or restrict the movements of persons and to censor communications without resorting to the normal legal procedures.

The K.P.U. leaders were detained in 1969 and Oginga Odinga, for example, was not released until 1972. Detention was, of course, a feature of the Kenyatta regime and the terms of and reasons for detention were purposively vague. In May 1977, for example, the M.P. for Kitutu East, Mr. George Anyona was arrested and this led Bishop Lawi Imathiu MP to comment;-

"If this is not explained then there will be rumour mongering to the effect that his arrest was due to the causes he (92) championed in the House".

On December 12, 1978, President Moi announced the release of all political detainees. Mr. Wesonga Sijeyo, for example, the former Gem MP had been detained since October 1969 following the Kisumu 'riot' which led to the banning of K.P.U. George Anyona was released and his detention was explained to have followed his refusal to withdraw certain remarks in the House. Martin Shikuku, the former Butere MP was also released after being detained for his criticism of certain policies. Jean Seroney, the former Speaker of the National Assembly was, however, unable to account for his detention. (93)

One of the best known cases is that of Ngugi wa Thiong'o, the famous Kenyan author, whose books like 'Petals of Blood', 'A Grain of Wheat' and 'Weep Not, Child' were critical of the fact that the wananchi, particularly the forest fighters, were excluded from picking the fruits of independence. He was arrested on January 2, 1978 for producing a play, in the Kikuyu language, at Kamirithu village near Limuru on the same theme. (94)

Another well-known case is that of Josiah Kariuki, a young Kikuyu politician, who became the spokesman of the poor and landless, advocating radical change and warning of the dangers inherent in the laissez-faire attitude of the government. He was murdered in 1975 in a plot which a parliamentary committee traced to the highest quarters of the establishment. (95)

However, when President Moi released the detainees he warned that similar action would be taken against those who threatened peace, unity and stability in Kenya. The 1979 election campaign, for instance, saw continued harassment of former K.P.U. members, particularly Oginga Odinga.

Since 1974, Odinga has been attempting to re-enter politics. On March 17, 1977, for example, he announced his intention to run for the K.A.N.U. vice-presidency, (96) but, as in the 1974 General Elections, he was barred by Robert Matano, K.A.N.U. Secretary-General, since he and other K.P.U.

leaders, had not been 'cleared' by the Party. (97)

Similarly in October 1978 when Odinga indicated that he would contest the K.A.N.U. chairmanship, Matano, once more, stated that he must receive clearance. (98) The 'clearance' issue has never been fully explained and this led Mwangi Kagundah to comment;-

"Mr. Matano and many others who belonged to now defunct K.A.D.U. and A.P.P. parties did not need any 'clearance' to cross the floor to K.A.N.U. As such one cannot help to wonder why only the ex-K.P.U. leaders needed 'clearance' to contest for K.A.N.U. posts". (99)

The 'clearance' problem surfaced once more in the 1979 campaign. On June 3, 1979, Mr. Matano attempted to explain how ex-K.P.U. members could qualify for clearance;-

"... the way to go about it is for them to go right to their original respective areas and involve themselves with Harambee and development projects there. They must prove that they have truly changed at heart and that they are following Nyanyo (Kenya's new motto - Moi's 'footsteps')". (100)

Of course, on a previous occasion when Odinga attended a harambee meeting at Nairobi's Desai Memorial Hall called by the Kowak Welfare Association, he was picked up by the police. (101)

However, on June 26, K.A.N.U.'s South Nyanza branch Chairman, Mr. Okiki Amayo recommended Mr. Ochola Mak'Anyengo, a former K.P.U. leader, for clearance. (102)

Immediately afterwards, Matano claimed that such recommendation did not imply automatic clearance and that this depended on the decision of K.A.N.U. H.Q. (103)

At the same time, Matano referred to all ex-K.P.U. members as 'security risks' which lead to an angry reaction from Odinga;-

"President Kenyatta has already cleared me and in any case neither me nor any other former K.P.U. official who is wishing to contest Parliamentary elections need clearance, according to K.A.N.U.'s constitution". (104)

Despite the contradictions in K.A.N.U.'s position, clearance was never finally given to any ex-K.P.U. member and none were able to contest the 1979 elections.

In addition, trade unionism, although legitimised by the Constitution, is closely monitored by the government and union action, heavily repressed. In November 1977, for example, after 5 days of striking by the Kenya Union of Journalists and the Printing and Kindred Trades Workers Union, four top officials of the K.U.J. and two of the P.K.J.W.U. were arrested by the police in accordance with the Kenyatta Presidential Decree banning strikes. (105) The following day, 8 Union leaders and 2 of the Management Association were charged with several offences and 430 employees were sacked. (106)

Similarly, on 25 April, 1979 over 1,200 employees of hotels run by the African Safari Club struck over service charge payments. 130 were sacked but after pressure from the Union were reinstated. (107)

After several threats by hotel workers to take industrial action in March, 1979 in the Mombasa area, the Coast Province Provincial Commissioner, Eliud Mahihu banned strikes and walk-outs;-

"You are all aware that our President has recently directed that there shall be no walk-outs or strikes, especially during the period when we are getting involved in increasing employment by 10% ... There have been several walk-outs at beach hotels which have affected the country's image on tourism overseas". (108)

He also banned meetings or demonstrations unless authorised by the management and the police. He went on to say that;-

"It is important that our hotel managers shall understand that there are Government laid-down procedures for sorting out disputes and the Government guarantees the trade union movement in our Constitution". (109)

As a result, trade unionism, although widespread in Kenya, is limited in its powers. Leitner's detailed 1976 study of the Kenya Plantation and Agricultural Workers Union showed quite clearly that it had failed to significantly better the working conditions of its members and that;-

"Any trade unionist who gets involved in a trade dispute with an employer who is at the same time holding political office will find himself confronting the administration as well as the employer and the employer's association". (110)

Finally, there is suppression of literature and free speech. For example, 18 publications, ranging from the Quotations of Mao Tse-tung to Das Capital are banned in Kenya under orders of the Minister of Home Affairs. (111) These restrictions are enforced. Clement Enoit, for instance, appeared in a Busia Court in December 1977 charged with possessing several banned publications concerning Marxism such as the "Selected Works of Lenin" and "How to be a good Communist". (112)

In summary, we can see that socialist tendencies are suppressed in Kenya confirming our interpretation of Kenyan politics as control by the bourgeois elite.

5(iii) Development Orientation

In 1971 Nellis argued that the orientation of the political bourgeoisie towards development for the masses was minimal because of its pre-occupation with business, stability and corruption. (113)

Certainly, the involvement of the political leaders in business contrary to official policy lines is well known. The Ndegwa Commission Report of 1970, for example, recommended that Civil Servants should be allowed to own property and to pursue economic

activities, although it laid down certain guidelines such as loyalty, subordination of private to public interests, ethical values and a caution not to engage in business prejudicial to the name of the Civil Service.

As a result, the Civil Service has come under heavy criticism and Githegi, for example, has commented upon its;-

"... inefficiency, ineffectiveness, failure to measure up to the public expectations (114) and, worst of all, corruption".

Besides private enterprises, the political elite tend to be involved in land accumulation. In January 1979, the Assistant Minister in the Lands and Settlement Ministry, Mr. G. G. Kariuki, complained that the price of land was rising to K.5,000 Shs. per acre when the recommended level was K500 Shs. because of speculation. It was suggested that civil servants and MPs allocated themselves parcels of land. (115)

Corruption, sometimes subtle and occasionally overt, is more common in Kenya than the politicians admit.

Smuggling has been officially "eradicated" although the illicit coffee and luxury goods trade across the border with Uganda is still lively and some very important public servants have been implicated. (116) Another example is that of the 'tea shortage' in early 1979.

The Kenya Tea Development Authority blamed the shortage on smuggling but it was found that those distributors

with a good supply were associated with K.T.D.A. officials.<sup>(117)</sup> In addition, several high ranking officials personally owned private tea companies, supposedly in competition with K.T.D.A.<sup>(118)</sup>

Allegations that the Co-operative Societies are mis-managed and run to the benefit of certain officials are particularly commonplace,<sup>(119)</sup> and the relationship between the political and industrial and commercial business communities is very strong. President Moi, in fact, sacked his Assistant Minister for Tourism and Wildlife, Mr. Daniel Moss in June 1979 because he claimed that some top government officials had leaked the secrets of the year's budget to certain rich businessmen.<sup>(120)</sup>

In summary, then, it is apparent that the political elite belongs to and is closely related to the bourgeoisie and, therefore, government policies tend to reflect the economic interests and objectives of this class.

5(iv) The Attitude to the Independence Struggle

The current attitude to and interpretation of the Uhuru struggle provides a revealing insight into Kenyan politics and economic objectives.

The European view of Mau Mau was that it was a barbaric, evil, mis-guided and unco-ordinated native revolt

unrelated to any legitimate economic and social complaint.<sup>(121)</sup> On the other hand, to begin with, Kenyan politicians and, of course, the wanachi saw it as a heroic, vindicated battle to achieve rightful ends.

However, with independence achieved, the political elite carefully and gradually played down the role of Mau Mau in the Uhuru struggle while betraying one of the main objectives, that of land reform, it fought for. Knauss has interpreted this trend as an attempt to preserve cordial relations with the U.K.<sup>(122)</sup> but Buijtenhuijs goes further in seeing it as a rejection of more socialist policies which would reduce capitalist formation, circulation and hence, business opportunities and detrimentally affect relations with international capitalism.<sup>(123)</sup>

Certainly, it seems that the role of Mau Mau is now regarded to have been subversive to the Uhuru negotiations and the forest fighters completely forgotten. In May 1977, for example, a group of ex-guerillas filed a plaint seeking compensation for the part they played in the Uhuru struggle but this was rejected by Mr. Justice Muli since it "offered no course of action". The group had filed a case in 1976, turned down by the Attorney-General and, they claimed, the Attorney-General had;-

"... maliciously inferred that their activities in the Mau Mau war were rebellious and unlawful and that they were not entitled to compensation." (124)

This section has not been intended to be a comprehensive analysis of Kenyan politics but the evidence presented clearly suggests that political power is invested in the hands of the bourgeois elite. As such, government policies naturally support, perpetuate and entrench the interests of this stratum of the community. In doing so, it reinforces societal inequality and the class structure and, therefore, the fundamental pre-occupation of the political elite is to ensure economic and political stability. Without this, capital formation, circulation and foreign investment would decline and the business interests of the bourgeoisie seriously affected.

The elite, then, are primarily interested in preventing the disadvantaged groups perceiving, understanding and acting to radically alter this situation. It is for this reason that ideology and political clientelism are particularly important in Kenya.

The ideology of 'harambee' (let's all pull together) was heavily promoted during the Kenyatta regime and now wananchi are expected to follow in President Moi's 'Nyayo'. Together with the pleas for national unity and integration, these ideologies are powerful means in suggesting that wananchi have a contributory role to

play in and are the objective of development planning.<sup>(125)</sup>

In the same way, political clientelism creates the impression that wananchi may actively participate in and significantly influence political decision-making.<sup>(126)</sup>

In addition, the personalisation of politics - the charismatic leader - turns the attention of wananchi away from the vagaries of politics and class relations.<sup>(127)</sup>

The promotion of the leaders to virtual immortality casts a favourable light on their class.

However, a crucial means of preserving stability is the control of social mobility and, therefore, the education system. Recruitment to classes through the school system must take place in such a way as to preserve internal and external class characteristics and relations.

We examine this in the following section.

#### 6. Education, Students and Politics

During the colonial period it was the highly educated Africans who climbed to elite professional, administrative, business and political positions. Education is still strongly associated with social mobility.

The educated are a social elite and are drawn disproportionately from the bourgeois strata of society.

Goldthorpe's study of Makerere College in Uganda from 1922 to 1960 clearly demonstrated how the graduates created and entrenched a form of white collar elite. (128)

Several studies have further pointed out that the educated elites are not generated by purely meritocratic means but the selection procedures seem to be biased in favour of certain social groups.

Barbara Lloyd, for example, compared two types of Yoruba family; the elite and the traditional, and she suggested that the most significant differences between them were in terms of education. (129)

Hanna and Hanna's general analysis of African University students in 1975 also showed that in terms of father's occupation and education selection was biased towards the wealthier, more modern sectors of the community. (130)

The research presented in this thesis, for Form IV Kenyan students, also endorses this conclusion.

It is not, in fact, surprising that this is the case. The social elite are in a better position to ensure that their offspring receive a higher standard of education and guarantee their entry to the highest levels of the system. Lloyd summed up the West African situation as follows;-

"... education is the principal condition of success and those who have attained elite status are best able to ensure that their children will be similarly favoured. The chances that a young person will gain a secondary school or University education are directly related to the education of his parents." (131)

Similarly, Samoff and Samoff, in their 1976 study of the Moshi area of Kilimanjaro Province, Tanzania, found that the economic and political elite had disproportional access to educational facilities and;-

"Since education is the key to advancement, a class which can ensure that its children are better educated than other children can largely guarantee that it will continue to hold power." (132)

In Kenya, the education system is advertised as meritocratic and yet it exhibits marked inequalities, the most important of which are related to socio-economic background. The system is severely and rigidly hierarchical - those who reach the top could be genuinely termed the educated elite. As a result, entry to the bourgeoisie, on the basis of education, is confined, for the most part, to its own offspring. This is not to say that a poor peasant's son cannot become a top civil servant but his chances are extremely slim. In addition, the fact that the education system is highly competitive and selective tends to alienate the successful from their less fortunate colleagues. As a Kenyatta University College lecturer put it to me;-

"Form VI and University students, whatever their background, are 'apprentice bourgeoisie' "

The control of education by the State, therefore, endorses the selective system and thereby, effectively manipulates social mobility so as to perpetuate the prevailing class relations and the concentration of political power in a few hands.

This form of social control is crucial to preserve social, economic and political stability in a country such as Kenya. The last thing the government would want is a large, frustrated and critical educated cadre.

Barkan's 1975 study of students in Ghana, Tanzania and Uganda visualised them as an expectant upper-middle class rather than a presumptive ruling elite. As a result, they were more concerned with the acquisition of economic security than power. In all three countries, the students, therefore, had a relatively low propensity to engage in active politics as long as their prospects were good. (133)

Prewitt, in his 1972 analysis of Makerere College students, came to similar conclusions. He found that the modal political style was non-agitational, conservative and generally quiescent. Provided that they had realistic hopes of realising their ambitions, the students were prepared to leave politics to the incumbent politicians. (134)

For Nairobi University students, McKown went further in regarding them as a bourgeois elite with elite perceptions, values and ambitions. As a result, they were generally acquiescent and supportive of general policies. (135)

Certainly, the level of agitation and political participation at both K.U.C. and the University of Nairobi is remarkably low. Trouble with the administration is rarely political and strikes are very uncommon.

The one demonstration, occurring during the field research period, at the main Campus on March 2, 1979, was extremely peaceful. The students were commemorating the 4th anniversary of the murder of Josiah Kariuki. (136) In Kenyatta's day the police were mobilised before dawn to surround the Campus. On March 2, 1978, for example, riot police were ordered in to arrest students who were apparently stoning motorists and blocking State House Road. (137)

Although the level of politicisation of Kenyan students appears to be low, disruptive action is heavily suppressed. In April 1977, for example, 170 2nd year Commerce students were expelled for their 'criticism' and 'rioting'. The reasons were never publically made clear although a 'Standard' leader commented;-

"... if the students engage in 'sensitive' national issues there will always be conflicts between the administration and the government and the domestic problems on the campus will take a long time to solve." (138)

President Moi, has recently taken action concerning students which must be interpreted in the light of the government's pre-occupation with political stability.

In the first place, he announced in February 1979, K.A.N.U.'s intention to establish a branch at the University as this would enable students to better 'understand' current political policies and issues. (139)

Secondly, he warned that students could not expect to find high level professional, skilled employment immediately after graduation and that they should involve themselves in rural development programmes as part of their University courses. This may only be political rhetoric for the consumption of the students' less successful peers but the students took it seriously. Muriuki Imaathiu, for example, argued that students could not be expected to live on paltry salaries since 'others would be developing themselves at our expense'. (140)

Finally, he warned that students, as the fortunate products of academic selection, should be grateful for their opportunities and not engage in 'disruptive

practices' or politics. The Assistant Education Minister, Maina Wanjigi, then indicated that, in the future, the Ministry of Education would;-

"... be very strict on the conduct and behaviour of students before accepting them into higher institutions of learning." (141)

Secondary school students appear to be less politicized<sup>(142)</sup> but more inclined to act in support of particular, albeit apolitical, objectives.

Kinyanjui has analysed the wave of secondary school strikes in 1974.<sup>(143)</sup> There were 76 between March and September despite the Presidential Decree banning strikes by workers and students. Although only 7% of the schools were affected the important point is that the majority of strikes were at low to medium quality schools. Clearly, the students had legitimate grievances - food and general services quality, teachers and standards - but the attitude of the establishment was entirely unsympathetic. As a Daily Nation editorial put it;-

"We are, in effect, producing a potentially rebellious, semi-educated youth of Kenya who can even betray the country's hard won independence in the distant future unless we rescue them now." (144)

There were, in addition, a rash of strikes in 1979. Students, for example, at Oyugis Mixed Secondary School in Kisii, rioted on June 11.<sup>(145)</sup> The Headmaster of Ribe Secondary School in Kilifi was

attacked and threatened during a riot in February 11. (146) Police were called in to control students at Garbatula Secondary School in Isiolo District on February 13 and 160 pupils were eventually sent home after the incident. (147)

The reaction of the authorities was severe. Students involved in 'criminal' activities were punished through the judiciary. For example, 8 of the 12 students arrested at Oyugis Secondary School were sentenced to 12 strokes of the cane. The incumbent magistrate commented;-

"Your parents work hard for you to get some education, but you instead decide to choose the easy way of life by resorting to rioting." (148)

A Bungoma Court sentenced 10 boys to 10-20 strokes of the cane after a strike took place at Bungoma Town Harambee High School on March 19 in which over 100 boarders, armed with rungas and stones, caused extensive damage to the compound in complaining that the fees were too high. (149)

Student grievances are, therefore, not discussed or considered. Dialogue with the Ministry and the Headmasters is dismissed. As Kinyanjui put it;-

"The education system in this country operates on the assumption that the best way to educate young people is to reduce them to the level of docility. The authoritarian structure of the school inculcates fear in students and rewards blind obedience to authority." (150)

In conclusion, then, it appears that Kenyan students are politically acquiescent, conservative and non-agitational. These attitudes must be related to the control of the education system by the State. The political and economic elite recruit candidates on the basis of their academic qualifications and the education system is structured to produce a cadre of educated elite capable of efficient absorption into the bourgeoisie and to favour the selection of individuals drawn from the bourgeois sections of the community.

In this way, the education system satisfies both the successful and the unsuccessful since it is perceived as being meritocratic while rigidly restricting social mobility. Kenyan politics, then, are determined by the class structure and, in turn, the education system is constructed as a reflection and an endorsement of that class structure. This arrangement is seen to preserve political and economic stability which is the primary preoccupation of Kenya's ruling bourgeoisie.

7. Conclusion

The interpretation of Kenyan society in terms of 'class' is still very much a contentious issue. There is disagreement over the definition and identification of social groups and whether these groups may legitimately be termed 'classes'.

The most persuasive argument, however, is that the formation and awareness of and the relations between the groups are such that the application of class theory is not misplaced.

There are, it seems, several strata in Kenya society but a simple conceptualisation is that of a politically and economically, but numerically small, bourgeoisie existing together with a large, essentially unconscious, proletariat-peasantry and a petty-bourgeoisie which is primarily interested in the exploitation of business opportunities which it obtains from its political support of the bourgeoisie.

Kenyan politics, then, is dominated by bourgeois elements. The fundamental objectives are to preserve good relations with international capitalism and also encourage indigenous private enterprise to increase the rate of capital formation and circulation. This 'African Socialism' tends to widen income inequality and concentrate economic wealth and political power into a few hands.

In all contradictory situations there is an inherent element of instability and, as a result, the bourgeoisie is heavily involved in control mechanisms designed to preserve political, social and economic stability. Without this stability, Kenya's relationship with

foreign investors would crumble and local capitalism gradually grind to a halt.

Therefore, Kenya's politics can be usefully interpreted in terms of a continual effort to preserve stability by the economic bourgeoisie. In consequence, it would seem unlikely that the education system is not integrated into this general strategy.

The education system, is severely hierarchical so that the 'elite' may be efficiently absorbed into the bourgeois strata of society. In addition, the system is heavily biased towards candidates of a certain familial, residential, ethnic and most importantly, socio-economic background. Therefore, entry to the political and economic elite favours bourgeoisie offspring.

In this way, the education system reflects and entrenches the class structure. Therefore, University students, who are generally very vocal and politically active are, in Kenya, largely apolitical and non-agitational. Provided that their aspirations are fulfilled, the students are prepared to leave politics and policy-making to the politicians.

However, it is not enough that the system is biased since it is essential that this situation is not perceived by the disadvantaged. In fact, the

meritocracy of the system is strongly stressed and believed in by students and parents. Secondary school strikes, therefore, are not prompted by reaction against inequality.

Kenya's formal education structure, then, operates in precisely the same way as the colonial system. It selects students for the 'elite' and thereby alienates them from the masses. It works as a method of social control and, for this reason, the prospects of radical change are very slim.

In the thesis conclusion, the problems of the relationship between formal education and development are summarised and discussed. However, in evaluating the particular problems of inequality and suggesting changes which might be made to rectify the situation, one must, as this Chapter has argued, appreciate that inequalities are not an accidental by-product of a malfunctioning system but are intricately related to political, economic and social relationships and objectives.

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CONCLUSION

One of the arguments of the thesis is that an education system cannot be examined in isolation from social, political and economic forces and conditions. Colonial and Mission education in Kenya, for example, had far reaching effects outside of those connected with teaching and training. In the same way, independent Kenya sees education as an important mechanism of social change and development. The necessity for integrating educational development into general development strategy has been increasingly noted, and it is in these terms that the Kenyan education system must be evaluated.

In the 1960's, Kenyan educational policy was heavily influenced by the econometric approach in education investment and manpower planning. Accordingly, with the projected expansion of the modern sector in the early Development Plans, educationalists concentrated on providing skilled professional and vocational manpower. Therefore, although the Government was still interested in achieving universal primary enrolment and literacy, the most significant developments were in the University and tertiary level and in the expansion of Forms V and VI facilities.

However, in the 1970's national development strategy underwent a significant change. The Government became more concerned with the problems and potential of the rural/agricultural sector and there was increasing

pressure to re-design the formal education system in relation to rural development. This thesis has attempted to examine certain aspects and difficulties of the present formal school system in the light of these new emphases in development priorities and manpower requirements.

It is suggested that many of the problems of the formal school system in meeting these demands may be traced to the colonial period in that Kenya inherited a system based on a 3-tier pattern with British curricula, school structures, and methods of organisation and administration, which have proved resilient against change.

The continuation of this pattern was crucially influenced by the popular enthusiasm for formal education. During the colonial period it was apparent that those Africans who had had the benefit of formal academic schooling rose to positions of economic and political prominence. Similar success could not be achieved, it seemed, by vocational, technical or agricultural training. As a result, the new leaders of Kenya and the ' wananchi ' saw non-formal education as second-rate and a means of discrimination and subordination. It is not surprising, therefore, that the expansion of formal schooling has dominated educational planning since independence.

In the 1960's, the Government was largely concerned with expansion at the tip of the educational pyramid but, at

the lower levels, demand was intense and this was expressed by the rapid development of harambee and private schooling which served to emphasise the hierarchical nature of the system. Competition became intense and, in time, the education system became entirely oriented towards selection by national examinations for the higher stages and, since the focus of the system seemed to be, for the students, the acquisition of employment in the modern sector of the Economy, schooling acquired an urban/white-collar flavour. This process became a circular one. As competition increased, it generated a ' diploma escalation ' - a trend which induced a greater academic basis to formal schooling.

In Kenya to-day, the result is that the formal education system is severely pyramidical and competitive in structure, and academic and theoretical in content. Selection from one stage to the next is controlled by examinations which are so crucial that they become, in effect, the ultimate objective of education and teaching at each stage.

It is also important to realise that educational development outside the government sector has exacerbated the competitiveness and inequity of the system. The harambee schools were originally seen as a great benefit to poor rural communities without State schools. They would, it was argued, widen educational opportunities and so reduce inequality and train a local workforce which would assist enormously in the development of the locale.

Unfortunately, as the thesis points out, this has not been the case at all. Harambee education, like low quality private schooling, is of very low relative standard. Students cannot compete with their peers in higher graded government schools. The overwhelming majority are destined to leave school after the completion of four years of secondary education and most of these will eventually have to find employment in the rural areas. One could argue that they have, at least, had some post-primary schooling but the important point is that their aspirations and education are geared towards a continuation of their school careers and, finally, the acquisition of employment in the urban/modern sector of the Economy, the chances of which are very slim.

One of the main purposes of the thesis, then, was to provide quantitative evidence in support of this argument and the methodology was to demonstrate and measure structural and spatial inequalities in the Kenyan education system and examine the attitudes and aspirations of potential school leavers at Form IV.

Regional and ethnic educational inequalities have been well documented in Kenya as distributional variables largely inherited from the colonial period. However, it appears they are becoming less significant and, in essence, they do not explain how one school student is more advantaged than another but only consider the inequality between an individual who attends school and one who does not. Structural and urban-rural

inequalities, on the other hand, have not been intensively quantified and yet, there is little doubt that, they are intrinsically more important.

These inequalities were measured by national educational data and by a detailed survey of a representative sample of secondary schools and students in central Kenya. It should be remembered that the data were derived from an educationally advantaged and relatively wealthy area of Kenya and the survey area included Nairobi which is of far more importance and influence than other urban areas. However, the structure of the educational system is quite consistent throughout the well populated regions of Kenya and it is suggested that the conclusions of the research may be applied outside central Kenya. Inequalities between schools of different grade, location and type were measured by E.A.C.E. examination results at Form IV, the C.P.E. results of the Form 1 intake, facilities and amenities, the quality of the teaching staffs and the entry to University.

The data revealed quite clearly that, in terms of all criteria, the most advantaged students were those attending government grade A schools in Nairobi and the least advantaged were those at low graded harambee and private schools in the rural areas. The results were consistent and statistically significant.

It has been suggested that this situation is only a reflection of the competitiveness of the system and the

essential meritocracy in streaming in relation to academic ability. However, the massive differences in examination results between differently graded schools can be only partially explained by the different general abilities of the students as measured by their C.P.E. results on entering Form I. It is more important to consider the differences between the schools rather than the students' 'intrinsic academic abilities'. Moreover, there is little doubt that students at the better schools are drawn from significantly different socio-economic strata of Society. These inequalities were measured by familial background and the students' educational experiences.

It was discovered that students at higher graded schools had had more years of school education despite repeating fewer classes and tended to stay at the same school longer. In addition, they had benefitted from more pre-school and out-of-school tuition. The data also showed that their fathers had generally had more education, owned a greater acreage of land and more cattle, were employed in more prestigious and remunerative occupations, had smaller families and were generally more wealthy. It does seem, then, that the wealthy have disproportionate access to higher standard education and it is not difficult to understand how this came to be.

The wealthy can better afford to send their children to nursery and higher quality primary schools. They are more able to provide a better learning environment, and help and

encourage their children, and an urban, middle-class background is a tremendous advantage in mastering the English language which is so important in examinations. In addition, wealthy families do not need to sacrifice one child's education for another. Finally, research has shown that the C.P.E. is biased towards children of an urban and middle class background.

These inequalities mean that the chances of a poor rural student progressing to higher education are very slim indeed. Of course, some do make it but the percentage of students from low graded harambee and private schools finding places in senior secondary schools and University is very small indeed and, unfortunately, this is not realised by the students involved. The oral and written questionnaires were, therefore, designed to analyse student aspirations, attitudes, values and perceptions.

Occupational and educational aspirations were found, in all schools, to be extremely high and increasingly unrealistic as one moves from high to low standard schools. They are, almost exclusively, urban and modern sector orientated. As a result, most students prefer towns to the rural areas and do not feel that they belong in or have a role to play in rural development. To fulfil their ambitions the students realise the necessity of rural to urban migration since they primarily see towns as places where jobs are available. The result is, of course, that, given the current rate of development in the urban modern sector, the majority of these students will be disappointed

since they cannot compete with University graduates and E.A.A.C.E. holders on the strength of an E.A.C.E. pass and will be obliged to endure a substantial period of unemployment or return to the village. The Likert Scale data and the oral questionnaire responses quite definitely show that the inequalities of the system are not overtly perceived and the strongest defenders of the concept of meritocracy, ironically, are those against whom the dice is heavily loaded.

The research, then, concludes that expansion of junior secondary school facilities by community action and private entrepreneurship is, for the students, something of a waste of time and probably does more harm than good in the development of the rural areas. The education offered simply does not acknowledge that the overwhelming majority will be leaving school at Form IV and have virtually no selling power in the employment market in the urban areas and none at all in the rural areas in jobs where their education would be of value. The formal school system, despite enormous expansion since independence, has, for the most part, failed to integrate education with manpower planning and national development strategy with the exception of the very top of the educational pyramid. There have been no significant changes aimed at the promotion of rural development through education.

What education there is orientated towards rural development lies outside the formal sector in a variety of informal programmes which teach vocational, technical, commercial and agricultural skills and trades but they make little national impact since only about 6% of Kenyan students are actually involved in them. In addition, they tend to be under-financed, heavily dependent on local community contributions and are often obliged to over-emphasise the production and marketing of products to pay their way. They generally have difficulties in attracting qualified and dedicated teachers, are often poorly organised and because there is demand from the students to take trade tests there is a tendency for these schemes to become more formal. Moreover, these programmes are mainly interested in primary school leavers and do little about the problems of students completing Form IV.

There is a definite need for further government involvement in the financing of informal institutions but, if there are changes to be made as regards the orientation of education to rural development, the most practical and far-reaching policy would be to re-structure formal schooling not only because the basic raw material is there to work with but also because this would definitely be more acceptable to the parents and students. Formal education should provide all students with the means to find useful employment and not only in the urban areas. The Gichathi Report of 1977 outlined proposals which would go a long way to meeting this objective.

Primary education, it was suggested, should be extended to 9 years, the extra two providing training in skills and trades which would assist students, leaving at the end of the period, in finding self or salaried employment. This would also involve a substantial re-designing of the curricula from Standard 1 so as to encourage students to look for careers in agriculture and the rural economy. Academically very successful students would, under the Plan, continue to Form VI and on to University mainly in government schools. The Report envisaged the takeover, and very stringent future registration, of harambee and possibly some private schools to provide facilities for the extra two years of primary education. The changes would certainly improve the situation of the pre-Form VI leaver by encouraging interest in training, hitherto neglected, but which give students good opportunities to develop themselves and their community. However, there are some very important barriers to implementation of this Plan or one like it.

In the first place, it is probable that the present system is too well established and resilient to alter radically. The cost of implementation would be enormous since the schools would need new equipment, teachers, curricula, new forms of organisation and administration and different examination and inspection procedures as well as structural alterations. The Government may then, decide to maintain the present system and provide an alternative through further development of the informal sector.

Secondly, it is unlikely that the parents and students will be enthusiastic about the changes. For them, formal education equals social mobility and as long as this equation holds true or is perceived to hold true they will support the present system.

Thirdly, the Plan would, in time, produce a large cadre of school leavers looking for employment opportunities in the rural economy and, therefore, it is essential that some progress be made in the Government's rural development programmes but it does seem unlikely that the pace of development in this sector will be fast enough judging by the results of the two previous Development Plans.

Fourthly, the new system may introduce a form of legitimised inequality whereby poor rural students are trained for life and work in the poor, rural communities and the middle class, urban students are groomed for careers in the urban modern sector.

Finally, it is doubtful whether the Government would be prepared to tamper with an education system which has certainly contributed to the preservation of political stability and the perpetuation of class relations in Kenya.

One, must, therefore, end on a pessimistic note. In terms of educational expansion the achievements of independent Kenya have been remarkable but the course taken would seem to have been the wrong one. The Gichathi Report

contains recommendations which, one feels, would produce an education system more in line with current development priorities and manpower requirements, but there seems no prospect of implementation in the current Plan period. For some time to come, education specifically related to the development of the rural areas will be available only outside the formal sector and the problems of the school system will only be intensified by the further expansion of facilities through community effort and private developments.

APPENDIX

SCHOOL SUMMARY SHEET

1 2 3

SCHOOL	Grade	Type	District	No. of Respondents male-female	Year founded	Founded Form IV	Founded Form V	Founded Form VI	Boarding/Day	No. Staff	No. Graduates	No. Qualified	No. Non-Kenyan	Total No. Boys	Total No. Girls
ALLIANCE HIGH	A	M	K	25	1926	1942	1961	1962	B	34	15	34	28	617	-
NAIROBI GIRLS	A	M	Nbi	-	1964	1968	1972	1973	B	22	20	22	2	-	425
NAIROBI SCHOOL	A	M	Nbi	30	1929	1964	1968	1969	B	45	40	44	11	880	-
ACA KHAN HIGH	A	M	Nbi	27	1960	1961	1963	1964	D	26	23	23	12	407	203
KAGUMO HIGH	A	M	N	36	1933	1939	1962	1963	B	31	30	31	3	760	-
NYERI HIGH	A	M	N	40	1968	1969	1975	1976	B	22	20	22	4	800	-
GIAKANJA SECONDARY	A	M	N	38	1962	1966	-	-	D/B	16	4	14	2	409	120
ST. MARY'S SCHOOL	A	P	Nbi	30	1939	1950	1962	1963	D	25	25	25	16	350	150
LORETO CONVENT, MSONGARI	A	P	Nbi	-	1921	1925	1951	1952	D	30	29	30	17	-	400
STATE HOUSE ROAD GIRLS	A	M	Nbi	-	1954	1959	1967	1968	D	28	17	26	3	-	580
KENYA HIGH	A	M	Nbi	-	1943	1955	1966	1967	B/D	45	35	45	8	-	820
LENANA SCHOOL	A	M	Nbi	35	1949	1953	1954	1955	B	37	35	37	8	760	-
JAMHURI HIGH	A	M	Nbi	38	1920	1924	1953	1954	D	46	40	46	18	1020	80
UPPER HILL SCHOOL	A	M	Nbi	38	1956	1960	1961	1962	D	32	30	30	10	720	-
PARKLANDS SCHOOL	A	M	Nbi	36	1955	1959	-	-	D	19	15	19	4	432	-
ALLIANCE GIRLS	A	M	K	-	1948	1952	1962	1963	B	31	26	31	9	-	615
LORETO HIGH, LIMURU	A	M	K	-	1936	1950	1970	1971	B	19	10	19	14	-	378
KANGARU SCHOOL	A	M	E	21	1947	1955	1961	1962	B	42	33	42	9	550	550
MUQOIRI GIRLS	A	M	M	-	1959	1960	1974	1975	B	23	12	20	2	-	600
KAHUHIA GIRLS	A	M	M	-	1959	1962	1969	1970	B	26	13	24	5	-	630
NGANDU HIGH	A	M	N	-	1964	1967	1972	1973	B	16	13	16	7	-	397
TEMPLE ROAD SECONDARY	B	P	N	20	1966	1969	-	-	D	14	8	10	5	228	218
UTHIRU SECONDARY	B	M	K	31	1965	1969	-	-	D	22	12	22	4	366	171
KIAMBU HIGH	B	M	K	26	1976	1976	1978	1979	B	14	11	14	2	206	201
RAVAL'S SECONDARY	B	P	Nbi	32	1954	1958	-	-	D	30	15	28	8	600	300
SHARDA HIGH	B	P	Nbi	30	1958	1961	-	-	D	19	8	12	9	243	332
CITY HIGH	B	P	Nbi	47	1951	1954	-	-	D	29	14	24	5	960	-
ST. MARY'S BOYS	B	P	N	24	1962	1965	-	-	D	11	6	8	4	300	-
NYERI BAPTIST	B	P	N	25	1966	1977	-	-	B	8	6	7	3	148	45
VISA OSHWAL BOYS	B	P	Nbi	34	1963	1967	-	-	D	25	20	20	7	540	-
VISA OSHWAL GIRLS	B	P	Nbi	-	1959	1962	-	-	D/B	21	15	16	5	-	360
SIAKAGO HIGH	B	M	E	39	1965	1968	-	-	B	20	7	18	1	480	-
KAMAMA SECONDARY	B	M	E	40	1965	1968	-	-	B	10	4	100	-	292	-
KANGEMA SECONDARY	B	M	M	-	1964	1967	-	-	B/D	14	7	11	2	390	22
MURANG'A HIGH	B	M	M	40	1964	1967	1971	1972	B/D	23	15	23	7	600	-
ST. PAUL'S SEMINARY	B	P	N	13	1914	1961	1978	1978	B	10	6	8	-	170	-

SCHOOL	Grade	Type	District	No. of Respondents		Year founded	Founded Form IV	Founded Form V	Founded Form VI	Boarding/Day	No. Staff	No. Graduates	No. Qualified	No. Non-Kenyan	Total No. Boys	Total No. Girls
				M	F											
TUMUTUMU GIRLS	B	M	N	-	42	1964	1967	1971	1972	B	30	16	22	3	-	720
LANGATA HIGH	C	M	Nbi	32	8	1970	1975	-	-	D	13	11	10	2	230	70
KENNEDY HIGH	C	P	Nbi	38	2	1973	1973	-	-	D	18	6	8	2	400	200
NYERI TECHNICAL	C	M	N	17	18	1977	1978	-	-	B	27	14	17	9	300	422
THUNGUMA SECONDARY	C	P	N	19	24	1967	1977	1978	-	B	16	7	6	2	250	250
NGUVIA GIRLS	C	M	E	-	35	1967	1976	-	-	B	13	7	9	1	-	320
GITITU SECONDARY	C	M	M	42	2	1967	1972	-	-	B/D	11	3	6	1	370	30
KIMATHI SECONDARY	C	M	N	33	-	1964	1967	-	-	D	17	5	10	2	353	134
KIANDU SECONDARY	C	A	N	12	16	1965	1969	-	-	D	8	-	2	-	99	102
CHINGA GIRLS	C	M	N	-	36	1966	1969	-	-	B	9	2	6	-	-	270
ST. MARY'S GIRLS HIGH	D	P	Nbi	-	43	1973	1975	-	-	D	13	4	7	2	-	360
PAN AFRICAN GIRLS HIGH	D	P	Nbi	-	38	1968	1972	-	-	D	9	2	2	2	-	295
KIRITI SECONDARY	D	H	N	27	19	1972	1978	-	-	D	10	2	5	2	117	133
KIGANJO AMBONI SECONDARY	D	P	N	-	40	1972	1973	-	-	B	28	2	5	-	243	530
KIKUYU TOWNSHIP	D	P	K	7	4	1975	1977	-	-	D	13	3	7	-	144	87
KAVUTIRI SECONDARY	D	H	E	8	4	1966	1979	-	-	D/B	7	1	2	-	120	43
KIRIARI SECONDARY	D	A	E	-	43	1968	1976	-	-	B	8	2	7	1	-	220
SIAKA GO GIRLS	D	A	E	-	35	1971	1974	-	-	B	10	1	6	1	-	330
KAGIRA SECONDARY	D	H	M	13	12	1974	1977	-	-	D	6	1	1	1	83	55
IGHICHI HARAMBEE	D	H	M	3	3	1973	1976	-	-	D	6	-	1	-	38	23
GITUTO SECONDARY	D	H	M	5	6	1969	1976	-	-	D	5	-	2	-	55	65
MBOGOINI SECONDARY	D	H	M	5	7	1975	1978	-	-	D	6	-	1	-	72	88
CATHEDRAL COLLEGE	D	P	N	-	34	1963	1963	-	-	D/B	4	-	2	-	-	100
KIRICHU SECONDARY	D	H	N	17	20	1973	1979	-	-	D	4	-	1	-	55	46
FEDERAL HIGH	D	P	N	26	30	1965	1968	-	-	D/B	8	1	2	1	213	136
RURINGU HIGH	D	P	N	10	5	1968	1971	-	-	B	6	-	1	-	136	140

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Total No. Pupils	TRIBE			REGION			C.P.E.			E.A.C.E. 1978					INSPECTION POINTS											
	K	E	M	S.D.	S.P.	K.	Best	worst	Average	No.	Div. 1	Div. 2	Div. 3	Div. 4	Fail	Build	Serv	Clean	Leisure	Lab	Library	Equip	Sports	Ventil	Vis-T	Total
720	✓			✓			28	20	24	118	19	61	29	8	1	4	4	5	2	2	4	3	1	4	1	30
300			✓			✓	30	23	25	75	1	7	40	20	7	3	3	3	3	4	3	4	2	3	1	29
600			✓			✓	25	18	20	152	-	4	8	25	115	2	2	3	1	2	2	2	1	3	1	19
722	✓				✓		27	20	22	-	-	-	-	-	-	5	2	5	1	5	3	5	1	5	1	33
500	✓					✓	26	23	24	-	-	-	-	-	-	2	2	1	1	3	2	2	2	1	1	17
320		✓			✓		32	18	23	34	1	12	12	6	3	5	4	3	1	3	1	3	1	2	1	24
400	✓			✓			33	27	28	43	2	16	23	1	1	4	3	4	1	2	1	3	3	3	2	26
487	✓			✓			33	22	26	81	6	16	29	20	10	5	3	3	1	4	1	3	3	2	1	26
201	✓			✓			27	16	20	37	-	2	4	17	14	5	2	2	2	4	3	4	4	3	1	30
270	✓				✓		31	25	28	37	1	15	11	9	1	3	2	2	1	3	1	3	4	3	1	23
360			✓			✓	24	17	19	58	-	7	6	28	17	3	2	3	4	1	1	2	1	3	1	21
295	✓				✓		27	16	20	125	-	2	17	42	64	2	1	2	2	2	1	2	1	2	1	16
250	✓			✓			27	20	23	-	-	-	-	-	-	3	3	4	3	1	2	2	2	4	1	25
773	✓			✓			27	15	21	125	-	3	19	43	60	4	4	3	1	1	1	2	1	3	1	21
231	✓				✓		24	15	18	6	-	1	1	4	-	2	1	2	1	1	2	1	1	2	1	14
163		✓		✓			23	13	17	-	-	-	-	-	-	5	1	3	1	1	1	4	3	2	1	22
220		✓		✓			25	16	19	36	-	5	8	15	8	3	3	3	2	4	1	2	2	3	1	24
330		✓			✓		25	17	20	42	-	7	15	11	9	4	3	2	2	1	1	3	3	2	1	22
138	✓			✓			25	12	17	21	-	2	3	11	5	4	2	2	3	1	2	1	2	3	1	21
61	✓			✓			26	15	18	12	-	-	2	5	5	4	3	3	1	1	1	4	3	2	1	23
120	✓			✓			26	13	19	-	-	-	-	-	-	3	2	2	1	1	1	3	2	2	1	18
160	✓			✓			16	9	13	-	-	-	-	-	-	3	3	2	1	1	1	4	1	2	1	19
100	✓				✓		21	15	18	40	-	2	9	20	9	4	2	3	1	1	2	3	1	3	2	22
101	✓			✓			23	13	18	-	-	-	-	-	-	2	1	2	1	1	1	2	1	1	1	13
349	✓				✓		20	13	16	154	-	1	4	51	98	1	1	2	1	1	1	1	2	1	2	13
276	✓				✓		25	18	20	28	1	-	1	7	19	2	1	2	1	1	2	2	1	2	1	15

1. Graded A, B, C or D by Kenya Inspectorate
2. Type - either State maintained (M), assisted (A), private (P), Harambee (H)
3. District - Nairobi (Nbi), Nyeri (N), Murang'a (M), Kiambu (K), Embu (E)
4. K (mainly Kikuyu), E (mainly Embu), M (Mixed)
5. S.D. (mainly from same District), S.P. (from same Province as school), K (from all over Kenya)
6. Maximum possible is 36 points, lowest pass is 15
7. P is a principal pass, S is a subsidiary pass
8. Buildings, Services, Cleanliness, Leisure, Laboratory, Library, Equipment, Sports, Ventilation, Visits-Transport.  
Points from 1 - 5

4

5

6

7

8

Total No. Pupils	TRIBE			REGION			C.P.E.			E.A.C.E. 1978					INSPECTION POINTS											
	K	E	M	S.D.	S.P.	K	Best	Worst	Average	No.	Div. 1	Div. 2	Div. 3	Div. 4	Fail	Build	Serv	Clean	Leisure	Lab	Library	Equip	Sports	Ventil	Vis-T	Total
617			✓			✓	36	30	33	100	83	14	3	-	-	5	5	5	5	5	5	5	5	5	4	49
425			✓			✓	36	28	30	77	12	24	32	8	1	4	4	4	4	4	4	4	3	5	3	39
880			✓			✓	36	28	30	159	56	58	37	6	2	4	4	4	4	5	5	5	5	5	4	45
610			✓			✓	34	26	28	126	5	33	41	33	14	5	5	5	3	4	5	5	5	4	2	43
760	✓				✓		36	31	32	126	62	41	17	3	3	5	5	5	4	5	4	4	3	4	3	42
800	✓				✓		36	27	31	117	55	36	24	2	-	4	4	3	4	5	5	5	5	4	2	41
529	✓				✓		36	29	31	41	6	14	15	4	2	4	3	4	3	5	2	3	5	2	1	32
500			✓	✓			36	25	30	36	21	5	10	-	-	5	5	5	5	5	5	5	5	5	4	49
400			✓	✓			36	27	30	79	45	25	6	3	-	5	4	5	4	5	5	5	4	5	5	47
580			✓	✓			34	23	28	90	11	27	34	17	1	5	4	5	4	5	5	5	5	4	3	45
820			✓	✓		✓	35	26	30	141	37	66	33	5	-	5	4	5	5	5	5	5	5	4	5	48
760			✓	✓		✓	34	26	30	138	76	43	16	2	1	4	5	4	5	5	5	5	5	5	5	48
1100			✓	✓		✓	36	24	26	233	73	76	55	23	6	5	4	5	4	5	4	5	5	4	4	45
720	✓				✓		34	22	25	115	16	29	42	23	5	4	4	5	4	5	4	5	4	5	3	43
432			✓	✓			36	23	28	93	7	26	50	10	-	3	3	3	2	4	4	4	3	4	2	32
615			✓			✓	36	27	31	101	79	13	5	2	2	4	4	4	4	5	5	4	5	3	4	42
378			✓			✓	36	25	30	75	50	15	6	4	-	4	4	4	3	4	2	4	4	4	4	37
1100		✓			✓		36	21	26	158	34	62	44	14	4	3	4	4	4	5	4	4	5	4	4	41
600	✓				✓		34	20	27	79	33	30	14	2	-	4	3	3	4	3	3	4	3	4	3	34
630	✓				✓		30	20	27	111	14	29	46	14	8	3	4	3	3	4	3	5	3	3	2	33
397	✓				✓		35	27	31	78	58	15	5	-	-	4	4	4	4	5	5	5	3	3	2	39
446	✓				✓		28	20	24	79	3	11	35	13	17	4	4	4	3	4	2	2	3	3	1	30
536	✓				✓		31	20	24	123	-	12	48	42	21	3	2	4	2	3	2	4	4	3	1	28
407	✓				✓		32	25	27	-	-	-	-	-	-	5	5	5	2	5	4	4	2	5	4	41
900			✓			✓	24	18	20	223	-	16	38	73	96	2	2	2	1	2	2	2	1	2	1	17
575			✓			✓	24	18	19	137	1	5	23	69	39	2	3	3	3	4	3	3	1	3	2	27
960			✓			✓	25	15	21	159	3	15	47	65	29	4	4	4	2	4	4	4	2	4	3	35
300	✓				✓		28	23	25	58	11	17	26	4	-	4	4	4	3	5	4	4	1	4	1	34
193	✓				✓		26	18	22	38	4	11	14	8	1	4	4	4	4	5	5	4	3	4	5	42
540			✓	✓			23	15	17	88	2	5	28	28	25	4	3	4	3	4	4	4	2	4	2	34
360			✓	✓			22	12	18	78	2	8	24	40	4	4	4	4	2	4	3	4	1	4	2	32
480		✓			✓		32	22	26	120	7	23	46	29	15	4	2	3	1	4	2	3	3	1	1	24
292		✓			✓		29	19	24	38	1	10	13	12	2	4	3	3	3	4	1	5	3	3	3	32
420	✓				✓		32	20	26	84	8	17	32	13	14	5	3	3	2	4	3	4	4	3	1	32
600	✓				✓		35	28	30	115	24	38	43	9	1	5	4	4	1	4	2	4	4	3	1	32
170	✓				✓		30	20	24	15	2	3	8	2	-	5	4	4	2	4	4	4	3	3	4	37

INFORMATION SHEET

1. Name of school .....
2. Grade ..... 3. Type .....
4. Address .....
5. District ..... 6. Number .....
7. Location ..... 8. Date visited .....
9. Class interviewed ..... 10. No. respondents .....
11. Staff member interviewed .....

12. Year founded .....
13. Brief history of school .....
- .....
- .....
14. Year of opening of first Form IV Class .....
15. Year of opening of first Form V Class .....
16. Year of opening of first Form VI Class .....
17. Boarding/Day ..... 18. No. of staff .....
- (Full-time)
19. No. graduate staff ..... 20. No. qualified .....
- staff
21. No. non-Kenyan staff .....

22.

	BOYS	GIRLS	CLASSES
Form I			
Form II			
Form III			
Form IV			
Form V			
Form VI			
TOTALS			

- 23. Fees paid .....
- 24. Tribal composition of school .....
- .....
- 25. Regional composition of school .....
- .....
- .....
- 26. 1979 Form 1 entrants
  - (i) best C.P.E. results .....
  - (ii) worst C.P.E. results .....
  - (iii) average C.P.E. results .....

27. E.A.C.E. results 1978

No. candidates	
Division 1	
Division 2	
Division 3	
Division 4	
Failed	

28. E.A.A.C.E. results 1978

No. candidates	
3 Principals +	
2 Principals +	
1 Principal +	
3 Subsids	
Failures	

29. University Places 1978

No. candidates	
Nairobi University	
K.U.C.	
University abroad	
Other Kenyan colleges	

30. Points given in Inspection

- 5: excellent
- 4: good
- 3: average
- 2: below
- 1: poor

Buildings	
Services	
Cleanliness	
Leisure	
Laboratory	
Library	
Equipment	
Sports	
Ventilation	
Visits - transport	

31. Comments

.....

.....

.....

.....

.....

.....

I am a postgraduate affiliated to the Geography Department of the School of Oriental and African Studies in the University of London, England.

As part of my Ph.D I am looking into educational provision and its relationship with the policy of rural development in this part of Kenya.

I will be visiting many schools in this area and asking the pupils to complete questionnaires. I am interested in your attitudes and aspirations and I hope that the research will be of interest to the Kenya Government and eventually of some help to young people like yourself.

I would like to make it clear that the completed questionnaires will be seen only by myself and my colleagues at the University of London. Your replies will be anonymous and treated in the utmost confidence.

Please do your best when you complete the questionnaire. Try to answer every question. I am interested in any opinions you may have about the questionnaire and the topics it covers so if you have any questions, criticisms or comments do not hesitate to speak out.

Thank you very much for your help.

P. A. Wellings B.A (Camb)  
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Department of Geography  
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WRITTEN QUESTIONNAIRE

PART A

1. What is your home address?  
 Sub-Location .....  
 Location .....  
 District .....  
 Province .....
2. What was your age last birthday? .....
3. What is your tribe? .....
4. What is your sex? .....

PART B

1. How many people live in your Father's household? .....
2. How many children under the age of 15 years live in your father's household? .....
3. For how many children does your Father pay school fees? ...
4. Does your Father receive any assistance in paying your school fees? .....

NO ASSISTANCE	
GOVERNMENT ASSISTANCE	
ASSISTANCE FROM FRIENDS	
ASSISTANCE FROM RELATIVES	

5. Which languages does your father speak?

	NONE	SOME	FLUENT
SWAHILI			
KIKUYU			
ENGLISH			
OTHER			

6. What is your Father's main occupation? .....

7. Does your Father run any businesses?

YES	
NO	

8. If you answered YES to question (7) please specify the type(s) of business(es) .....

9. How much school or College Education has your father had?

NONE	
SOME PRIMARY	
UP TO STANDARD 7	
UP TO FORM 2	
UP TO FORM 6	
COLLEGE OR UNIVERSITY	

10. How much land does your Father own?

LESS THAN 1 ACRE	
1 - 2 ACRES	
3 - 4 ACRES	
5 - 9 ACRES	
10 - 19 ACRES	
20 - 49 ACRES	
50-99 ACRES	
OVER 100 ACRES	

11. How many permanent labourers does your father employ?

NONE	
1 LABOURER	
2 LABOURERS	
3 - 4 LABOURERS	
MORE THAN 4 LABOURERS	

12. Does your father own any land away from the local shamba?

YES	
NO	

13. If you answered YES to the last question please specify the location of the land.

..... Sub-Location  
 ..... Location  
 ..... District  
 ..... Province

14. Indicate the number of acres farmed by your Father for each of the cash crops I have listed below.

	TEA	COFFEE	VEGETABLES	FRUIT
NONE				
LESS THAN 1 ACRE				
1 - 2 ACRES				
3 - 4 ACRES				
5 - 9 ACRES				
10 - 19 ACRES				
20 - 49 ACRES				
50 - 99 ACRES				
OVER 100 ACRES				

15. How many diary cows does your father own?

NONE	
1 - 2 COWS	
3 - 5 COWS	
6 - 9 COWS	
10 OR OVER	

16. How many of his cows are grade cows? .....

PART C

1. How long have you been at this school? ..... FULL YEARS
2. Including nursery and primary school, for how many years have you had school education? .....
3. How many other Secondary Schools have you attended? .....
4. Apart from illness write down the most common reason why you miss school .....
5. If you are a boarder write down the distance in miles to your home. If you are a day-scholar write down how many miles you travel to school, every day. ....
6. How many classes have you repeated? .....
7. Before you first went to Primary school did you receive any tuition in the following subjects from your parents, relatives or friends?

	NONE	SOME	A LOT
ENGLISH			
WRITING			
READING			

8. Do you now have private tuition outside school hours from qualified teachers in any of the following subjects:-

	YES	NO
ENGLISH		
MATHEMATICS		
SCIENCE		
HISTORY AND/OR GEOGRAPHY		
LANGUAGES		

PART D

1. Do you wish to continue your Education after this school year?

YES	
NO	

If you answered NO do not answer question (2) or (3) but go on to question (4).

2. If you had enough ability and money which educational level would you like to reach? .....

3. Now, if you take into account all your personal circumstances which educational level do you expect to reach? .....

4. Your ability, intelligence and hard work are important in passing exams. Write down any other things which you think are important in passing exams.

You do better in exams if you .....  
.....

5. What new subjects would you like to see taught in Kenya?  
.....  
.....

6. A lot of people are unable to reach the educational level they desire even if they have enough ability. For your own case I would like you to list the reasons, in order of importance, which prevent you getting as much education as you would like.  
.....  
.....  
.....

7. There are not enough places available in Government Secondary Schools and Colleges. Many applicants who have the required grades are turned down. The statements which I have listed below are common explanations of this situation. Please indicate how strongly you agree with each statement with a tick.

It is easier to get into a Government Secondary School or College if you:-

	AGREE STRONGLY	AGREE	UNDEC- IDED	DIS- AGREE	DISAGREE STRONGLY
HAVE WEALTHY PARENTS					
LIVE IN A BIG TOWN					
HAVE WEALTHY RELATIVES OR FRIENDS					
ARE A MEMBER OF A PROMINENT TRIBE					
HAVE PARENTS WHO HAVE PROFESSIONAL OR MANAGERIAL JOBS					
HAVE PARENTS WHO ARE IMPORTANT IN LOCAL POLITICS					
WERE EDUCATED AT A GRADE 'A' GOVERNMENT SCHOOL					
ARE A BOY					

8. What changes or improvements would you like to see in your school?

.....  
 .....

9. If the Government of Kenya decided to improve the education available to this District what would you advise it to do?

.....  
 .....

10. Do you agree that the following groups of people have less chance to get better education?

	AGREE STRONGLY	AGREE	UNDEC- IDED	DIS- AGREE	DISAGREE STRONGLY
THE LANDLESS					
THE LESS PROMINENT TRIBES					
THE UNEMPLOYED					
PEOPLE LIVING A LONG WAY FROM TOWNS					
PEOPLE ATTENDING HARAMBEE INSTITUTIONS					
PEOPLE WHO DO NOT SPEAK ENGLISH WELL					

PART E

- 1. What occupation would you like to have when you leave school?  
Give your first three preferences

I would like to be a ..... 1st choice  
 ..... 2nd choice  
 ..... 3rd choice

- 2. Considering all your personal circumstances and qualifications what occupation do you expect to have? Give your first three preferences

I expect to be a ..... 1st choice  
 ..... 2nd choice  
 ..... 3rd choice

- 3. Most people think that the towns have far better job opportunities and living conditions than the rural areas. If you were to move from your village to a big town what sorts of things would affect your decision?

Things I do not like about the rural areas .....  
 .....  
 .....

- 4. Things I like about towns .....  
 .....  
 .....

- 4. How many visits have you paid to Nairobi during the past year?  
 .....

- 5. If the Government of Kenya were to spend a certain amount of money on the rural development of this District what would you advise them to do? Give a list of things you would like to see done and rank them in order of importance.

.....  
 .....  
 .....  
 .....

- 6. Indicate your level of agreement with each statement I have listed below with a tick.  
 You have more chance of getting a good job if you:-

	AGREE STRONGLY	AGREE	UNDECIDED	DIS-AGREE	DISAGREE STRONGLY
HAVE BETTER QUALIFICATIONS					
HAVE SOME JOB EXPERIENCE					
SPEAK BETTER ENGLISH					
MOVE TO A BIG TOWN					
HAVE MORE INFORMATION ABOUT JOBS WHEN LEAVING SCHOOL					
HAVE FRIENDS OR RELATIVES WHO WILL LOOK FOR A JOB FOR YOU					

7. How do you define a town? Below are 6 town characteristics. Rank them in order of importance. Give the characteristic you think most important the rank of 1, the next important 2 and so on. Towns have .....

	RANK
AT LEAST 5,000 PEOPLE	
LEISURE ACTIVITIES, CINEMAS, SPORTS CLUBS	
GOOD SOCIAL SERVICES, ROADS, HOSPITALS, ELECTRICITY, WATER	
MANY INDUSTRIAL AND OFFICE JOBS	
AT LEAST 10,000 PEOPLE	
MANY SHOPS	

8. Would you prefer to work in Nairobi rather than your own District?

YES	
NO	

Explain the reasoning behind your answer .....

.....

.....

9. Can you tell me your Grades at C.P.E.?

	GRADE
ENGLISH	
MATHEMATICS	
GENERAL KNOWLEDGE	



NOTES

1. In A1, D = District, P = Province
2. In A3, coding is as follows:-
 

Kikuyu	=	K
Luo	=	L
Luhya	=	Ly
Embu	=	E
Kamba	=	Ka
Meru	=	M
Asian	=	A
Others	=	O
3. In B5, coding 1, 2, 3, 4 refers to the individual items of the question i.e.
 

1	=	Swahili
2	=	Kikuyu
3	=	English
4	=	Other
4. In B6, coding is as follows:-
 

Professional	=	P
Skilled/Top Administrative	=	S
Semi-skilled/Administrative	=	SS
Unskilled	=	U
Farming	=	F
5. In B13, D = District, P = Province
6. In D2 and D3, coding is as follows:-
 

2nd Degree (Ph.D, M.A. etc.)	=	2nd
1st Degree	=	1st
Form VI	=	6
Form IV	=	4
7. E1 and E2 referring to occupational preferences uses the scaling suggested by Lin, Nan. 1976. Foundations of Social Research. McGraw-Hill. New York.
8. Questions B8, C4, D4, D5, D6, D8, D9, E3, E5, E8 are not codifiable on the sheet. They were examined separately by content analysis.

ORAL QUESTIONNAIREList of Items

1. "If you have brains and determination you can always get on in life"
2. "Life is like an examination and the best man usually gets the prize"
3. "People in jobs can only do better in life by joining together and making the Employers pay better wages and offer better opportunities"
4. "You can tell with most people if they are wananchi or wabenzi"
5. "We are all wananchi really"
6. "People who work in the shambas are quite different from those who work in an office"
7. "There are no such things as 'classes' in Kenya today"

CODING SHEET (ORAL QUESTIONNAIRE)

Name of School..... District .....

Grade ..... Type ..... Number of Respondents .....

ITEM	AGREE STRONGLY	AGREE	UN-DECIDED	DISAGREE	DISAGREE STRONGLY	TOTAL SCORE	AVERAGE SCORE
1							
2							
3							
4							
5							
6							
7							

## Notes:

1. Total Score = (Frequency "Agree Strongly" x 1) + (Frequency "Agree" x 2) + ... etc.
2. Scoring is reversed for Items 3,5 and 7 i.e. "Agree Strongly" = 5 and so on.
3. Average Score = Total Score  $\div$  No. of Respondents

TABLE X1

Question A1 - Respondents' Province of Residence,  
by School Grade

PROVINCE	SCHOOL GRADE			
	A	B	C	D
NAIROBI	32.8	8.0	3.1	3.7
CENTRAL	42.7	64.0	55.5	69.7
EASTERN	9.9	14.2	21.4	21.5
RIFT VALLEY	3.0	0.9	2.3	1.1
WESTERN	5.6	5.6	10.0	2.2
NYANZA	4.9	6.9	7.7	1.6
N.E.	0.3	-	-	-
COAST	1.0	0.5	-	0.1
	100.2%	100.1%	100.0%	99.9%

## Notes:

1. Do not add up to 100.00% because of rounding

TABLE X2

Question A1 - Respondents' Province of Residence,  
by School Grade  
Nairobi Schools (Urban)

PROVINCE	SCHOOL GRADE			
	A	B	C	D
NAIROBI	59.0	24.9	13.8	10.1
CENTRAL	19.8	25.0	17.5	46.7
EASTERN	5.3	12.6	20.0	12.4
RIFT VALLEY	2.5	3.7	2.5	2.4
WESTERN	7.0	14.8	31.3	14.4
NYANZA	5.4	18.5	15.0	13.0
N.E.	0.3	-	-	-
COAST	0.4	0.5	-	1.2
	99.7%	100.0%	100.1%	100.2%

## Notes:

1. Do not add up to 100.00% because of rounding

TABLE X3

Question A1 - Respondents' Province of Residence,  
by School Grade  
Schools in Nyeri, Murang'a, Kiambu and Embu  
Districts (Rural)

PROVINCE	SCHOOL GRADE			
	A	B	C	D
NAIROBI	4.0	0.2	-	2.8
CENTRAL	67.9	81.8	66.4	73.0
EASTERN	15.0	14.9	21.8	22.8
RIFT VALLEY	3.6	-	2.3	0.9
WESTERN	4.4	1.4	4.0	0.5
NYANZA	4.2	1.6	5.6	-
N.E.	-	-	-	-
COAST	0.6	-	-	-
	99.7%	99.9%	100.1%	100.0%

## Notes:

1. Do not add up to 100.0% because of rounding

TABLE X4Question A3 - Respondents' Tribe by School Grade

TRIBE	SCHOOL GRADE				ALL
	A	B	C	D	
KIKUYU	52.1	62.6	64.0	71.6	61.6
LUO	11.5	8.5	7.1	2.3	7.7
LUHYA	8.5	5.4	4.2	2.1	5.4
EMBU	3.9	9.8	12.2	19.3	10.6
KAMBA	5.2	5.9	7.7	3.7	5.4
MERU	1.6	0.9	2.4	0.3	1.2
OTHERS	6.4	2.1	2.4	0.8	3.3
ASIAN	10.9	4.8	-	-	4.9
	100.1%	100.0%	100.0%	100.1%	100.1%

## Notes:

1. Do not add up to 100.0% because of rounding

TABLE X5Question A3 - Respondents' Tribe, by SchoolGradeNairobi Schools (Urban)

TRIBE	SCHOOL GRADE			
	A	B	C	D
KIKUYU	38.3	27.5	26.3	53.3
LUO	17.3	25.1	25.0	14.1
LUHYA	11.2	16.7	18.8	15.6
EMBU	-	-	1.3	1.3
KAMBA	4.5	13.7	21.3	9.9
MERU	1.5	0.4	-	1.2
OTHERS	7.3	5.8	7.5	4.7
ASIAN	20.0	10.8	-	-
	100.1%	100.0%	100.2%	100.1%

## Notes:

1. Do not add up to 100.00% because of rounding

TABLE X6

Question A3 - Respondents' Tribe, by  
School Grade  
Schools in Nyeri, Murang'a, Kiambu and  
Embu Districts (Rural)

TRIBE	SCHOOL GRADE			
	A	B	C	D
KIKUYU	67.2	78.5	74.8	74.3
LUO	5.2	1.0	2.0	0.6
LUHYA	5.6	0.2	-	0.1
EMBU	8.2	14.2	15.3	21.9
KAMBA	5.9	2.3	3.8	2.8
MERU	1.7	1.2	3.1	0.2
OTHERS	5.5	0.5	1.0	0.2
ASIAN	0.8	2.1	-	-
	100.1%	100.0%	100.0%	100.1%

## Notes:

1. Do not add up to 100.0% because of rounding

TABLE X7Question A2 - Respondents' Age byIndividual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	15.9	18.4	19.1	17.2
2	16.5	17.8	17.0	17.4
3	15.8	17.1	16.8	17.1
4	15.9	18.0	17.5	17.8
5	17.5	17.6	18.2	17.4
6	16.7	17.2	18.3	17.5
7	17.7	17.7	17.6	17.6
8	16.8	18.1	17.9	17.7
9	16.3	18.3	18.5	17.3
10	17.9	18.4		17.5
11	16.2	17.9		17.6
12	16.5	17.8		18.3
13	16.7	17.5		16.9
14	17.2	18.2		18.1
15	16.8	18.3		18.5
16	16.7	17.2		18.5
17	16.7			
18	16.8			
19	16.6			
20	16.5			
21	16.3			
Av.	16.67	17.84	17.88	17.65

TABLE X8Question A2 - Respondents' AgeMann-Whitney 'U' Test to determinesignificance of differences1. Significance at 0.01 Level by School Grade

A			
(B+C)	✓		
D	✓	x	

A      (B+C)      D

Significant      =      ✓  
 Not Significant =      x

Test Scores

A - (B+C)      z = 5.30

A - D              z = 2.88

(B+C) - D      z = 2.50

## Notes:

1. It was decided to compare the av. age in A schools (16.67) with D schools (17.65) and a composite figure for B + C schools (17.86).
2. Z scores used since both A and (B+C) samples have over 20 values.

TABLE X9

Question A2 - Respondents' AgeMann-Whitney 'U' Test to determinesignificance of differences2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	<u>Test Scores</u>
URBAN	A	X	/	A; urban-rural U = 46.5
	B	/	X	B; urban-rural U = 23.5
				<u>Scores</u>
				A (urban) = 16.60
				A (rural) = 16.74
				B (urban) = 17.90
				B (rural) = 17.82
Significant		= ✓		
Not significant		= X		

## Notes:

- Schools are compared within grades. The urban-rural effect is therefore examined by excluding the influence of school grade. This means that only A and B graded samples can be analysed since C and D samples provide too small a number of urban scores for significant comparison.

TABLE X10

## QUESTION A4 - RESPONDENTS' SEX

	SCHOOL GRADE										ALL		
	A		B		C		D		ALL		male female Total		
	male	female Total	male	female Total	male	female Total	male	female Total	male	female Total	male	female Total	
URBAN	234	150	384	143	50	193	70	10	80	-	81	81	738
RURAL	160	205	365	258	128	386	123	131	254	121	262	383	1388
TOTAL	394	355	749	401	178	579	193	141	334	121	343	464	2126
NO. SCHOOLS	21		16		9		16		62				
AV. NO. PER SCHOOL	35.7		36.2		37.1		29.0		34.3				

TABLE X11

Question B1 - Number of People in Father's  
Household, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	12.0	7.8	8.9	12.0
2	8.8	13.9	10.8	8.3
3	8.9	9.5	9.5	11.1
4	7.3	8.2	8.2	10.0
5	10.1	9.3	9.4	10.2
6	7.8	10.7	10.2	11.9
7	9.6	8.6	8.7	12.2
8	6.0	9.4	9.5	9.3
9	5.7	9.6	9.4	10.6
10	7.8	9.5		10.4
11	7.9	10.2		11.1
12	8.4	8.9		9.6
13	8.6	8.9		10.3
14	7.3	9.2		11.3
15	9.2	9.4		8.9
16	6.7	9.6		10.4
17	8.5			
18	8.4			
19	7.2			
20	8.7			
21	7.7			
Av.	8.22	9.54	9.40	10.48

TABLE X12

Question B2 - Number of People in Father's  
Household under 15, by individual school averages

No.	SCHOOL GRADE			
	A	B	C	D
1	6.0	3.4	3.9	5.1
2	3.2	5.4	4.9	3.4
3	3.3	4.3	4.1	5.6
4	2.7	3.9	4.0	4.8
5	4.3	4.2	4.5	4.8
6	3.4	4.6	3.8	3.9
7	4.7	4.4	4.4	5.2
8	2.0	4.3	4.3	5.1
9	1.8	4.1	3.9	4.8
10	3.0	4.4		4.9
11	2.5	3.9		4.2
12	4.2	4.6		5.2
13	3.1	4.5		3.5
14	3.1	4.2		4.2
15	3.3	4.1		4.6
16	4.3	4.0		5.0
17	2.9			
18	4.2			
19	3.8			
20	3.2			
21	2.8			
Av.	3.42	4.27	4.20	4.64

TABLE X13

Question B3 - Number of Children for which  
Father is paying school fees, by individual  
school averages

No.	SCHOOL GRADE			
	A	B	C	D
1	4.5	4.0	4.7	5.1
2	4.2	4.8	5.1	4.1
3	4.4	4.8	4.4	6.1
4	3.6	4.1	4.2	4.8
5	4.7	3.6	4.6	5.3
6	4.5	4.7	4.7	5.2
7	4.5	3.7	3.9	4.9
8	3.5	4.3	5.5	5.5
9	3.5	4.8	4.5	5.3
10	4.3	3.9		4.8
11	4.3	4.2		6.1
12	4.3	4.1		6.2
13	3.9	4.9		4.9
14	3.8	3.3		4.8
15	3.9	4.1		5.2
16	4.4	4.2		5.2
17	4.5			
18	4.2			
19	3.9			
20	4.0			
21	4.0			
Av.	4.14	4.22	4.62	5.22

TABLE X14

Composite Scores - Addition of Individual School  
Averages for questions B1, B2 and B3, by  
individual school

No.	SCHOOL GRADE			
	A	B	C	D
1	7.51	5.07	5.83	7.40
2	5.40	8.03	6.93	5.27
3	5.53	6.18	6.00	7.60
4	4.53	5.40	5.47	6.52
5	6.35	5.70	6.17	6.77
6	5.24	6.67	6.23	7.00
7	6.28	5.57	5.67	7.43
8	3.83	5.99	6.43	6.63
9	3.67	6.17	5.93	6.90
10	5.03	5.93		6.70
11	4.90	6.10		7.13
12.	5.63	5.87		7.00
13	5.20	6.10		6.23
14	4.73	5.57		6.77
15	5.47	5.87		6.23
16	5.13	5.93		6.87
17	5.30			
18	5.60			
19	4.97			
20	5.30			
21	4.83			
Av.	5.26	6.01	6.07	6.78

TABLE X15

Composite scores (B1 + B2 + B3)

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 3.30$
B	✓				A-C	$z = 3.07$
C	✓	x			A-D	$z = 4.29$
D	✓	✓	✓		B-C	$U = 31.0$
	A	B	C	D	B-D	$U = 41.0$
					C-D	$U = 21.0$

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location:

	RURAL			
	A	B		
URBAN	A	x		<u>Test Scores</u> A; urban-rural $U = 31.0$ B; urban-rural $U = 16.5$
	B		x	

Significant = ✓  
 Not Significant = x

Notes:

- Z scores used for A sample since it contains more than 20 values

TABLE X16

Question B5 - Language spoken by Father - Swahili,  
by individual School Averages

No.	SCHOOL GRADE							
	A		B		C		D	
	None	Fl.	None	Fl.	None	Fl.	None	Fl.
1	4.0	36.0	16.7	60.0	2.5	47.5	11.6	34.9
2	2.5	67.5	15.8	36.8	15.0	40.0	7.9	39.5
3	-	83.3	15.0	42.5	8.6	60.0	63.0	8.7
4	13.2	44.7	2.1	76.6	18.6	32.6	52.5	27.5
5	13.9	66.7	23.3	30.0	16.2	52.1	47.2	11.2
6	17.5	52.5	12.8	57.4	7.3	61.0	65.0	6.5
7	21.1	31.6	26.1	43.5	18.9	32.3	49.3	15.6
8	6.7	80.0	-	64.7	8.7	46.0	53.6	9.2
9	13.0	60.9	8.7	72.1	11.3	41.0	62.9	8.3
10	3.1	59.4	13.4	52.1			67.5	11.7
11	-	71.4	14.2	32.6			32.4	42.1
12	13.2	73.4	13.6	37.9			52.6	31.6
13	7.3	67.2	15.2	61.2			41.9	25.7
14	6.5	41.9	24.2	27.8			21.8	31.2
15	4.9	63.2	11.1	43.5			63.2	11.7
16	11.3	51.6	17.6	51.0			69.8	19.6
17	12.4	43.2						
18	8.6	37.8						
19	8.9	53.9						
20	11.2	64.1						
21	7.4	67.3						
Av.	8.89	57.98	14.36	49.36	11.90	45.83	47.64	20.94

## Notes:

1. Giving average percentage speaking Swahili fluently and not at all

TABLE X17

Question B5 - Father's speaking fluent Swahili -

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 1.69
B	x				A-C	z = 2.33
C	x	x			A-D	z = 4.89
D	✓	✓	✓		B-C	U = 62.0
	A	B	C	D	B-D	U = 17.0
					C-D	U = 8.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	B	<u>Test Scores</u>
	B	A	

A; urban-rural U = 22.0  
B; urban-rural U = 16.0

Scores

A (urban) = 64.81  
A (rural) = 50.47  
B (urban) = 57.64  
B (rural) = 45.59

TABLE X17

Question B5 - Father's speaking fluent Swahili -

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 1.69
B	x	/	/	/	A-C	z = 2.33
C	x	x	/	/	A-D	z = 4.89
D	✓	✓	✓	/	B-C	U = 62.0
	A	B	C	D	B-D	U = 17.0
					C-D	U = 8.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	/	<u>Test Scores</u> A; urban-rural U = 22.0 B; urban-rural U = 16.0  <u>Scores</u> A (urban) = 64.81 A (rural) = 50.47 B (urban) = 57.64 B (rural) = 45.59
	B	x	

TABLE X18

Question B5 - Father's speaking No Swahili -

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

A				
B	✓			
C	x	x		
D	✓	✓	✓	
	A	B	C	D

Test Scores

A-B	z = 2.67
A-C	z = 1.30
A-D	z = 4.60
B-C	U = 57.5
B-D	U = 29.0
C-D	U = 10.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL	
	A	B
A	x	
B		x
URBAN		

Test Scores

A; urban-rural	U = 25.0
B; urban-rural	U = 15.0

Scores

A (urban)	= 6.40
A (rural)	= 11.63
B (urban)	= 12.06
B (rural)	= 15.41

TABLE X19

Question B5 - Languages spoken by Father - English,  
by Individual School Averages

No.	SCHOOL GRADE							
	A		B		C		D	
	None	Fl.	None	Fl.	None	Fl.	None	Fl.
1	76.0	16.0	56.7	33.3	35.0	22.6	44.2	16.3
2	-	85.0	60.5	26.3	42.5	25.0	42.1	18.4
3	6.7	83.3	35.0	32.5	48.6	34.3	87.0	4.3
4	13.1	65.8	38.3	48.9	44.2	18.6	87.5	7.5
5	38.9	27.8	43.3	30.0	46.3	24.1	73.6	8.4
6	40.0	30.0	40.4	19.1	49.2	20.9	79.2	7.5
7	60.5	13.2	47.8	34.7	37.8	32.4	65.4	12.6
8	-	100.0	14.7	26.5	52.6	18.7	57.6	19.6
9	-	95.7	35.3	35.6	32.4	23.9	82.9	3.2
10	-	87.5	42.1	22.3			97.1	-
11	2.4	92.9	47.9	19.7			74.2	5.7
12	10.3	62.9	48.2	23.9			62.7	11.2
13	11.2	87.3	57.6	18.7			63.5	3.6
14	16.1	77.6	59.5	19.6			78.9	4.7
15	7.4	73.8	32.6	27.8			82.7	7.6
16	42.1	22.9	39.2	25.6			93.6	-
17	38.9	36.2						
18	47.6	25.8						
19	53.7	18.6						
20	32.6	37.9						
21	61.0	23.2						
Av.	26.70	55.40	43.69	27.78	43.17	24.50	73.26	8.16

## Notes:

1. Giving average percentage speaking English fluently and not at all

TABLE X20

Question B5 - Father's speaking fluent English --

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 2.33$
B	X				A-C	$z = 2.33$
C	X	X			A-D	$z = 5.50$
D	✓	✓	✓		B-C	$U = 50.0$
	A	B	C	D	B-D	$U = 1.5$
					C-D	$U = 2.0$

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	B	<u>Test Scores</u>
	B	A	

A; urban-rural  $U = 0$   
B; urban-rural  $U = 21.0$

Scores

A (urban) = 82.89  
A (rural) = 22.37  
B (urban) = 31.18  
B (rural) = 26.24

TABLE X21

Question B5 - Father's speaking No English -

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

A				
B	✓			
C	x	x		
D	✓	✓	✓	
	A	B	C	D

Test Scores

- A-B      z = 5.39
- A-C      z = 1.52
- A-D      x = 4.49
- B-C      U = 31.0
- B-D      U = 18.0
- C-D      U = 10.5

Significant =  
Not Significant =

2. Significance at 0.01 Level by School Location

	RURAL	
	A	B
A	✓	
B		x
URBAN		

Test Scores

- A; urban-rural    U = 0
- B; urban-rural    U = 22.0

Scores

- A (urban) = 6.10
- A (rural) = 49.13
- B (urban) = 39.88
- B (rural) = 45.22

TABLE X22

Question B9 - Father's Education,  
by Individual School Averages

No.	SCHOOL GRADE																							
	A						B						C						D					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	56.0	20.0	4.0	4.0	-	16.0	10.0	30.0	40.0	13.3	6.7	-	17.5	35.0	20.0	17.5	2.5	7.5	27.9	34.9	14.0	20.9	2.3	-
2	2.5	-	7.5	25.0	22.5	42.5	63.2	13.2	10.5	2.6	5.2	5.2	27.5	37.5	17.5	7.5	5.0	5.0	23.7	36.8	18.4	13.2	2.6	5.2
3	-	10.0	3.3	23.3	10.0	53.3	25.0	22.5	17.5	15.0	7.5	12.5	20.0	42.9	8.6	11.4	-	17.1	46.0	39.0	7.0	8.0	-	-
4	10.5	7.9	10.5	18.4	15.8	36.8	27.7	19.1	19.1	19.1	4.3	10.6	30.2	37.2	18.6	9.3	4.7	4.7	37.5	27.5	15.0	20.0	-	-
5	16.7	36.1	13.9	16.7	11.1	5.6	26.7	53.3	13.3	6.7	-	-	24.5	45.6	8.6	12.1	-	9.2	35.0	35.0	15.0	10.2	4.8	-
6	20.0	27.5	15.0	20.0	2.5	15.0	36.2	27.7	10.6	19.1	2.1	4.2	25.0	49.3	20.0	3.5	2.2	-	39.2	32.3	10.0	11.1	5.0	2.4
7	21.1	50.0	18.4	10.5	-	-	12.5	33.3	29.2	12.5	4.2	8.3	20.0	32.5	25.0	8.5	4.0	10.0	43.1	40.0	12.3	2.3	2.3	-
8	-	-	6.7	6.7	16.7	70.0	5.9	29.4	23.5	17.6	11.8	11.8	18.6	35.0	15.6	13.2	12.6	5.0	21.6	50.0	11.6	4.1	13.7	-
9	-	-	-	-	17.4	82.6	26.7	12.3	18.0	29.7	-	13.3	26.2	50.0	13.2	6.3	4.3	-	23.9	46.7	21.0	8.4	-	-
10	3.1	-	3.1	25.0	28.1	40.6	32.1	32.9	19.2	8.4	2.1	5.3							25.0	57.6	8.5	8.9	-	-
11	2.4	7.1	7.1	16.7	16.7	50.0	28.2	33.2	17.3	7.3	7.3	6.7							30.0	53.1	10.3	6.6	-	-
12	-	12.7	-	22.6	15.7	49.0	21.3	35.0	15.0	21.9	5.0	1.8							45.0	33.6	11.1	10.3	-	-
13	3.2	13.2	4.6	21.7	24.2	33.1	19.7	25.0	28.7	11.3	-	15.3							46.7	35.0	13.2	5.1	-	-
14	7.8	16.9	5.8	32.3	11.8	25.4	34.3	20.0	12.6	4.7	15.0	23.7							50.0	25.7	12.7	11.6	-	-
15	8.4	8.4	2.7	18.7	16.9	44.9	20.0	24.6	21.2	18.2	7.1	8.9							27.3	53.4	14.0	5.3	-	-
16	15.2	19.3	11.2	6.3	8.7	39.3	25.0	31.0	19.2	17.1	7.7	-							35.0	46.2	8.2	10.6	-	-
17	23.4	18.6	13.1	7.9	9.3	27.7																		
18	25.0	11.2	2.9	11.3	10.1	39.5																		
19	11.4	21.3	-	13.2	15.2	38.9																		
20	31.3	14.6	17.8	7.8	22.9	5.6																		
21	12.1	14.5	12.4	15.0	19.6	26.4																		
Av.	12.9	14.7	7.6	15.4	14.1	35.3	25.9	27.7	19.7	14.0	5.4	8.0	23.3	40.6	16.3	9.9	3.9	6.5	34.8	40.4	12.6	9.8	1.9	0.5

Notes:

## 1. Coding:-

- 1 = % having no education  
 2 = % " some primary education  
 3 = % " education up to Standard VII  
 4 = % " education up to Form II  
 5 = % " education up to Form VI  
 6 = % " University or College Education

TABLE X23Question B9 - Father's Education - CompositeScores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	2.76	2.77	2.75	2.35
2	4.93	1.94	2.40	2.50
3	4.93	2.95	2.80	1.77
4	4.32	2.85	2.49	2.18
5	2.87	2.00	2.45	2.15
6	3.03	2.36	2.09	2.18
7	2.18	2.88	2.74	1.81
8	5.50	3.35	2.81	2.41
9	5.83	3.04	2.13	2.14
10	4.97	2.31		2.01
11	4.88	2.52		1.94
12	4.78	2.55		1.87
13	4.50	2.93		1.77
14	4.0	2.48		1.86
15	5.07	2.95		1.97
16	4.31	2.52		1.93
17	3.72			
18	3.89			
19	4.16			
20	2.94			
21	3.95			
Av.	4.16	2.65	2.52	2.05

## Notes:

- Composite scores are calculated by awarding points as follows; No education = 1, Some Primary = 2, Up to Standard VII = 3, Up to Form II = 4, Up to Form VI = 5, College or University = 6

TABLE X24

Question B9 - Father's Education - Composite Scores

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

A	/	/	/	/
B	✓	/	/	/
C	✓	x	/	/
D	✓	✓	✓	/
	A	B	C	D

Test Scores

A-B	z = 4.32
A-C	z = 3.37
A-D	z = 5.05
B-C	U = 93.0
B-D	U = 21.5
C-D	U = 24.5

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL

A B

	A	B
URBAN	A ✓	/
	/	B x

Test Scores

A; urban-rural	U = 8.0
B; urban-rural	U = 26.0

Scores

A (urban)	= 4.88
A (rural)	= 3.38
B (urban)	= 2.51
B (rural)	= 2.71

TABLE X25

Question B9 - Father's having College or University Education -  
Composite Scores, Mann-Whitney 'U' Test to determine  
significance of differences

1. Significance at 0.01 Level by School Grade

	A	B	C	D	
A	/	/	/	/	A-B z = 4.06
B	✓	/	/	/	A-C z = 3.46
C	✓	x	/	/	A-D z = 5.38
D	✓	✓	✓	/	B-C U = 61.0
	A	B	C	D	B-D U = 30.5
					C-D U = 20.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
A	✓	/
B	/	x

Test Scores

A; urban-rural U = 11.0  
 B; urban-rural U = 24.0

Averages

A - urban = 48.0%  
 A - rural = 21.4%  
 B - urban = 6.7%  
 B - rural = 8.6%

TABLE X25a

Question B9 - Father's having No Education - Composite ScoresMann-Whitney 'U' Test to determine significance of differences1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 3.20
B	✓	/	/	/	A-C	z = 2.08
C	x	x	/	/	A-D	z = 4.30
D	✓	✓	✓	/	B-C	U = 58.0
	A	B	C	D	B-D	U = 63.0
					C-D	U = 14.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	<u>Test Scores</u>
URBAN	A	✓	/	A; urban-rural U = 0
	B	/	x	B; urban-rural U = 12

Averages

A - urban = 3.4%  
 A - rural = 23.2%  
 B - urban = 29.9%  
 B - rural = 24.1%

TABLE X26

Question B6 - Father's Occupation,  
by Individual School Averages

No.	SCHOOL GRADE																			
	A					B					C					D				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1	17.4	4.3	4.3	-	73.9	-	22.7	31.8	9.1	36.4	-	18.9	32.4	10.8	37.8	2.4	2.4	26.8	26.8	41.5
2	50.0	15.0	22.5	-	12.5	6.5	9.7	12.9	6.5	64.5	2.5	5.0	30.0	27.5	35.0	7.9	2.6	31.6	34.2	23.7
3	33.3	36.7	13.3	-	16.7	5.0	2.5	7.5	5.0	80.0	2.9	5.9	17.6	8.8	64.7	2.2	-	6.5	10.9	80.4
4	38.5	30.6	19.4	2.8	5.6	6.7	13.3	22.2	22.2	35.6	4.5	4.5	27.3	18.2	45.5	-	-	7.5	17.5	75.0
5	8.6	8.6	17.1	8.6	57.1	6.5	9.7	16.1	32.3	35.5	3.0	6.1	18.2	21.2	51.5	-	-	9.1	18.2	72.7
6	10.3	10.3	10.3	2.6	66.7	-	12.8	27.7	25.5	34.0	-	7.1	14.3	11.9	66.7	-	-	10.0	30.0	60.0
7	2.6	10.3	10.3	5.1	71.8	4.2	25.0	29.2	20.8	20.8	3.0	6.1	21.2	21.2	48.5	-	2.6	7.7	23.1	66.7
8	32.3	48.4	12.9	-	6.5	5.9	8.8	14.7	14.7	55.9	4.0	8.0	24.0	16.0	48.0	3.1	6.3	9.4	21.9	59.4
9	43.5	56.5	-	-	-	8.8	23.5	23.5	23.5	20.6	2.9	2.9	22.9	20.0	51.4	-	-	8.0	20.0	72.0
10	37.5	31.3	21.9	3.1	6.3	8.6	25.7	22.9	22.9	20.0	-	-	-	-	-	-	-	16.7	16.7	66.7
11	42.9	45.2	4.8	-	7.1	2.8	11.1	27.8	22.2	36.1	-	-	-	-	-	-	10.0	20.0	20.0	50.0
12	42.9	28.6	20.0	-	8.6	5.4	16.2	18.9	10.8	48.6	-	-	-	-	-	-	-	16.7	16.7	66.7
13	25.0	32.5	27.5	2.5	7.5	-	21.6	21.6	18.9	37.8	-	-	-	-	-	3.3	3.3	6.7	10.0	76.7
14	39.5	34.2	18.4	-	7.9	5.1	10.3	30.8	20.5	33.3	-	-	-	-	-	-	2.7	8.1	24.3	64.9
15	27.8	41.7	13.9	5.6	11.1	7.7	15.4	23.1	15.4	38.5	-	-	-	-	-	-	2.0	15.7	35.3	47.1
16	16.7	29.2	25.0	8.3	20.8	5.0	12.5	25.0	25.0	32.5	-	-	-	-	-	-	-	-	20.0	80.0
17	13.5	27.0	24.3	8.1	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	14.6	19.5	9.8	-	56.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	16.2	16.2	8.1	2.7	56.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	15.8	7.9	10.5	-	65.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	13.2	23.7	2.6	2.6	57.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Av.	25.8	26.8	14.1	2.5	30.7	4.9	15.1	22.2	18.5	39.4	2.5	7.2	23.1	17.3	49.9	1.2	2.0	12.5	21.6	62.7

Notes:

1. Coding:-

- 1 = Professional
- 2 = Skilled/Top Administration
- 3 = Semi-skilled/Administration
- 4 = Unskilled
- 5 = Farming

TABLE X27

Question B6 - Father's Occupation - CompositeScores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	1.91	2.41	2.51	1.97
2	3.90	1.88	2.13	2.37
3	3.70	1.48	1.73	1.33
4	3.84	2.33	2.04	1.33
5	2.03	2.20	1.88	1.36
6	1.96	2.19	1.62	1.50
7	1.67	2.71	1.94	1.46
8	4.00	1.94	2.04	1.72
9	4.44	2.76	1.86	1.36
10	3.91	2.80		1.50
11	4.17	2.22		1.90
12	3.98	2.19		1.47
13	3.70	2.27		1.47
14	3.97	2.33		1.38
15	3.70	2.39		1.73
16	3.13	2.33		1.20
17	2.92			
18	2.37			
19	2.32			
20	2.08			
21	2.32			
Av.	3.14	2.28	1.97	1.57

## Notes:

- Composite scores are calculated by awarding points as follows; Professional = 5, Skilled/Top Administration = 4, Semi-Skilled/Administration = 3, Unskilled = 2, Farming = 1.

TABLE X28

Question B6 - Father's Occupation - Composite ScoresMann-Whitney 'U' Test to determine significance of differences1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 2.42
B	x	/	/	/	A-C	z = 3.10
C	✓	✓	/	/	A-D	z = 4.74
D	✓	✓	✓	/	B-C	U = 29.0
	A	B	C	D	B-D	U = 21.0
					C-D	U = 19.5

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	<u>Test Scores</u>
URBAN	A	✓	/	A; urban-rural U = 0
	B	/	x	B; urban-rural U = 18.5
				<u>Scores</u>
				A (urban) = 3.94
				A (rural) = 2.27
				B (urban) = 2.46
				B (rural) = 2.20

TABLE X29

Question B7 - Percentage of Fathers owning  
businesses, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	20.0	13.3	5.0	18.6
2	35.0	10.5	15.0	21.1
3	43.3	12.5	25.7	4.3
4	34.2	10.6	25.6	20.0
5	22.2	6.7	14.3	9.1
6	20.0	17.0	13.6	-
7	15.8	20.8	9.1	9.3
8	73.3	50.0	10.7	11.4
9	52.2	44.1	11.1	12.0
10	31.3	40.0		-
11	61.9	17.9		-
12	48.6	15.0		16.7
13	57.5	18.9		5.9
14	55.3	15.0		10.8
15	52.8	15.4		7.1
16	32.0	9.5		6.7
17	37.8			
18	38.1			
19	38.5			
20	47.4			
21	35.9			
Av.	40.6	19.8	14.5	9.6

TABLE X30

Question B7 - Percentage of Father's owning Businesses

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

		<u>Test Scores</u>			
A					
B	✓				
C	✓	x			
D	✓	✓	x		
		A	B	C	D

A-B	z = 3.74
A-C	z = 3.91
A-D	z = 4.90
B-C	U = 54.0
B-D	U = 60.5
C-D	U = 45.5

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL

		A	B
URBAN	A	✓	
	B		x

Test Scores

A; urban-rural U = 17.0  
 B; urban-rural U = 26.0

Scores

A (urban) = 49.6  
 A (rural) = 30.8  
 B (urban) = 29.6  
 B (rural) = 18.1

TABLE X31

Question B10 - Acreage of Land Owned by  
Fathers, by Individual School Averages

		SCHOOL GRADE															
		A								B							
No.		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1	4.0	28.0	8.0	40.0	8.0	12.0	-	-	-	11.1	22.2	18.5	22.2	3.7	18.5	3.7	-
2	10.0	5.0	12.5	30.0	25.0	17.5	-	-	-	10.5	34.2	36.8	15.8	2.6	-	-	-
3	13.3	6.7	16.7	20.0	16.7	16.7	3.3	6.7	6.7	5.0	20.0	20.0	35.0	15.0	2.5	2.5	-
4	14.5	21.1	18.4	15.8	7.9	18.4	2.6	2.6	2.6	21.3	23.4	23.4	12.8	14.9	4.3	-	-
5	2.8	19.4	22.2	30.6	8.3	13.9	2.8	-	-	3.3	33.3	26.7	23.3	13.3	-	-	-
6	10.0	17.5	22.5	20.0	12.5	15.0	-	2.5	2.5	8.5	12.8	36.2	21.3	12.8	8.5	-	-
7	21.1	21.1	21.1	23.7	13.2	-	-	-	-	16.7	-	29.2	33.3	16.7	4.2	-	-
8	26.7	16.7	-	-	3.3	16.7	3.3	33.3	33.3	-	8.8	20.6	35.3	20.6	14.7	-	-
9	21.7	-	4.3	-	8.6	13.0	26.1	26.1	26.1	14.7	23.5	20.6	23.5	5.9	5.9	5.9	-
10	12.5	15.6	3.1	12.5	31.3	21.9	3.1	-	-	8.6	11.4	17.1	28.6	31.4	2.9	-	-
11	23.8	16.7	7.1	11.9	7.1	19.0	4.8	9.5	9.5	17.9	30.8	35.9	5.1	5.1	5.1	-	-
12	24.6	11.1	14.3	17.2	10.1	11.0	4.4	7.3	7.3	7.5	7.5	35.0	17.5	20.0	10.0	2.5	-
13	10.0	10.0	10.0	20.0	10.0	5.0	10.0	25.0	25.0	13.5	-	43.2	24.3	5.4	8.1	2.7	2.7
14	5.6	11.3	6.7	20.7	25.0	15.2	11.3	4.2	4.2	15.0	22.5	5.0	12.5	35.0	7.5	2.5	-
15	33.3	34.4	5.6	5.6	11.1	13.9	-	-	-	30.8	15.4	15.4	15.4	23.1	-	-	-
16	8.0	16.0	28.0	36.0	4.0	4.0	4.0	4.0	4.0	-	9.5	31.0	38.1	14.3	7.1	-	-
17	-	2.7	2.7	2.7	48.6	27.0	10.8	5.4	5.4	-	-	-	-	-	-	-	-
18	11.9	11.9	14.3	11.9	16.7	11.9	7.1	14.3	14.3	-	-	-	-	-	-	-	-
19	15.4	20.5	10.3	23.1	7.7	17.9	-	5.1	5.1	-	-	-	-	-	-	-	-
20	15.8	18.4	7.9	23.7	7.9	7.9	10.5	7.9	7.9	-	-	-	-	-	-	-	-
21	17.9	10.3	7.7	25.6	10.3	7.7	5.1	15.4	15.4	-	-	-	-	-	-	-	-
AV.	14.4	15.0	11.6	18.6	14.0	13.6	5.2	7.9	7.9	11.5	17.2	25.9	22.8	15.0	6.2	1.2	0.2

TABLE X31 (continued)

Question B10 - Acreage of Land Owned by  
Fathers, by Individual School Averages

No.	SCHOOL GRADE															
	C								D							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1	22.5	30.0	15.0	22.5	2.5	7.5	-	-	7.0	25.6	23.3	32.6	11.6	-	-	-
2	7.5	17.5	32.5	20.0	15.0	7.5	-	-	13.2	31.6	28.9	18.4	7.9	-	-	-
3	5.7	25.7	22.9	31.4	11.4	2.9	-	-	17.0	41.0	22.0	15.0	4.0	-	-	-
4	11.6	11.6	27.9	25.6	13.9	4.7	4.7	-	12.5	27.5	35.0	12.5	10.0	2.5	-	-
5	8.6	48.6	17.1	8.6	11.4	5.7	-	-	36.4	36.4	9.1	9.1	9.1	-	-	-
6	6.8	27.3	38.6	25.0	2.3	-	-	-	25.0	16.7	25.0	16.7	8.3	8.3	-	-
7	21.2	24.2	24.2	15.2	6.1	9.1	-	-	34.9	27.9	20.9	9.3	7.0	-	-	-
8	17.9	28.6	28.6	14.3	3.6	7.2	-	-	20.0	11.4	25.7	34.3	5.7	2.9	-	-
9	16.7	25.0	25.0	11.1	11.1	11.1	-	-	32.0	36.0	32.0	-	-	-	-	-
10	11.1	11.1	11.1	11.1	11.1	11.1	-	-	33.3	33.3	16.6	16.7	-	-	-	-
11	11.1	11.1	11.1	11.1	11.1	11.1	-	-	27.3	9.1	36.4	9.1	18.2	-	-	-
12	11.1	11.1	11.1	11.1	11.1	11.1	-	-	33.3	25.0	16.7	8.3	16.7	-	-	-
13	11.1	11.1	11.1	11.1	11.1	11.1	-	-	26.5	29.4	23.5	11.8	8.8	-	-	-
14	11.1	11.1	11.1	11.1	11.1	11.1	-	-	21.6	29.7	27.0	5.4	5.4	8.1	2.7	-
15	11.1	11.1	11.1	11.1	11.1	11.1	-	-	35.7	32.1	16.1	7.1	8.9	-	-	-
16	11.1	11.1	11.1	11.1	11.1	11.1	-	-	33.3	26.7	26.7	6.7	6.7	-	-	-
17	11.1	11.1	11.1	11.1	11.1	11.1	-	-	25.6	27.5	24.1	13.3	8.0	1.4	0.2	-
18	11.1	11.1	11.1	11.1	11.1	11.1	-	-								
19	11.1	11.1	11.1	11.1	11.1	11.1	-	-								
20	11.1	11.1	11.1	11.1	11.1	11.1	-	-								
21	11.1	11.1	11.1	11.1	11.1	11.1	-	-								
AV.	13.2	26.5	25.8	19.3	8.6	6.2	0.5	-	25.6	27.5	24.1	13.3	8.0	1.4	0.2	-

Notes:

1. Coding:-

- 1 = Less than 1 acre
- 2 = 1 - 2 acres
- 3 = 3 - 4 acres
- 4 = 5 - 9 acres

- 5 = 10 - 19 acres
- 6 = 20 - 49 acres
- 7 = 50 - 99 acres
- 8 = 100 and over acres

TABLE X32

Question B10 - Acreage of Land Owned by Fathers -Composite Scores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	3.56	3.55	2.75	3.17
2	4.08	2.66	3.40	2.76
3	4.17	3.53	3.26	2.45
4	3.64	2.90	3.52	2.88
5	3.75	3.10	2.83	2.18
6	3.65	3.43	2.89	2.92
7	2.87	3.46	2.88	2.26
8	4.66	4.12	2.79	3.03
9	5.47	3.24	3.08	2.00
10	4.13	3.72		2.17
11	3.85	2.64		2.82
12	3.64	3.75		2.50
13	4.90	3.56		2.47
14	4.60	3.63		2.78
15	2.80	2.85		2.21
16	3.40	3.79		2.27
17	5.48			
18	4.45			
19	3.66			
20	3.95			
21	4.21			
Av.	4.04	3.37	3.04	2.55

## Notes:

- Composite Scores are calculated by awarding points as follows: <1 acre = 1, 1-2 acres = 2, 3-4 acres = 3, 5-9 acres = 4, 10-19 acres = 5, 20-49 acres = 6, 50-99 acres = 7, >100 acres = 8

TABLE X33

Question B10 - Acreage of Land owned by Fathers -

Composite Scores, Mann-Whitney 'U' Test to

determine significance of differences

1. Significance at 0.01 Level by School Grade

A				
B	✓			
C	✓	x		
D	✓	✓	✓	
	A	B	C	D

Test Scores

A-B	z = 3.22
A-C	z = 3.62
A-D	z = 4.87
B-C	U = 36.0
B-D	U = 22.0
C-D	U = 5.5

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL

	A	B
A	x	
B		x

Test Scores

A; urban-rural	U = 41.0
B; urban-rural	U = 25.0

Scores

A (urban)	= 4.18
A (rural)	= 3.90
B (urban)	= 3.28
B (rural)	= 3.41

TABLE X34

Question B12 - Land owned by Fathers away from  
Local Shamba, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	8.0	25.6	17.5	11.6
2	40.0	10.5	15.0	18.4
3	30.0	30.0	28.6	4.3
4	31.6	8.5	11.6	20.0
5	30.6	10.0	22.9	9.1
6	20.0	14.9	13.6	8.3
7	13.2	20.8	12.1	9.3
8	53.3	47.1	17.9	17.1
9	50.0	34.2	17.1	16.0
10	40.6	28.6		-
11	45.2	15.4		-
12	54.3	17.5		8.3
13	40.0	27.0		17.6
14	50.0	25.0		18.9
15	47.2	23.1		10.7
16	36.0	23.8		13.3
17	43.2			
18	28.6			
19	41.0			
20	36.8			
21	33.3			
Av.	36.8	22.6	17.4	11.4

TABLE X35

Question B12 - Land owned by Fathers away from Local Shamba -  
Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 3.34
B	✓	/	/	/	A-C	z = 3.44
C	✓	x	/	/	A-D	z = 4.52
D	✓	✓	x	/	B-C	U = 49.0
	A	B	C	D	B-D	U = 45.0
					C-D	U = 38.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	/	<u>Test Scores</u>
	B	x	
			B; urban-rural U = 20.0
			<u>Scores</u>
			A (urban) = 43.8
			A (rural) = 29.1
			B (urban) = 19.2
			B (rural) = 24.2

TABLE X36

Question B13 - Land Owned by Fathers away from  
Local Shamba - Percentage outside the District,  
by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	50.0	70.0	57.1	60.0
2	68.8	100.0	-	57.1
3	66.7	58.3	20.0	-
4	25.0	-	-	25.0
5	45.5	-	12.5	-
6	37.5	14.3	16.7	-
7	20.0	20.0	-	-
8	43.8	18.8	20.0	16.7
9	80.0	23.1	33.3	-
10	61.5	30.0		-
11	31.6	33.3		-
12	47.4	14.3		-
13	56.3	20.0		16.7
14	36.8	20.0		14.3
15	35.3	33.3		-
16	44.4	20.0		-
17	50.0			
18	33.3			
19	37.5			
20	42.9			
21	37.6			
Av.	45.3	29.7	17.7	12.8

TABLE X37

Question B13 - Land owned by Fathers away from Local Shamba -  
Percentage outside the District, Mann-Whitney 'U' Test to  
determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	$z = 3.03$
B	✓	/	/	/	A-C	$z = 2.94$
C	✓	x	/	/	A-D	$z = 4.06$
D	✓	x	x	/	B-C	$U = 48.0$
	A	B	C	D	B-D	$U = 70.0$
					C-D	$U = 52.5$

Significant = ✓

Not Significant = x

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	<u>Test Scores</u>
URBAN	A	x	/	A; urban-rural $U = 40.0$
	B	/	x	B; urban-rural $U = 12.5$
				<u>Scores</u>
				A (urban) = 50.3
				A (rural) = 39.9
				B (urban) = 13.5
				B (rural) = 37.1

TABLE X38

Question B14 - Acreage of Cash Crops grown by Fathers -  
 Combined Percentages, by Individual School Averages

No.	SCHOOL GRADE																	
	A									B								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
1	83.0	8.0	7.0	1.0	1.0	-	-	-	-	68.5	10.2	13.9	6.5	0.9	-	-	-	-
2	68.1	10.6	8.1	7.5	5.0	0.6	-	-	-	85.5	11.2	2.0	0.7	-	-	0.7	-	-
3	64.2	13.3	9.2	8.3	3.3	0.8	0.8	-	-	65.6	13.1	13.8	5.0	1.9	-	-	-	0.6
4	75.7	12.5	6.6	2.6	0.7	-	0.7	0.7	0.7	84.0	9.6	4.3	1.1	-	1.1	-	-	-
5	71.5	14.6	9.0	2.8	0.7	0.7	-	-	-	67.5	17.5	9.2	5.0	8.3	-	-	-	-
6	61.3	21.3	9.4	4.4	0.6	1.3	1.9	-	-	79.3	7.4	8.5	4.3	0.5	-	-	-	-
7	71.7	15.1	9.9	1.3	2.0	-	-	-	-	59.8	22.8	12.0	4.3	-	1.1	-	-	-
8	84.2	6.7	1.7	0.8	-	0.8	0.8	2.5	2.5	47.8	27.9	13.2	8.1	2.2	1.1	-	-	-
9	70.7	13.0	-	1.1	-	-	1.1	1.1	13.0	29.3	17.6	14.7	12.5	4.4	0.7	0.7	-	-
10	74.2	4.7	9.4	3.9	4.7	2.3	0.8	-	-	72.1	13.6	4.3	5.7	3.6	0.7	-	-	-
11	78.6	5.4	8.9	2.4	3.6	1.2	-	-	-	62.2	13.5	9.0	9.0	5.1	1.3	-	-	-
12	62.1	7.1	3.6	3.6	11.4	8.6	1.4	0.7	1.4	82.5	4.4	6.3	3.8	2.5	0.6	-	-	-
13	63.8	6.9	7.5	4.4	4.4	4.4	4.4	2.5	1.9	75.0	10.1	6.8	4.1	2.7	1.4	-	-	-
14	53.3	5.9	10.5	13.8	7.2	5.3	2.0	2.0	-	78.1	12.5	7.5	1.9	-	-	-	-	-
15	56.9	6.9	6.9	6.3	10.4	9.7	2.1	-	0.7	75.0	13.5	5.8	1.9	3.8	-	-	-	-
16	81.0	2.0	3.0	3.0	4.0	5.0	1.0	-	1.0	78.6	10.1	5.4	2.4	2.4	0.6	0.6	-	-
17	53.4	6.8	6.8	6.8	6.8	5.4	7.4	3.4	3.4	-	-	-	-	-	-	-	-	-
18	58.9	11.9	6.5	7.7	6.0	8.3	-	0.6	-	-	-	-	-	-	-	-	-	-
19	68.6	5.1	7.1	7.7	6.4	3.2	0.6	1.3	-	-	-	-	-	-	-	-	-	-
20	57.2	13.2	6.6	6.6	4.6	10.5	1.3	-	-	-	-	-	-	-	-	-	-	-
21	59.6	9.6	4.5	11.5	9.6	3.8	-	1.3	-	-	-	-	-	-	-	-	-	-
Av.	68.5	9.5	6.7	5.1	4.4	3.4	1.3	0.8	1.2	70.7	13.4	8.5	4.8	2.4	0.5	0.1	-	0.04

Notes: 1. "Cash Crops" refers to combined averages for coffee, tea, vegetables and fruit.

TABLE X38 (continued)

Question B14 - Acreage of Cash Crops grown by Fathers -  
 Combined Percentages, by Individual School Averages

No.	SCHOOL GRADE																	
	C					D												
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
1	84.4	6.9	5.6	3.1	-	-	-	-	-	80.2	8.1	8.1	2.3	1.2	-	-	-	-
2	51.3	13.8	32.5	2.5	-	-	-	-	-	75.0	12.5	7.9	3.9	0.7	-	-	-	-
3	76.4	7.9	11.4	2.9	-	-	1.4	-	-	75.0	13.6	8.7	1.1	1.6	-	-	-	-
4	64.5	15.1	14.5	3.5	1.2	-	1.2	-	-	82.5	8.1	6.3	1.9	0.6	0.6	-	-	-
5	60.7	15.7	9.3	7.1	7.1	-	-	-	-	81.8	9.1	0.2	0.2	0.5	-	-	-	-
6	62.8	19.9	6.4	6.4	4.5	-	-	-	-	77.1	10.4	10.4	2.1	-	-	-	-	-
7	66.7	18.9	11.4	3.0	-	-	-	-	-	70.3	13.4	9.9	1.7	3.5	1.2	-	-	-
8	74.1	6.3	9.8	9.8	-	-	-	-	-	79.3	7.1	7.1	2.1	4.3	-	-	-	-
9	68.1	18.8	6.9	6.3	-	-	-	-	-	81.0	10.0	7.0	2.6	-	-	-	-	-
10										83.3	8.3	4.2	4.2	-	-	-	-	-
11										63.6	25.0	6.8	2.3	2.3	-	-	-	-
12										60.4	16.7	12.5	8.3	2.1	-	-	-	-
13										75.7	11.8	11.8	7.4	-	-	-	-	-
14										83.9	6.8	4.7	4.7	-	-	-	-	-
15										71.4	19.2	4.5	2.2	1.8	0.4	0.4	-	-
16										78.3	16.7	1.7	3.3	-	-	-	-	-
17																		
18																		
19																		
20																		
21																		
Av.	67.7	13.7	12.0	5.0	1.4	-	0.3	-	-	76.2	12.3	7.0	3.1	1.2	0.1	0.06	-	-

Coding: -

1. = None	6 = 10 - 19 acres
2 = Less than 1 acre	7 = 20 - 49 acres
3 = 1 - 2 acres	8 = 50 - 99 acres
4 = 3 - 4 acres	9 = 100 acres and over
5 = 5 - 9 acres	

TABLE X39

Question B14 - Acreage of Cash Crops grown by  
Fathers (combined percentages) - Composite  
Scores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	1.29	1.61	1.27	1.36
2	1.72	1.22	1.86	1.43
3	1.79	1.68	1.48	1.41
4	1.51	1.27	1.67	1.32
5	1.52	1.92	1.84	1.04
6	1.74	1.39	1.70	1.38
7	1.47	1.65	1.51	1.58
8	1.59	1.93	1.55	1.45
9	2.54	2.10	1.52	1.30
10	1.70	1.57		1.29
11	1.51	1.86		1.55
12	2.38	1.42		1.75
13	2.34	1.54		1.64
14	2.50	1.33		1.30
15	2.48	1.27		1.46
16	1.72	1.44		1.30
17	2.91			
18	2.18			
19	1.97			
20	2.25			
21	2.20			
Av.	1.97	1.58	1.60	1.41

TABLE X40

Question B14 - Acreage of Cash Crops grown by Fathers

(combined percentages) - Composite Scores

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 2.79
B	✓				A-C	z = 1.92
C	x	x			A-D	z = 4.03
D	✓	x	x		B-C	U = 65.5
	A	B	C	D	B-D	U = 87.0
					C-D	U = 32.5

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
URBAN	A	B
	B	A

Significant = ✓  
Not Significant = x

Test Scores

A; urban-rural U = 46.5  
B; urban-rural U = 14.5

Scores

A (urban) = 2.01  
A (rural) = 1.93  
B (urban) = 1.65  
B (rural) = 1.54

TABLE X41

Question B11 - Labourers employed by Fathers,  
by Individual School Averages

No.	SCHOOL GRADE																							
	A						B						C						D					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	80.0	4.0	12.0	4.0	-	-	46.7	30.0	6.7	6.7	10.0	-	65.0	15.0	10.0	7.5	2.5	-	62.8	11.6	18.6	7.0	-	-
2	20.0	12.5	12.5	32.5	22.5	-	86.8	7.9	5.3	-	-	-	62.5	27.5	7.5	-	2.5	-	50.0	23.7	10.5	13.2	2.6	-
3	13.3	16.7	23.3	23.3	23.3	-	70.0	12.5	7.5	7.5	2.5	-	54.3	25.7	8.6	11.4	-	-	91.0	4.5	4.5	-	-	-
4	28.9	18.4	10.5	18.4	23.7	-	66.0	14.9	6.4	4.3	8.5	-	44.2	16.3	20.9	7.0	11.6	-	60.0	17.5	15.0	7.5	-	-
5	63.9	16.7	8.3	5.6	5.6	-	70.0	20.0	6.7	3.3	-	-	48.6	37.1	8.6	5.7	-	-	72.7	9.1	9.1	9.1	-	-
6	65.0	15.0	7.5	7.5	5.0	-	63.8	14.9	14.9	4.3	2.1	-	61.4	15.9	15.9	4.5	2.3	-	66.7	16.7	16.7	-	-	-
7	89.5	5.3	2.6	2.6	-	-	54.2	16.7	16.7	8.3	4.2	-	51.5	12.1	18.2	18.2	-	-	65.1	16.3	16.3	2.3	-	-
8	-	16.7	16.7	10.0	56.7	-	35.3	32.4	14.7	5.9	11.8	-	53.6	14.3	14.3	14.3	-	-	57.1	22.9	14.3	5.7	-	-
9	10.0	10.0	40.0	-	40.0	-	50.0	17.6	14.7	5.9	11.8	-	55.6	33.3	8.3	2.8	-	-	72.0	12.0	16.0	-	-	-
10	18.8	31.3	31.3	12.5	6.3	-	40.0	31.4	8.6	11.4	8.6	-							66.7	16.7	16.7	-	-	-
11	16.7	16.7	11.9	23.8	31.0	-	51.3	20.5	7.7	10.3	10.3	-							72.7	9.1	9.1	9.1	-	-
12	11.4	17.1	20.0	22.9	22.9	5.7	65.0	20.0	7.5	7.5	-	-							66.7	25.0	8.3	-	-	-
13	13.0	17.5	30.0	25.0	12.5	-	54.1	5.4	21.6	10.8	8.1	-							50.0	26.5	17.6	5.9	-	-
14	10.5	26.3	23.7	23.7	15.8	-	45.0	40.0	10.0	5.0	-	-							78.4	18.9	2.7	-	-	-
15	25.0	27.8	30.6	5.6	11.2	-	46.2	30.8	15.4	7.7	-	-							71.4	10.7	14.3	3.6	-	-
16	60.0	24.0	12.0	-	4.0	-	66.7	9.5	11.9	9.5	2.4	-							60.0	40.0	-	-	-	-
17	48.6	18.9	10.8	10.8	10.8	-																		
18	35.7	23.8	26.2	7.1	7.1	-																		
19	43.6	23.1	30.8	2.6	-	-																		
20	50.0	15.8	15.8	15.8	2.6	-																		
21	53.8	7.7	15.4	12.8	10.3	-																		
Av.	36.2	17.4	18.7	12.7	14.8	0.3	56.9	20.3	11.0	6.5	5.0	-	55.2	21.9	12.5	7.9	2.1	-	66.5	17.6	11.9	4.0	0.2	-

## Notes:

## 1. Coding:-

- 1 = None
- 2 = 1 Labourer
- 3 = 2 Labourers
- 4 = 3 - 4 Labourers
- 5 = 5 - 9 Labourers
- 6 = 10 and over

TABLE X42

Question B11 - Labourers employed by Fathers -  
Composite Scores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	1.40	2.04	1.68	1.70
2	3.25	1.19	1.53	1.95
3	3.26	1.60	1.77	1.14
4	2.89	1.75	2.26	1.70
5	1.73	1.43	1.71	1.55
6	1.73	1.66	1.70	1.50
7	1.18	1.92	2.03	1.56
8	4.07	2.27	1.82	1.69
9	3.50	2.12	1.58	1.44
10	2.57	2.17		1.50
11	3.36	2.08		1.55
12	3.42	1.58		1.42
13	3.03	2.13		1.79
14	3.08	1.75		1.24
15	2.51	1.85		1.50
16	1.64	1.71		1.40
17	2.16			
18	2.26			
19	1.93			
20	1.84			
21	2.18			
Av.	2.52	1.83	1.79	1.54

## Notes:

- Composite scores are calculated by awarding points as follows; None = 1, 1 Labourer = 2, 2 Labourers = 3, 3-4 Labourers = 4, 5-9 Labourers = 5, 10 and over = 6

TABLE X43

Question B11 - Labourers employed by Fathers - Composite Scores, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 3.65
B	✓	/	/	/	A-C	z = 2.49
C	x	x	/	/	A-D	z = 3.88
D	✓	✓	✓	/	B-C	U = 61.0
	A	B	C	D	B-D	U = 50.0
					C-D	U = 26.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
URBAN	A	/
	B	x

Test Scores

A; urban-rural U = 0  
B; urban-rural U = 17.5

Scores

A (urban) = 3.18  
A (rural) = 1.81  
B (urban) = 1.83  
B (rural) = 1.83

TABLE X44

Question B15 - Number of Dairy Cows owned by Fathers,  
by Individual School Averages

No.	SCHOOL GRADE																			
	A					B					C					D				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1	48.0	28.0	20.0	4.0	-	25.9	48.1	22.2	3.7	-	52.5	22.5	15.0	5.0	5.0	44.2	23.3	16.3	9.3	7.0
2	37.5	15.0	17.5	12.5	17.5	28.9	55.3	7.9	5.3	2.6	22.5	32.5	25.0	8.0	15.0	50.0	23.7	18.4	7.9	-
3	43.3	13.3	23.3	10.0	10.0	15.0	47.5	17.5	17.5	2.5	42.9	31.4	17.1	5.7	2.9	26.1	54.3	15.2	4.3	-
4	47.4	13.2	26.3	5.3	7.9	57.4	29.8	8.5	2.1	2.1	25.6	37.2	30.2	7.0	-	20.0	65.0	10.0	5.0	-
5	13.9	36.1	38.9	5.6	5.6	36.7	36.7	20.0	3.3	3.3	40.0	34.3	17.1	8.6	-	45.5	36.4	18.2	-	-
6	20.0	42.5	17.5	12.5	7.5	44.7	34.0	38.5	6.4	6.4	36.4	29.5	22.7	6.8	4.5	50.0	33.3	8.3	8.3	-
7	36.8	26.3	36.1	2.8	-	16.7	41.7	25.0	4.2	12.5	30.3	36.4	24.2	6.1	3.0	46.5	27.9	16.3	4.7	4.7
8	50.0	6.7	-	3.3	40.0	5.9	32.4	44.1	11.8	5.9	39.3	21.4	28.6	10.7	-	51.4	22.9	22.9	2.9	-
9	73.9	-	4.3	-	21.7	47.1	23.5	8.8	14.7	5.9	44.4	30.6	16.7	2.8	5.6	44.0	28.0	20.0	8.0	-
10	50.0	18.8	3.1	6.3	21.9	54.3	8.6	8.6	20.0	8.6						50.0	33.3	16.7	-	-
11	50.0	9.5	14.3	11.9	14.3	30.8	33.3	12.8	12.8	10.3						36.4	36.4	18.2	9.1	-
12	48.6	2.9	2.9	17.1	28.6	27.5	25.0	22.5	17.5	7.5						41.7	33.3	16.7	8.3	-
13	47.5	17.5	10.0	10.0	15.0	24.3	32.4	21.6	21.6	-						47.1	26.5	17.6	5.9	2.9
14	28.9	28.9	13.2	13.2	15.8	45.0	25.0	17.5	7.5	5.0						43.2	29.7	21.6	5.4	-
15	55.6	11.1	8.3	5.6	19.4	30.8	23.1	30.8	15.4	-						35.7	37.5	19.6	3.6	3.6
16	52.0	16.0	4.0	12.0	16.0	28.6	33.3	21.4	7.1	9.5						66.7	26.7	6.7	-	-
17	29.7	13.5	10.8	32.4	13.5															
18	28.6	28.6	11.9	16.7	14.3															
19	33.3	23.1	12.8	12.8	17.9															
20	23.7	26.3	18.4	26.3	5.3															
21	28.2	20.5	7.7	30.8	12.8															
Av.	40.3	18.9	14.3	12.0	14.5	32.5	33.1	18.6	10.7	5.1	37.1	30.6	21.8	6.4	4.0	43.7	33.6	16.4	5.2	1.1

Notes:

1. Coding:-

- 1 = None
- 2 = 1 - 2 Cows
- 3 = 3 - 4 Cows
- 4 = 5 - 9 Cows
- 5 = 10 and over

TABLE X45

Question B15 - Number of Dairy Cows owned by  
Fathers - Composite Scores, by Individual  
School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	1.80	2.04	1.88	2.12
2	2.58	1.97	2.58	1.84
3	2.30	2.45	1.94	1.98
4	2.13	1.61	2.19	2.00
5	2.53	2.00	1.94	1.73
6	2.45	1.96	2.13	1.75
7	2.09	2.54	2.15	1.94
8	2.77	2.80	2.11	1.78
9	1.95	2.09	1.95	1.92
10	2.32	2.20		1.67
11	2.31	2.39		2.00
12	2.75	2.53		1.92
13	2.28	2.40		1.91
14	2.58	2.03		1.89
15	2.22	2.31		2.02
16	2.24	2.35		1.40
17	2.86			
18	2.60			
19	2.59			
20	2.63			
21	2.80			
Av.	2.42	2.23	2.10	1.87

## Notes:

- Composite Scores are calculated by awarding points as follows; None = 1, 1-2 Cows = 2, 3-4 Cows = 3, 5-9 Cows = 4, 10 and over = 5

TABLE X46

Question B15 - No. of Dairy Cows owned by Fathers -  
Composite Scores, Mann-Whitney 'U' Test to determine  
significance of differences

1. Significance at 0.01 Level by School Grade

A				
B	X			
C	✓	X		
D	✓	✓	✓	
	A	B	C	D

Test Scores

- A-B      z = 2.05
- A-C      z = 2.78
- A-D      z = 4.63
- B-C      U = 47.0
- B-D      U = 41.0
- C-D      U = 27.0

Significant =      ✓  
 Not Significant =    X

2. Significance at 0.01 Level by School Location

RURAL

A      B

A	X	
URBAN		✓
B		

Test Scores

- A; urban-rural U = 43.0
- B; urban-rural U = 7.0

Scores

- A (urban) = 2.38
- A (rural) = 2.46
- B (urban) = 1.97
- B (rural) = 2.35

TABLE X47

Question B16 - Number of Grade Cattle owned by  
Fathers, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	0.76	1.50	0.90	0.47
2	2.60	1.90	0.70	0.87
3	2.40	2.70	1.40	1.35
4	2.10	0.28	1.21	0.70
5	2.30	0.83	1.31	0.55
6	2.28	0.85	0.95	0.58
7	0.97	2.75	1.24	0.95
8	7.80	3.10	0.64	1.11
9	4.00	1.68	1.03	0.44
10	2.70	2.09		1.00
11	3.60	1.62		0.73
12	3.97	0.90		0.92
13	2.78	2.89		0.47
14	3.26	1.15		1.14
15	3.86	0.62		0.34
16	2.24	2.07		0.40
17	1.95			
18	2.21			
19	2.74			
20	2.26			
21	2.54			
Av.	2.82	1.68	1.04	0.75

TABLE X48 .

Question B16 - Number of Grade Cattle owned by Fathers

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 2.84
B	✓	/	/	/	A-C	z = 3.73
C	✓	x	/	/	A-D	z = 4.94
D	✓	✓	x	/	B-C	U = 42.5
	A	B	C	D	B-D	U = 46.0
					C-D	U = 46.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
URBAN	A	/
	B	x
		<u>Test Scores</u>
		A; urban-rural U = 11.0
		B; urban-rural U = 14.0
		<u>Scores</u>
		A (urban) = 3.55
		A (rural) = 2.03
		B (urban) = 1.15
		B (rural) = 2.12

TABLE X.49

Question C1 - No. of Years Respondent has been  
at present School, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	3.00	3.00	2.50	2.50
2	2.90	3.00	2.20	2.30
3	3.00	3.00	2.10	2.40
4	2.90	2.60	2.50	2.75
5	3.00	2.40	2.70	2.20
6	3.00	2.64	2.25	2.45
7	2.89	3.00	2.50	2.70
8	2.90	2.90	2.40	2.15
9	2.80	2.65	2.50	2.20
10	2.80	3.00		2.10
11	2.90	2.90		2.65
12	3.00	2.50		2.30
13	3.00	2.45		2.35
14	3.00	2.90		2.40
15	3.00	2.95		2.27
16	2.90	2.70		2.25
17	2.95			
18	3.00			
19	2.85			
20	2.90			
21	3.00			
Av.	2.94	2.79	2.41	2.37

TABLE X50

Question C1 - No. of Years Respondent has been at present School, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

A	/	/	/	/
B	X	/	/	/
C	✓	✓	/	/
D	✓	✓	X	/
	A	B	C	D

Test Scores

- A-B      z = 1.30
- A-C      z = 4.30
- A-D      z = 5.15
- B-C      U = 17.0
- B-D      U = 24.0
- C-D      U = 61.5

Significant =      ✓  
 Not Significant =      X

2. Significance at 0.01 Level by School Location

		RURAL	
		A	B
URBAN	A	X	/
	B	/	X

Test Scores

- A; urban-rural U = 49.5
- B; urban-rural U = 15.0

Scores

- A (urban) = 2.93
- A (rural) = 2.95
- B (urban) = 2.66
- B (rural) = 2.85

TABLE X51

Question C2 - Total No. Years of Education per  
Respondent, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	11.3	11.3	11.5	11.7
2	11.4	11.3	12.1	11.1
3	11.4	11.2	11.6	11.5
4	11.2	11.2	11.7	11.1
5	11.6	11.5	11.5	11.1
6	11.4	11.2	11.3	11.2
7	11.3	10.8	11.2	11.4
8	11.9	11.9	11.4	10.9
9	11.9	11.5	11.6	11.5
10	11.6	11.7		11.2
11	12.9	11.3		11.0
12	12.0	11.4		11.0
13	11.7	11.5		11.3
14	11.9	11.5		10.8
15	11.8	11.4		11.0
16	11.4	11.6		10.9
17	11.8			
18	11.6			
19	11.6			
20	11.3			
21	11.5			
Av.	11.64	11.38	11.54	11.17

TABLE X52

Question C2 - Total No. Years of Education Per Respondent

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 2.18$
B	x				A-C	$z = 0.59$
C	x	x			A-D	$z = 3.92$
D	✓	✓	✓		B-C	$U = 48.5$
	A	B	C	D	B-D	$U = 63.5$
					C-D	$U = 20.5$

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
URBAN	A	B
	B	A

Test Scores  
A; urban-rural  $U = 25.0$   
B; urban-rural  $U = 26.0$

Scores  
A (urban) = 11.79  
A (rural) = 11.48  
B (urban) = 11.42  
B (rural) = 11.38

TABLE X53

Question C3 - No. of other Secondary Schools  
attended per Respondent, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	0.08	0.40	0.68	0.58
2	0.15	0.08	0.85	1.13
3	0.27	0.03	1.10	0.22
4	0.50	0.72	0.47	0.35
5	0.11	0.53	0.94	1.27
6	0.05	0.49	0.48	0.50
7	0.18	0.46	0.52	0.74
8	0.13	0.12	0.86	0.63
9	0.22	0.47	0.36	1.00
10	0.22	0.53		1.17
11	0.05	0.46		0.91
12	0.11	0.40		0.33
13	0.28	0.30		1.41
14	0.24	0.60		1.14
15	0.22	0.15		1.68
16	0.08	0.33		1.07
17	0.16			
18	0.14			
19	0.13			
20	0.26			
21	0.05			
Av.	0.173	0.379	0.696	0.883

TABLE X54

Question C3 - No. of Other Secondary Schools attended

Per Respondent, Mann-Whitney 'U' Test to determine

significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	$z = 2.99$
B	✓	/	/	/	A-C	$z = 3.28$
C	✓	✓	/	/	A-D	$z = 4.87$
D	✓	✓	x	/	B-C	$U = 25.5$
	A	B	C	D	B-D	$U = 39.5$
					C-D	$U = 51.0$

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
A	x	/	<u>Test Scores</u>
B	/	✓	
			A; urban-rural $U = 26.0$
			B; urban-rural $U = 4.0$
			<u>Scores</u>
			A (urban) = 0.217
			A (rural) = 0.124
			B (urban) = 0.548
			B (rural) = 0.303

TABLE X55

Question C6 - No. of Classes repeated per  
Respondent, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	0.28	0.54	0.55	0.56
2	0.30	0.87	0.85	0.47
3	0.27	0.75	0.69	0.74
4	0.50	0.77	0.63	0.80
5	0.56	0.90	0.71	0.55
6	0.40	0.51	0.66	0.75
7	0.71	0.63	0.42	0.74
8	0.13	0.79	0.75	0.89
9	-	0.59	0.64	0.56
10	0.34	0.24		1.00
11	0.10	0.67		0.82
12	0.11	0.80		1.08
13	0.23	0.24		0.79
14	0.16	0.93		0.95
15	0.25	0.54		0.68
16	0.44	0.79		0.47
17	0.30			
18	0.17			
19	0.51			
20	0.42			
21	0.49			
Av.	0.318	0.660	0.656	0.741

TABLE X56

Question C6 - No. of Classes repeated Per Respondent

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

		<u>Test Scores</u>			
A		A-B	z = 4.00		
B		A-C	z = 3.69		
C		A-D	z = 4.66		
D		B-C	U = 65.0		
		B-D	U = 106.0		
		C-D	U = 46.0		

A				
B	✓			
C	✓	x		
D	✓	x	x	
	A	B	C	D

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
A	✓		
B		x	
	A	B	

	<u>Test Scores</u>	
A; urban-rural	U = 15.5	
B; urban-rural	U = 20.5	
	<u>Scores</u>	
A (urban)	= 0.217	
A (rural)	= 0.428	
B (urban)	= 0.602	
B (rural)	= 0.686	

TABLE X57

Question C7 -- Pre-School Tuition in Writingby Individual School Averages

No.	SCHOOL GRADE											
	A			B			C			D		
	1	2	3	1	2	3	1	2	3	1	2	3
1	72.0	20.0	8.0	46.4	46.4	7.2	22.5	55.0	22.5	37.2	46.5	16.3
2	27.5	47.5	25.0	60.5	36.8	2.6	52.5	37.5	10.0	28.9	57.9	13.2
3	43.3	50.0	6.7	35.0	47.5	17.5	54.3	34.3	11.4	32.6	65.2	2.2
4	50.0	31.6	15.8	53.2	25.5	21.3	32.6	48.8	18.6	65.0	30.0	5.0
5	50.0	41.7	8.3	30.0	43.3	26.7	51.4	37.1	11.4	45.5	54.5	-
6	30.0	50.0	20.0	46.8	36.2	17.0	45.5	40.9	13.6	50.0	41.7	8.3
7	57.9	36.8	5.3	37.5	54.2	8.3	54.5	27.3	18.2	51.2	41.9	7.0
8	46.7	26.7	26.7	14.7	58.8	26.5	50.0	46.4	3.6	42.9	48.6	8.6
9	43.5	43.5	13.0	47.1	41.2	11.8	55.6	36.1	8.3	40.0	52.0	8.0
10	28.1	34.4	37.5	31.4	45.7	22.9				50.0	50.0	-
11	9.5	61.9	28.6	46.2	43.6	10.3				45.5	45.5	9.0
12	28.6	45.7	25.7	55.0	30.0	15.0				41.7	50.0	8.3
13	37.5	40.0	22.5	37.8	54.1	8.1				70.6	23.5	5.9
14	28.9	42.1	28.9	47.5	40.0	12.5				37.8	56.8	5.4
15	22.2	50.0	27.8	46.2	38.5	15.4				51.8	42.9	5.4
16	48.0	36.0	16.0	47.6	40.5	11.9				60.0	40.0	-
17	54.1	35.1	10.8									
18	61.9	23.8	14.3									
19	46.2	38.5	15.4									
20	50.0	34.2	15.8									
21	28.2	51.3	20.5									
Av.	41.1	40.0	18.7	42.7	42.6	14.7	46.5	40.4	13.1	46.9	46.7	6.4

Notes:

## 1. Coding:-

1 = No Tuition

2 = Some Tuition

3 = A Lot of Tuition

TABLE X58

Question C7 - Pre-School Tuition in Reading  
by Individual School Averages

No.	SCHOOL GRADE											
	A			B			C			D		
	1	2	3	1	2	3	1	2	3	1	2	3
1	68.0	16.0	16.0	53.6	28.6	17.9	25.0	50.0	25.0	44.2	44.2	11.6
2	27.5	47.5	25.0	60.5	36.8	2.6	52.5	42.5	5.0	39.5	42.1	18.4
3	36.7	53.3	10.0	52.5	40.0	7.5	42.9	42.9	14.3	58.7	39.1	2.2
4	27.0	51.4	21.6	53.2	29.8	17.0	41.9	41.9	16.3	67.5	30.0	2.5
5	55.6	27.8	16.7	43.3	30.0	26.7	57.1	37.1	5.7	54.5	45.5	-
6	27.5	45.0	27.5	44.7	38.3	17.0	45.5	43.2	11.4	58.3	33.3	8.3
7	57.9	34.2	7.9	37.5	45.8	16.7	48.5	39.4	12.1	48.8	46.5	4.7
8	46.7	23.3	30.0	32.4	55.9	11.8	28.6	67.9	3.6	54.3	40.0	5.7
9	34.8	47.8	17.4	32.4	50.0	17.6	58.3	33.3	8.3	40.0	56.0	4.0
10	31.3	31.3	37.5	34.3	51.4	14.3				50.0	50.0	-
11	11.9	57.1	31.0	48.7	41.0	10.3				63.6	36.4	-
12	31.4	40.0	28.6	52.5	32.5	15.0				41.7	50.0	8.3
13	32.5	40.0	27.5	56.8	37.8	5.4				52.9	38.2	8.8
14	15.8	52.6	31.6	57.5	30.0	12.5				54.1	40.5	5.4
15	41.7	36.1	22.2	46.2	46.2	7.6				55.4	37.5	7.1
16	28.0	44.0	28.0	45.2	50.0	4.8				53.3	46.7	-
17	48.6	37.8	13.5									
18	47.6	28.6	23.8									
19	43.6	30.8	25.6									
20	57.9	23.7	18.4									
21	46.2	43.6	10.3									
Av.	39.0	38.7	22.4	47.0	40.3	12.8	44.5	44.2	11.3	52.3	42.3	5.4

## Notes:

## 1. Coding:-

- 1 = No Tuition
- 2 = Some Tuition
- 3 = A Lot of Tuition

TABLE X59

Question C7 - Pre-School Tuition in English,  
by Individual School Averages

No.	SCHOOL GRADE											
	A			B			C			D		
	1	2	3	1	2	3	1	2	3	1	2	3
1	72.0	16.0	12.0	64.3	21.4	14.3	47.5	40.0	12.5	51.2	44.2	4.7
2	27.5	50.0	22.8	78.9	21.1	-	67.5	22.5	10.0	50.0	47.4	2.6
3	40.0	46.7	13.3	62.5	35.0	2.5	62.9	34.3	2.9	72.0	33.0	-
4	51.4	32.4	16.2	51.1	34.0	14.9	60.5	34.9	4.7	85.0	12.5	2.5
5	69.4	22.2	8.4	50.0	23.3	26.7	60.0	34.3	5.7	63.6	36.4	-
6	42.5	52.5	5.0	61.7	31.9	6.4	68.2	27.3	4.5	66.7	33.3	-
7	71.1	26.3	2.6	70.8	25.0	4.2	60.6	33.3	6.1	60.5	37.2	2.3
8	53.3	13.3	33.3	41.2	52.9	5.9	50.0	42.9	7.1	71.4	25.7	2.9
9	43.5	39.1	17.4	50.0	35.3	14.7	52.8	38.9	8.3	68.0	28.0	4.0
10	28.1	43.8	28.1	51.4	37.1	11.4				83.3	16.7	-
11	11.9	61.9	26.2	56.4	35.9	7.7				81.8	18.2	-
12	22.9	42.9	34.3	62.5	32.5	5.0				75.0	25.0	-
13	25.0	50.0	25.0	64.8	24.3	10.8				47.1	47.1	5.8
14	23.7	55.3	21.1	50.0	42.5	7.8				64.9	32.4	2.7
15	18.4	58.3	22.2	46.2	53.8	-				73.2	23.2	3.6
16	60.0	24.0	16.0	66.7	23.8	9.5				73.3	26.7	-
17	48.6	40.5	10.8									
18	54.8	33.3	11.9									
19	59.0	20.5	20.5									
20	63.2	31.6	5.3									
21	46.2	48.7	5.1									
Av.	44.4	38.5	17.0	58.0	33.1	8.8	58.9	34.3	6.9	67.9	30.4	1.9

## Notes:

## 1. Coding:-

- 1 = No Tuition
- 2 = Some Tuition
- 3 = A lot of Tuition

TABLE X60

Question C7 - Pre-School Tuition in Writing -  
Composite Scores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	1.36	1.61	2.00	1.79
2	1.98	1.42	1.58	1.84
3	1.63	1.83	1.57	1.37
4	1.61	1.68	1.88	1.40
5	1.58	1.97	1.60	1.55
6	1.90	1.70	1.68	1.58
7	1.47	1.71	1.64	1.56
8	1.80	2.12	1.54	1.66
9	1.70	1.65	1.53	1.68
10	2.09	1.92		1.50
11	2.19	1.64		1.64
12	1.97	1.60		1.67
13	1.85	1.70		1.35
14	2.00	1.65		1.68
15	2.06	1.69		1.54
16	1.68	1.64		1.40
17	1.57			
18	1.52			
19	1.71			
20	1.66			
21	1.92			
Av.	1.77	1.72	1.67	1.58

## Notes:

- Composite Scores are calculated by awarding points as follows; No Tuition = 1, Some Tuition = 2, A lot of Tuition = 3

TABLE X61

Question C7 - Pre-School Tuition in Reading -  
Composite Scores - by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	1.48	1.65	2.00	1.67
2	1.98	1.42	1.63	1.79
3	1.73	1.55	1.72	1.44
4	1.95	1.64	1.75	1.35
5	1.61	1.83	1.48	1.46
6	2.00	1.72	1.66	1.50
7	1.50	1.79	1.64	1.56
8	1.83	1.80	1.75	1.51
9	1.83	1.85	1.50	1.64
10	2.06	1.80		1.50
11	2.19	1.62		1.36
12	1.97	1.63		1.67
13	1.95	1.49		1.56
14	2.16	1.55		1.51
15	1.81	1.61		1.52
16	2.00	1.60		1.47
17	1.65			
18	1.76			
19	1.82			
20	1.61			
21	1.64			
Av.	1.83	1.66	1.68	1.53

Notes:

- Composite Scores are calculated by awarding points as follows; None = 1, some Tuition = 2, a lot of Tuition = 3

TABLE X62

Question C7 - Pre-School Tuition in English -  
Composite Scores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	1.40	1.50	1.65	1.54
2	1.95	1.21	1.43	1.53
3	1.73	1.40	1.40	1.38
4	1.65	1.64	1.44	1.18
5	1.39	1.77	1.46	1.36
6	1.63	1.45	1.36	1.33
7	1.32	1.33	1.46	1.42
8	1.80	2.18	1.57	1.32
9	1.74	1.65	1.56	1.36
10	2.00	1.60		1.17
11	2.14	1.51		1.18
12	2.12	1.43		1.25
13	2.00	1.46		1.58
14	1.98	1.58		1.38
15	2.02	1.54		1.30
16	1.56	1.43		1.27
17	1.62			
18	1.57			
19	1.62			
20	1.42			
21	1.59			
Av.	1.73	1.54	1.48	1.35

## Notes:

- Composite Scores are calculated by awarding points as follows; No Tuition = 1, Some Tuition = 2, A lot of Tuition = 3

TABLE X63

Question C7 - Pre-School Tuition in Writing - Composite Scores, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 1.00
B	x				A-C	z = 1.33
C	x	x			A-D	z = 2.67
D	✓	✓	x		B-C	U = 45.0
	A	B	C	D	B-D	U = 57.0
					C-D	U = 53.5

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
URBAN	A	B
	B	A

Test Scores

A; urban-rural U = 17.0  
 B; urban-rural U = 10.5

Scores

A (urban) = 1.90  
 A (rural) = 1.64  
 B (urban) = 1.80  
 B (rural) = 1.69

TABLE X64

Question C7 - Pre-School Tuition in Reading - Composite Scores, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 2.67
B	✓	/	/	/	A-C	z = 1.86
C	x	x	/	/	A-D	z = 7.07
D	✓	✓	x	/	B-C	U = 66.5
	A	B	C	D	B-D	U = 61.0
					C-D	U = 34.5

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
A	✓	/
B	/	✓

Test Scores

A; urban-rural U = 18.0  
B; urban-rural U = 6.5

Scores

A (urban) = 1.95  
B (rural) = 1.71  
B (urban) = 1.77  
B (rural) = 1.61

TABLE X65

Question C7 - Pre-School Tuition in English - Composite Scores, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 2.12$
B	x				A-C	$z = 2.47$
C	x	x			A-D	$z = 4.45$
D	✓	✓	✓		B-C	$U = 66.0$
	A	B	C	D	B-D	$U = 45.5$
					C-D	$U = 25.0$

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A		<u>Test Scores</u>
	B	x	
			A; urban-rural $U = 0.0$
			B; urban-rural $U = 10.0$
			<u>Scores</u>
			A (urban) = 1.92
			A (rural) = 1.51
			B (urban) = 1.62
			B (rural) = 1.51

TABLE X66

Question C7 - Pre-School Tuition in English,  
Writing and Reading - Combined Scores, by  
Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	4.24	4.76	5.65	5.00
2	5.91	4.05	4.64	5.16
3	5.09	4.78	4.69	4.19
4	5.21	4.96	5.07	3.93
5	4.58	5.57	4.54	4.37
6	5.53	4.87	4.70	4.41
7	4.29	4.83	4.74	4.54
8	5.43	6.10	4.86	4.49
9	5.27	5.15	4.59	4.53
10	6.15	5.32		4.17
11	6.52	4.77		4.18
12	6.06	4.66		4.59
13	5.80	4.65		4.49
14	6.14	4.78		4.57
15	5.89	4.84		4.36
16	5.24	4.67		4.14
17	4.84			
18	4.85			
19	5.15			
20	4.69			
21	5.15			
Av.	5.33	4.92	4.83	4.45

## Notes:

1. Combined Scores are calculated by adding the individual composite scores for tuition in English, Writing and Reading

TABLE X67

Question C7 - Pre-School Tuition in English, Writing and Reading - Combined Scores, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 2.10
B	x				A-C	z = 2.22
C	x	x			A-D	z = 4.11
D	✓	✓	✓		B-C	U = 52.0
	A	B	C	D	B-D	U = 38.0
					C-D	U = 18.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL		
	A	B
URBAN	A	B
	B	A

Test Scores  
A; urban-rural U = 8.0  
B; urban-rural U = 5.0

Scores  
A (urban) = 5.77  
A (rural) = 4.86  
B (urban) = 5.17  
B (rural) = 4.81

TABLE X68

Question C8 - After School Tuition, by  
Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	6.40	8.00	9.50	6.98
2	9.50	2.11	6.50	8.42
3	4.67	9.50	5.14	0.43
4	23.68	10.60	21.86	-
5	8.24	10.67	4.57	7.27
6	9.00	7.66	9.09	1.67
7	8.82	10.48	6.67	2.33
8	5.33	20.00	8.57	3.43
9	8.70	7.06	5.00	3.20
10	15.63	8.57		-
11	7.14	8.72		1.82
12	10.29	10.50		5.00
13	11.50	8.65		4.12
14	8.95	10.00		3.81
15	17.78	6.15		5.36
16	6.40	6.19		4.00
17	4.32			
18	8.57			
19	8.72			
20	9.47			
21	11.28			
Av.	9.73	9.05	8.54	3.62

## Notes:

1. These figures indicate the percentage of respondents receiving after-school tuition, averaged over the 5 items; English, Maths, Science, History/Geography, Languages

TABLE X69

Question C8 - After School Tuition -Mann-Whitney 'U' Test to determine significance of differences1. Significance at 0.01 Level by School Grade

A				
B	X			
C	X	X		
D	✓	✓	✓	
	A	B	C	D

Test ScoresA-B       $z = 0.20$ A-C       $z = 1.11$ A-D       $z = 4.45$ B-C       $U = 50.0$ B-D       $U = 21.0$ C-D       $U = 19.5$ 

Significant = ✓

Not Significant = X

2. Significance at 0.01 Level by School Location

## RURAL

A      B

	A	B
A	X	
B		X

Test ScoresA; urban-rural  $U = 35.0$ B; urban-rural  $U = 28.0$ Scores

A (urban) = 11.20

A (rural) = 8.12

B (urban) = 8.91

B (rural) = 9.12

TABLE X70

Question D1 - Percentage of Respondents wishing  
to continue Education, by Individual School  
Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	96.00	90.00	95.00	88.37
2	100.00	100.00	75.00	65.79
3	100.00	92.50	91.40	97.80
4	89.47	89.36	90.70	85.00
5	100.00	93.33	88.57	90.91
6	100.00	97.87	90.91	83.33
7	97.37	95.83	84.85	88.37
8	100.00	88.24	92.86	94.29
9	86.96	94.12	91.67	92.00
10	90.63	100.00		66.67
11	97.62	92.31		81.82
12	100.00	95.00		83.33
13	100.00	97.30		82.35
14	97.37	87.50		94.59
15	100.00	92.31		78.57
16	92.00	97.62		86.67
17	100.00			
18	97.62			
19	92.31			
20	97.37			
21	97.44			
Av.	96.77	93.96	89.00	85.00



TABLE X72

Question D2 - "Hoped-For" Educational Levels,  
by Individual School Averages

No.	SCHOOL GRADE															
	A				B				C				D			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	16.7	83.3	-	-	3.7	85.2	11.1	-	39.5	47.4	13.2	-	13.2	71.1	15.8	-
2	40.0	60.0	-	-	2.6	89.5	7.9	-	30.0	60.0	10.0	-	24.0	56.0	16.0	4.0
3	66.7	33.3	-	-	2.7	94.6	2.7	-	-	90.6	9.4	-	4.7	67.4	25.6	2.3
4	21.9	62.5	15.6	-	-	85.7	14.3	-	5.3	78.9	13.2	2.6	2.9	76.5	20.6	-
5	63.9	36.1	-	-	64.3	21.4	10.7	3.6	25.8	45.2	25.8	3.2	10.0	60.0	30.0	-
6	17.5	80.0	2.5	-	13.0	73.9	13.0	-	17.5	45.0	37.5	-	10.0	50.0	40.0	-
7	-	100.0	-	-	8.7	78.3	8.7	4.3	28.6	64.3	7.1	-	21.1	52.6	21.1	5.3
8	50.0	50.0	-	-	56.7	36.7	6.7	-	26.9	65.4	7.7	-	18.2	57.6	24.2	-
9	11.8	82.4	5.9	-	25.0	59.4	12.5	3.1	24.2	66.7	6.1	3.0	26.1	60.9	8.7	4.3
10	34.5	62.1	3.4	-	31.4	62.9	5.7	-					-	75.0	25.0	-
11	80.5	19.5	-	-	30.8	63.9	11.1	-					11.1	77.8	11.1	-
12	74.3	25.7	-	-	12.5	75.0	12.5	-					10.0	60.0	30.0	-
13	45.0	55.0	-	-	32.4	56.8	10.8	-					25.0	53.6	17.9	3.6
14	35.1	62.2	2.7	-	35.0	40.0	25.0	-					20.0	54.3	22.9	2.9
15	50.0	50.0	-	-	30.8	61.5	7.7	-					18.2	56.8	20.5	4.5
16	56.5	29.1	4.3	-	26.2	52.4	14.3	7.1					20.0	66.7	13.3	-
17	54.1	43.2	2.7	-												
18	47.6	47.6	4.8	-												
19	35.9	64.1	-	-												
20	42.1	55.3	2.6	-												
21	51.3	48.7	-	-												
Av.	42.6	55.2	2.1	-	23.5	64.8	10.6	1.1	22.0	62.6	14.4	1.0	14.7	62.3	21.4	1.7

Notes:

1. Coding:-

- 1 = Second Degree
- 2 = First Degree
- 3 = Form VI
- 4 = Form IV

TABLE X73

Question D2 - 'Hoped-For' Educational Level --  
Composite Scores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	3.17	2.93	3.26	2.98
2	3.40	2.95	3.20	3.00
3	3.67	3.00	2.91	2.75
4	3.06	2.86	2.87	2.82
5	3.64	3.46	2.94	2.80
6	3.15	3.00	2.80	2.70
7	3.00	2.91	3.22	2.90
8	3.50	3.50	3.19	2.94
9	3.06	3.06	3.12	3.09
10	3.31	3.26		2.75
11	3.81	3.37		3.00
12	3.74	3.00		2.80
13	3.45	3.22		3.00
14	3.32	3.10		2.92
15	3.50	3.23		2.89
16	3.52	2.98		3.07
17	3.51			
18	3.43			
19	3.36			
20	3.40			
21	3.51			
Av.	3.41	3.11	3.06	2.90

## Notes:

- Composite scores are calculated by awarding points as follows; Second Degree = 4, First Degree = 3, Form VI = 2, Form IV = 1

TABLE X74

Question D2 - 'Hoped For' Educational Level - Composite Scores

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 3.48$
B	✓				A-C	$z = 3.24$
C	✓	x			A-D	$z = 4.89$
D	✓	✓	x		B-C	$U = 58.5$
	A	B	C	D	B-D	$U = 49.0$
					C-D	$U = 36.5$

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
A	x		<u>Test Scores</u>  A; urban-rural $U = 49.5$ B; urban-rural $U = 25.0$
B		x	
URBAN			<u>Scores</u>  A (urban) = 3.44 A (rural) = 3.37 B (urban) = 3.13 B (rural) = 3.11

TABLE x75

Question D3 - "Expected" Educational Levels  
by Individual School Averages

No.	SCHOOL GRADE															
	A				B				C				D			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	-	54.2	25.0	20.8	-	30.0	29.6	40.4	7.9	31.6	39.5	21.1	13.2	71.1	15.8	-
2	25.0	37.5	37.5	-	-	15.8	47.4	36.8	-	40.0	40.0	20.0	-	28.0	44.0	28.0
3	40.0	43.3	16.7	-	-	48.6	13.5	37.8	-	26.7	40.0	33.3	-	2.3	38.6	59.1
4	9.4	56.3	25.0	9.4	-	28.6	28.6	42.9	2.8	27.8	44.4	25.0	-	52.9	23.5	23.5
5	19.4	47.2	22.2	11.1	7.1	32.1	32.1	28.6	-	32.3	35.5	32.3	-	40.0	30.0	30.0
6	5.4	54.1	13.5	27.0	-	56.5	30.4	13.0	2.5	37.5	47.5	12.5	-	50.0	20.0	30.0
7	-	35.0	37.0	28.0	-	27.3	45.5	27.3	-	42.9	35.7	21.4	2.6	26.3	42.1	28.9
8	33.3	66.7	-	-	9.7	71.0	19.4	-	-	38.5	30.8	30.8	-	42.4	27.3	30.3
9	-	71.4	21.4	7.2	-	56.3	18.8	25.0	6.1	33.3	33.3	27.3	-	34.8	30.4	34.8
10	13.8	24.1	55.2	6.9	11.4	45.7	25.7	17.1	-	-	-	-	-	50.0	25.0	25.0
11	39.0	43.9	17.1	-	-	55.6	30.6	13.9	-	-	-	-	11.1	33.3	22.2	33.3
12	31.4	51.4	14.3	2.9	-	39.5	36.8	23.7	-	-	-	-	-	30.0	30.0	40.0
13	10.0	50.0	40.0	-	5.6	44.4	27.8	22.2	-	-	-	-	-	42.9	32.1	25.0
14	18.9	35.1	32.4	13.5	-	37.1	37.1	25.7	-	-	-	-	2.9	28.6	37.1	31.4
15	11.1	52.8	33.3	2.8	8.3	50.0	25.0	16.7	-	-	-	-	-	36.4	36.4	27.3
16	8.7	69.6	21.7	-	4.9	48.8	24.4	22.0	-	-	-	-	-	30.8	38.5	30.8
17	37.8	37.8	18.9	5.4	-	-	-	-	-	-	-	-	-	-	-	-
18	-	65.9	22.0	12.2	-	-	-	-	-	-	-	-	-	-	-	-
19	13.9	52.8	33.3	-	-	-	-	-	-	-	-	-	-	-	-	-
20	27.0	43.2	24.3	5.4	-	-	-	-	-	-	-	-	-	-	-	-
21	7.9	42.1	39.5	10.5	-	-	-	-	-	-	-	-	-	-	-	-
Av.	16.8	49.3	26.2	7.8	2.9	43.0	29.5	24.6	2.1	34.5	38.5	24.9	1.9	37.5	30.8	29.8

## Notes:

## 1. Coding:-

- 1 = Second Degree
- 2 = First Degree
- 3 = Form VI
- 4 = Form IV

TABLE X76

Question D3 - 'Expected' Educational Levels -  
Composite Scores, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	2.33	1.90	2.27	2.98
2	2.88	1.79	2.20	2.00
3	3.23	2.11	1.93	1.43
4	2.66	1.86	2.08	2.29
5	2.75	2.18	2.00	2.10
6	2.38	2.43	2.30	2.20
7	2.07	2.00	2.22	2.02
8	3.33	2.91	2.08	2.12
9	2.64	2.32	2.18	2.00
10	2.45	2.51		2.25
11	3.22	2.52		2.22
12	3.11	2.16		1.90
13	2.70	2.33		2.18
14	2.59	2.11		2.03
15	2.72	2.50		2.09
16	2.87	2.37		2.00
17	3.09			
18	2.54			
19	2.83			
20	2.92			
21	2.47			
Av.	2.75	2.25	2.14	2.11

## Notes:

- Composite Scores are calculated by awarding points as follows; Second Degree = 4, First Degree = 3, Form VI = 2, Form IV = 1

TABLE X77

Question D3 - 'Expected' Educational Levels - Composite Scores, Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	A	B	C	D	
A					A-B $z = 3.88$
B	✓				A-C $z = 3.82$
C	✓	x			A-D $z = 4.41$
D	✓	x	x		B-C $U = 54.0$
	A	B	C	D	B-D $U = 90.5$
					C-D $U = 61.0$

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	
URBAN	A	x		<u>Test Scores</u> A; urban-rural = 36.0 B; urban-rural = 25.0
	B		x	

TABLE X78

Question E1 - "Hoped For" Occupations, Prestige Values,  
by Individual School Averages

No.	SCHOOL GRADE															
	A				B				C				D			
	1	2	3	Av.	1	2	3	Av.	1	2	3	Av.	1	2	3	Av.
1	69.3	68.1	67.6	68.4	62.2	60.5	56.7	59.8	66.1	63.2	59.5	62.9	56.4	53.1	53.9	54.5
2	68.6	65.3	62.1	65.4	63.6	60.8	62.6	62.4	63.2	60.9	55.8	60.1	57.8	57.1	56.1	57.0
3	70.1	67.5	65.1	67.7	64.6	64.4	62.0	63.7	62.4	55.8	56.9	59.2	62.0	56.7	57.9	58.9
4	67.7	65.8	61.4	65.0	64.2	60.3	57.6	60.7	54.0	50.6	51.7	52.1	51.1	51.2	49.3	50.6
5	67.0	72.0	64.0	67.7	62.4	60.0	59.7	60.7	63.7	58.8	58.9	60.5	59.8	58.6	58.5	59.0
6	66.1	67.2	62.6	65.1	62.7	63.9	61.2	62.7	65.9	62.4	61.2	63.2	61.2	57.5	58.2	59.1
7	67.2	63.2	59.5	63.3	71.0	70.8	64.2	68.8	65.1	61.7	58.9	61.9	60.2	55.6	55.5	57.1
8	66.0	65.7	62.1	64.7	61.9	59.4	57.6	59.6	63.2	63.3	60.0	62.2	59.7	56.8	55.3	57.3
9	66.0	63.4	57.6	62.5	65.2	62.4	62.1	63.2	63.2	59.8	60.1	61.0	57.8	57.2	56.9	57.3
10	68.2	65.5	63.9	65.9	63.9	60.2	60.9	61.7					63.7	62.9	57.8	61.6
11	71.5	68.3	69.3	69.7	68.6	65.7	61.2	65.2					60.2	59.2	56.5	58.7
12	66.8	65.6	65.2	65.9	63.2	63.1	60.7	62.4					58.5	54.6	56.3	56.6
13	70.0	68.6	65.6	68.1	64.6	61.7	59.9	62.1					59.4	58.9	58.5	58.9
14	69.2	68.5	67.2	68.3	64.7	62.4	61.9	63.0					60.5	59.5	58.7	59.6
15	70.3	69.5	68.7	69.5	66.3	65.8	64.9	65.7					61.5	57.6	57.7	58.9
16	68.6	65.4	66.2	66.8	64.1	63.2	60.6	62.7					59.8	58.6	59.4	59.3
17	66.1	64.7	62.3	64.4												
18	67.5	67.4	62.9	66.0												
19	67.2	64.7	64.2	65.4												
20	65.8	65.4	59.8	63.7												
21	69.2	68.7	68.8	68.9												
Av.	68.0	66.7	64.1	66.3	64.6	62.8	60.9	62.8	63.0	59.6	58.1	60.3	59.4	57.2	56.7	57.8

## Notes:

## 1. Coding:-

- 1 = First Choice
- 2 = Second Choice
- 3 = Third Choice

N.B. Average figure is not the summation of 1, 2 and 3, divided by 3, because there were different response rates for 1, 2 and 3.

TABLE X79

Question E1 - 'Hoped-For' Occupations, Prestige Values

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 3.91
B	✓				A-C	z = 4.19
C	✓	X			A-D	z = 5.15
D	✓	✓	✓		B-C	U = 40.5
	A	B	C	D	B-D	U = 4.5
					C-D	U = 21.0

Significant = ✓  
 Not Significant = X

2. Significance at 0.01 Level by School Grade

RURAL					
	A	B			
URBAN	A	X		<u>Test Scores</u>	A; urban-rural U = 46.0
	B		X		B; urban-rural U = 18.5
				<u>Scores</u>	
				A (urban) = 66.6	
				A (rural) = 66.0	
				B (urban) = 61.8	
				B (rural) = 63.2	

TABLE X80

Question E2 - "Expected" Occupations, Prestige Values,  
by Individual School Averages

No.	SCHOOL GRADE															
	A				B				C				D			
	1	2	3	Av.	1	2	3	Av.	1	2	3	Av.	1	2	3	Av.
1	68.2	66.7	63.2	66.0	49.9	53.2	45.2	49.4	61.0	57.5	56.4	58.3	56.3	53.5	54.6	54.9
2	64.0	62.7	62.5	63.1	58.1	56.4	54.2	56.2	60.9	54.8	53.4	56.7	56.7	58.3	54.2	56.5
3	68.2	63.1	64.8	65.6	64.5	62.8	57.1	61.7	56.5	55.0	58.9	56.7	53.5	52.0	51.9	52.4
4	65.2	62.4	61.0	63.1	58.0	59.1	53.6	57.0	51.7	49.0	49.2	50.0	49.7	46.4	46.0	47.4
5	62.2	58.9	55.1	59.0	62.7	57.7	56.5	59.0	59.2	56.1	57.2	57.5	57.6	56.2	56.3	56.7
6	61.7	61.2	57.2	60.0	60.2	59.2	60.0	59.8	58.5	54.2	55.6	56.1	55.4	52.8	52.7	53.6
7	60.3	56.3	57.1	57.9	60.0	63.7	52.2	58.8	59.2	58.9	53.6	57.2	58.2	52.9	47.2	53.6
8	68.1	68.1	60.1	65.6	62.0	56.5	57.5	58.7	60.2	56.7	56.8	58.0	56.2	49.6	50.7	52.3
9	65.3	64.0	58.3	62.7	62.6	59.3	58.6	60.2	59.7	54.6	53.2	55.8	58.9	56.2	50.6	55.2
10	69.6	57.7	57.3	58.2	61.7	60.4	61.2	61.1					57.2	52.3	53.1	54.2
11	69.9	64.6	63.9	66.1	61.9	57.3	56.1	58.5					56.7	52.4	49.8	53.0
12	65.4	63.2	62.9	63.9	62.1	60.7	55.4	59.4					59.7	58.3	54.1	57.5
13	65.6	64.9	64.2	64.9	60.9	60.2	54.6	58.7					58.6	51.7	49.8	53.5
14	66.1	62.3	60.9	63.2	62.1	62.4	56.1	60.2					60.1	54.9	52.3	55.8
15	66.2	64.3	62.6	64.4	59.2	58.6	55.7	57.8					58.7	54.7	52.6	55.5
16	64.6	61.7	59.8	62.2	59.9	58.7	56.2	58.4					56.6	48.2	49.7	51.5
17	66.1	64.6	60.3	63.7												
18	64.7	60.6	61.3	62.2												
19	65.3	62.8	58.9	62.3												
20	66.2	60.7	60.9	62.6												
21	67.1	59.6	62.1	62.9												
Av.	65.2	62.4	60.7	62.8	60.4	59.1	55.6	58.4	58.6	55.2	54.9	56.3	56.9	53.2	51.6	53.9

Notes:

1. Coding:-

- 1 = First Choice
- 2 = Second Choice
- 3 = Third Choice

TABLE X81

Question E2 - 'Expected Occupations', Prestige Values

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 4.40
B	✓				A-C	z = 4.14
C	✓	✓			A-D	z = 5.15
D	✓	✓	✓		B-C	U = 21.0
	A	B	C	D	B-D	U = 20.0
					C-D	U = 26.0

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	X	
	B		X

Test Scores

A; urban-rural U = 23.0  
B; urban-rural U = 16.5

Scores

A (urban) = 63.7  
A (rural) = 61.9  
B (urban) = 59.4  
B (rural) = 58.0

TABLE X82

Question E8 - Prefer to work in Nairobi,  
Percentages, by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	24.0	36.7	52.5	62.8
2	75.0	44.7	52.5	65.8
3	70.0	35.0	45.7	21.7
4	67.6	61.7	23.3	52.5
5	38.9	50.0	45.7	30.0
6	41.7	51.1	40.9	33.3
7	28.9	62.5	35.5	48.8
8	90.0	35.3	32.1	28.6
9	100.0	64.7	44.4	44.0
10	71.9	65.7		33.3
11	78.6	53.8		40.0
12	94.1	47.5		41.7
13	90.0	42.9		50.0
14	76.3	40.0		27.8
15	73.5	30.8		26.4
16	52.0	52.4		40.0
17	36.1			
18	45.2			
19	36.8			
20	31.6			
21	53.8			
Av.	60.8	48.4	41.4	40.4

TABLE X83

Question E8 - Prefer to Work in Nairobi, Percentages

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 1.64
B	x				A-C	z = 1.88
C	x	x			A-D	z = 2.65
D	✓	✓	x		B-C	U = 49.0
	A	B	C	D	B-D	U = 47.5
					C-D	U = 62.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL			
	A	B	
URBAN	A		✓
	B		✓

Test Scores

A; urban-rural U = 0.0  
B; urban-rural U = 7.0

Scores

A (urban) = 80.6  
A (rural) = 38.9  
B (urban) = 58.6  
B (rural) = 43.8

3. Significance at 0.01 Level by School Grade - Rural Schools Only

	<u>Test Scores</u>					
A					A-B	U = 41.5
B	x				A-C	U = 35.0
C	x	x			A-D	U = 54.5
D	x	x	x		B-C	U = 29.0
	A	B	C	D	B-D	U = 47.0
					C-D	U = 42.0

TABLE X84

Question E4 -- No. Visits to Nairobi Per Year,  
by Individual School Averages

No.	SCHOOL GRADE			
	A	B	C	D
1	10.40	3.20	2.40	2.63
2	3.90	15.00	2.88	3.10
3	3.50	7.60	2.62	3.55
4	1.26	3.61	3.19	1.60
5	8.24	2.62	1.27	1.33
6	5.05	4.08	2.21	1.82
7	3.32	2.23	1.63	1.44
8	3.97	2.61		0.67
9	3.84	3.40		1.70
10	4.38	2.42		1.89
11		2.74		2.21
12				1.92
13				2.36
14				2.29
Av.	4.79	4.50	2.31	2.04

## Notes:

1. Applies only to rural schools

TABLE X85

Question E4 - No. Visits to Nairobi Per Year

Mann-Whitney 'U' Test to determine significance  
of differences

Significance at 0.01 Level by School Grade

A				
B	X			
C	✓	X		
D	✓	✓	X	
	A	B	C	D

Test Scores

A-B	U = 35.0
A-C	U = 7.0
A-D	U = 15.0
B-C	U = 14.5
B-D	U = 18.0
C-D	U = 37.5

Significant = ✓  
Not Significant = X

TABLE X86Question D7 - Likert Scale Scores for IndividualItems averaged by School Grade Samples

ITEM	A	B	C	D
A	2.48	2.69	2.52	3.02
B	3.70	3.93	4.00	4.29
C	2.86	3.04	2.90	3.03
D	3.86	3.73	3.74	3.99
E	2.75	2.83	2.70	3.04
F	2.70	3.13	2.93	3.27
G	3.10	3.06	3.00	3.52
H	4.50	4.23	4.39	4.48
Av.	3.24	3.34	3.28	3.58

## Notes:

1. Scores range from: 1 = Agree Strongly  
 2 = Agree  
 3 = Undecided  
 4 = Disagree  
 5 = Disagree Strongly

TABLE X87

Question D7 - Composite Likert Scale Scores for  
Items A, C, E, F; Mann-Whitney 'U' Test to  
determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Composite Scores</u>				
A	/	/	/	/	A : 2.70
B	✓	/	/	/	B : 2.93
C	x	x	/	/	C : 2.77
D	✓	✓	✓	/	D : 3.09
	A	B	C	D	

	<u>Test Scores</u>	
A-B	z =	2.67
A-C	z =	1.09
A-D	z =	3.77
B-C	U =	45.5
B-D	U =	63.5
C-D	U =	10.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	/	<u>Scores</u>
	B	x	

A (urban)	=	2.78
A (rural)	=	2.61
B (urban)	=	3.16
B (rural)	=	2.82

	<u>Test Scores</u>	
A; urban-rural	U =	29.5
B; urban-rural	U =	9.0

TABLE X88

Question D7 - Likert Scale Scores for Item B

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 1.59
B	x				A-C	z = 1.74
C	x	x			A-D	z = 4.06
D	✓	✓	✓		B-C	U = 66.5
	A	B	C	D	B-D	U = 45.5
					C-D	U = 25.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A		<u>Scores</u> A (urban) = 3.34 A (rural) = 4.09 B (urban) = 3.80 B (rural) = 3.99
	B		

Test Scores

A; urban-rural U = 1.0  
 B; urban-rural U = 15.0

TABLE X89

Question D7 - Likert Scale Scores for Item D

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 1.24
B	x	/	/	/	A-C	z = 0.81
C	x	x	/	/	A-D	z = 1.56
D	x	✓	✓	/	B-C	U = 69.0
	A	B	C	D	B-D	U = 58.5
					C-D	U = 31.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	/	<u>Scores</u>
	B	x	
			A (urban) = 3.75
			A (rural) = 3.97
			B (urban) = 3.68
			B (rural) = 3.75
			<u>Test Scores</u>
			A; urban-rural U = 34.5
			B; urban-rural U = 21.0

TABLE X90

Question D7 - Likert Scale Scores for Item G

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	$z = 0.47$
B	x	/	/	/	A-C	$z = 0.92$
C	x	x	/	/	A-D	$z = 4.15$
D	✓	✓	✓	/	B-C	$U = 93.5$
	A	B	C	D	B-D	$U = 11.5$
					C-D	$U = 12.0$

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL			
	A	B	
URBAN	A	/	<u>Scores</u>
	B	/	
			A (urban) = 2.98
			A (rural) = 3.23
			B (urban) = 3.10
			B (rural) = 3.14
			<u>Test Scores</u>
			A; urban-rural $U = 39.0$
			B; urban-rural $U = 30.0$

TABLE X91

Question D7 - Likert Scale Scores for Item H

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 2.54$
B	x				A-C	$z = 1.43$
C	x	x			A-D	$z = 0.41$
D	x	x	x		B-C	$U = 55.5$
	A	B	C	D	B-D	$U = 70.5$
					C-D	$U = 52.0$

Significant = ✓  
Not Significant = x

TABLE X92

Question D10 - Likert Scale Scores for Individual  
Items averaged by School Grade Samples

ITEM	A	B	C	D
A	3.22	3.31	3.26	3.21
B	2.69	2.90	2.90	3.09
C	3.60	3.56	3.58	3.77
D	3.49	3.94	3.87	3.92
E	3.41	3.47	3.56	3.72
F	3.28	3.37	3.32	3.61
Av.	3.28	3.43	3.41	3.55

TABLE X93

Question D10 - Likert Scale Scores for Item A

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 0.47$
B	X				A-C	$z = 0.15$
C	X	X			A-D	$z = 0.47$
D	X	X	X		B-C	$U = 59.0$
	A	B	C	D	B-D	$U = 91.0$
					C-D	$U = 66.5$

Significant =  $\checkmark$   
Not Significant = X

2. Significance at 0.01 Level by School Location

	<u>RURAL</u>		
	A	B	
URBAN	A		<u>Scores</u>
	B	X	
			A (urban) = 3.44
			A (rural) = 2.98
			B (urban) = 3.28
			B (rural) = 3.33
			<u>Test Scores</u>
			A; urban-rural $U = 19.5$
			B; urban-rural $U = 23.0$

TABLE X94

Question D10 - Likert Scale Scores for Item B

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 1.66
B	x				A-C	z = 1.63
C	x	x			A-D	z = 3.34
D	✓	x	x		B-C	U = 70.5
	A	B	C	D	B-D	U = 84.5
					C-D	U = 45.5

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level - Comparison between Likert Scale  
Scores of "Tribally mixed" and "Mainly Kikuyu" Schools, as  
defined in School Summary Sheet. This analysis excludes  
schools in Embu District

Scores

"Tribally Mixed" Sample = 2.57

"Mainly Kikuyu" Schools = 3.24

Test Scores

z = 5.70 (Sig. at 0.01)

3. Significance at 0.01 Level by School Location

		<u>RURAL</u>		
		A	B	<u>Scores</u>
<u>URBAN</u>	A	x		A (urban) = 2.54
	B		x	A (rural) = 2.85
				B (urban) = 2.78
				B (rural) = 2.95
				<u>Test Scores</u>
				A; urban-rural U = 27.5
				B; urban-rural U = 18.0

TABLE X95

Question D10 - Likert Scale Scores for Item C

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 0.32$
B	X				A-C	$z = 0.11$
C	X	X			A-D	$z = 2.48$
D	X	✓	✓		B-C	$U = 65.0$
	A	B	C	D	B-D	$U = 61.0$
					C-D	$U = 27.5$

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A		<u>Scores</u>
	B		
			A (urban) = 3.73
			A (rural) = 3.45
			B (urban) = 3.78
			B (rural) = 3.46
			<u>Test Scores</u>
			A; urban-rural $U = 15.5$
			B; urban-rural $U = 17.5$

TABLE X96

Question D10 - Likert Scale Scores for Item D

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

A	/	/	/	/
B	✓	/	/	/
C	✓	x	/	/
D	✓	x	x	/
	A	B	C	D

Test Scores

A-B	z = 4.38
A-C	z = 3.21
A-D	z = 4.18
B-C	U = 53.5
B-D	U = 106.5
C-D	U = 53.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL

A B

	A	B
URBAN	/	/
	/	x

Scores

A (urban)	= 3.33
A (rural)	= 3.66
B (urban)	= 3.90
B (rural)	= 3.96

Test Scores

A; urban-rural	U = 18.0
B; urban-rural	U = 19.0

TABLE X97

Question D10 - Likert Scale Scores for Item E

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	A	B	C	D	
A	/	/	/	/	A-B      z = 0.92
B	x	/	/	/	A-C      z = 1.52
C	x	x	/	/	A-D      z = 3.20
D	✓	✓	x	/	B-C      U = 69.0
	A	B	C	D	B-D      U = 64.5
					C-D      U = 38.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	
URBAN	A	✓	/	A (urban) = 3.23 A (rural) = 3.62 B (urban) = 3.74 B (rural) = 3.35
	B	/	✓	

Test Scores

A; urban-rural U = 16.5  
B; urban-rural U = 3.0

TABLE X98

Question D10 - Likert Scale Scores for Item F  
Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 0.63
B	x	/	/	/	A-C	z = 0.23
C	x	x	/	/	A-D	z = 2.62
D	✓	✓	✓	/	B-C	U = 69.0
	A	B	C	D	B-D	U = 34.5
					C-D	U = 15.5

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL			
		A	B
URBAN	A	✓	/
	B	/	x

<u>Scores</u>	
A (urban)	= 2.97
A (rural)	= 3.62
B (urban)	= 3.38
B (rural)	= 3.36

<u>Test Scores</u>	
A; urban-rural	U = 0
B; urban-rural	U = 20.0

TABLE X99

Question E6 - Likert Scale Scores for Individual  
Items averaged by School Grade Samples

ITEM	A	B	C	D
A	1.40	1.37	1.37	1.33
B	1.62	1.70	1.64	1.93
C	2.36	2.56	2.72	2.78
D	3.34	3.50	3.74	3.88
E	2.63	3.01	3.03	3.06
F	2.60	2.45	2.40	2.46
Av.	2.33	2.43	2.49	2.57

TABLE X100

Question E6 - Likert Scale Scores for Item A

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 0.74$
B	X				A-C	$z = 0.93$
C	X	X			A-D	$z = 1.69$
D	X	X	X		B-C	$U = 71.0$
	A	B	C	D	B-D	$U = 109.0$
					C-D	$U = 63.0$

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	
URBAN	A	X		<u>Scores</u>
	B		X	
				A (urban) = 1.42
				A (rural) = 1.39
				B (urban) = 1.34
				B (rural) = 1.38
				<u>Test Scores</u>
				A; urban-rural $U = 54.5$
				B; urban-rural $U = 22.0$

TABLE X101

Question E6 - Likert Scale Scores for Item B

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 1.00
B	x				A-C	z = 0.25
C	x	x			A-D	z = 4.37
D	✓	✓	✓		B-C	U = 62.0
	A	B	C	D	B-D	U = 43.0
					C-D	U = 12.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A		<u>Scores</u>
	B		

A (urban) = 1.64  
A (rural) = 1.61  
B (urban) = 1.68  
B (rural) = 1.71

Test Scores

A; urban-rural U = 46.0  
B; urban-rural U = 26.0

TABLE X102

Question E6 - Likert Scale Scores for Item C

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

A				
B	x			
C	✓	x		
D	✓	✓	x	
	A	B	C	D

Test Scores

A-B	z = 1.84
A-C	z = 2.99
A-D	z = 3.82
B-C	U = 40.0
B-D	U = 50.0
C-D	U = 43.0

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL

		A	B
URBAN	A	✓	
	B		✓

Scores

A (urban)	= 2.15
A (rural)	= 2.60
B (urban)	= 2.36
B (rural)	= 2.65

Test Scores

A; urban-rural	U = 4.0
B; urban-rural	U = 6.0

TABLE X103

Question E6 - Likert Scale Scores for Item D

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A	/	/	/	/	A-B	z = 1.96
B	x	/	/	/	A-C	z = 3.91
C	✓	x	/	/	A-D	z = 5.01
D	✓	✓	x	/	B-C	U = 36.0
	A	B	C	D	B-D	U = 28.5
					C-D	U = 42.0

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A	/	<u>Scores</u>
	B	x	

A (urban) = 3.24  
A (rural) = 3.45  
B (urban) = 3.40  
B (rural) = 3.55

Test Scores

A; urban-rural U = 15.5  
B; urban-rural U = 18.5

TABLE X104

Question E6 - Likert Scale Scores for Item EMann-Whitney 'U' Test to determine significance  
of differences1. Significance at 0.01 Level by School Grade

	A	B	C	D	
A	/	/	/	/	
B	✓	/	/	/	
C	✓	X	/	/	
D	✓	X	X	/	
	A	B	C	D	

Test Scores

A-B	$z = 3.77$
A-C	$z = 3.48$
A-D	$z = 4.11$
B-C	$U = 70.5$
B-D	$U = 101.0$
C-D	$U = 65.0$

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	
URBAN	A	X	/	
	B	/	X	

Scores

A (urban)	= 2.62
A (rural)	= 2.65
B (urban)	= 3.10
B (rural)	= 2.96

Test Scores

A; urban-rural	$U = 52.5$
B; urban-rural	$U = 20.5$

TABLE X105

Question E6 -- Likert Scale Scores for Item F

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

A				
B	x			
C	x	x		
D	x	x	x	
	A	B	C	D

Test Scores

A-B	z = 1.06
A-C	z = 1.20
A-D	z = 0.97
B-C	U = 69.5
B-D	U = 120.0
C-D	U = 62.5

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

RURAL

A B

	A	B
URBAN	x	
		x

Scores

A (urban)	= 2.70
A (rural)	= 2.48
B (urban)	= 2.56
B (rural)	= 2.40

Test Scores

A; urban-rural	U = 36.0
B; urban-rural	U = 19.5

TABLE X106

Question E7 - Ranking Scores and Ranks of Individual  
Items averaged by School Grade Samples

ITEM	A		B		C		D	
	RS	R	RS	R	RS	R	RS	R
A	5.04	5.8	5.36	6.0	5.14	6.0	5.00	6.0
B	3.68	3.6	3.68	3.4	3.53	3.2	3.44	3.1
C	1.78	1.1	1.84	1.3	1.84	1.4	1.93	1.3
D	2.15	1.9	1.98	1.7	1.90	1.6	2.08	1.7
E	3.89	3.9	4.21	4.6	4.24	4.8	4.08	4.6
F	4.29	4.7	3.89	4.0	3.91	4.0	4.04	4.3

## Notes:

1. RS = Ranking Score, calculated in the same manner as Likert Scale Scores

R = Rank based on composite ranking scores

TABLE X107

Question E7 - Ranking Scores for Item A

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

A				
B	X			
C	X	X		
D	X	✓	X	
	A	B	C	D

Test Scores

- A-B      z = 1.75
- A-C      z = 0.02
- A-D      z = 1.26
- B-C      U = 36.5
- B-D      U = 30.0
- C-D      U = 33.0

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

RURAL

A      B

	A	B
A	X	
B		X

Scores

- A (urban) = 5.03
- A (rural) = 5.06
- B (urban) = 5.38
- B (rural) = 5.34

Test Scores

- A; urban-rural U = 46.5
- B; urban-rural U = 23.5

TABLE X108

Question E7 - Ranking Scores for Item BMann-Whitney 'U' Test to determine significanceof differences1. Significance at 0.01 Level by School Grade

A				
B	X			
C	X	X		
D	X	✓	X	
	A	B	C	D

Test Scores

A-B	$z = 0.11$
A-C	$z = 1.31$
A-D	$z = 2.01$
B-C	$U = 33.0$
B-D	$U = 52.0$
C-D	$U = 60.0$

Significant = ✓  
 Not Significant = X

2. Significance at 0.01 Level by School Location

## RURAL

A B

	A	B
A	X	
B		X

Scores

A (urban)	= 3.74
A (rural)	= 3.61
B (urban)	= 3.82
B (rural)	= 3.61

Test Scores

A; urban-rural	$U = 48.0$
B; urban-rural	$U = 17.0$

TABLE X109

Question E7 - Ranking Scores for Item C

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 1.04$
B	x				A-C	$z = 0.95$
C	x	x			A-D	$z = 2.19$
D	x	x	x		B-C	$U = 68.0$
	A	B	C	D	B-D	$U = 81.5$
					C-D	$U = 47.5$

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A		Scores
	B	x	

A (urban) = 1.74  
 A (rural) = 1.82  
 B (urban) = 1.90  
 B (rural) = 1.82

Test Scores

A; urban-rural  $U = 51.0$   
 B; urban-rural  $U = 15.0$

TABLE X110

Question E7 - Ranking Scores for Item D

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	z = 1.99
B	X				A-C	z = 2.83
C	✓	X			A-D	z = 1.01
D	X	X	X		B-C	U = 61.5
	A	B	C	D	B-D	U = 96.5
					C-D	U = 32.5

Significant = ✓  
Not Significant = X

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A		<u>Scores</u>
	B	X	
			A (urban) = 2.20
			A (rural) = 2.10
			B (urban) = 2.06
			B (rural) = 1.95
			<u>Test Scores</u>
			A; urban-rural U = 41.5
			B; urban-rural U = 20.0

TABLE X111

Question E7 - Ranking Scores for Item E

Mann-Whitney 'U' Test to determine significance  
of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 1.61$
B	x				A-C	$z = 1.67$
C	x	x			A-D	$z = 1.07$
D	x	x	x		B-C	$U = 51.5$
	A	B	C	D	B-D	$U = 85.5$
					C-D	$U = 48.5$

Significant = ✓  
Not Significant = x

2. Significance at 0.01 Level by School Location

		RURAL		
		A	B	<u>Scores</u>
URBAN	A	x		A (urban) = 3.89
	B		x	A (rural) = 3.88
				B (urban) = 4.22
				B (rural) = 4.21

Test Scores

A; urban-rural  $U = 52.5$   
B; urban-rural  $U = 25.0$

TABLE X112

Question E7 - Ranking Scores for Item F

Mann-Whitney 'U' Test to determine significance of differences

1. Significance at 0.01 Level by School Grade

	<u>Test Scores</u>					
A					A-B	$z = 2.65$
B	✓				A-C	$z = 2.33$
C	x	x			A-D	$z = 1.66$
D	x	x	x		B-C	$U = 69.5$
	A	B	C	D	B-D	$U = 104.5$
					C-D	$U = 48.5$

Significant = ✓  
 Not Significant = x

2. Significance at 0.01 Level by School Location

	RURAL		
	A	B	
URBAN	A		<u>Scores</u> A (urban) = 4.22 A (rural) = 4.36 B (urban) = 3.80 B (rural) = 3.84
	B		
			<u>Test Scores</u>
			A; urban-rural $U = 42.0$
			B; urban-rural $U = 21.5$