TECHNICAL EDUCATION IN KENYA: A STUDY OF YOUTH POLYTECHNICS

By
E. M. Ndua

A Thesis submitted to the Faculty of Graduate Studies and Ressearch in partial fulfillment of the degree requirements for Master of Arts (M.A.), in the Department of Administration and Policy Studies in Education.

McGill University
June, 1988

ABSTRACT

Technical Education in Kenya: A Study of Youth Polytechnics (Formerly: Village Polytechnics)

Based on library search, personal observation, and structured interviews, the efficiency, effectiveness and administration of 16 youth polytechnics, in five Districts of the Eastern Province of Kenya were studied. The study found that most polytechnics lack adequate equipment and tools, have underdeveloped curricula, and few courses frequented by women. Competition for work contracts and lack of initial capital diminishes chances for self-employment. These institutions suffer from high dropout rates, a lack of employment opportunities in the rural areas, and a lack of awareness in some communities of their importance. Instructors are not recognized as civil servants and are paid low salaries. Based on these findings, it was evident that the effectiveness and efficient functioning of youth polytechnics is dependent on the provision of adequate tools and well-trained instructors in addition to developing a positive attitude on the part of the trainees. Introduction of trades which are liked by female trainees is vital. Most of the instructors were not sure who their employer was; that is, the Ministry of Culture and Social Services or the local Management Committee. The study found that admitting students from distant areas affected the development of the local rural areas where the institutions are located. Finally, local Management Committees were often unaware of the economic importance of the youth polytechnics to the local area.

RÉSUMÉ

Éducation technique au Kenya: une étude des écoles Polytechniques pour Jeunes (Jadis: Polytechniques de Villages) 1988

Des recherches en bibliothèques, des observations personnelles et des entrevues structurées ont été utilisées comme base pour étudier le rendement, l'efficacité et l'administration de 16 écoles polytechniques pour jeunes dans cinq régions de la province orientale du Kenya. L'étude démontre que la plupart des écoles polytechniques manquent d'équipement et d'outils, ont des plans d'étude sous-développés et peu de cours attrayants pour les personnes de sexe féminin. La concurrence pour les contrats de travail et la manque de câpital de premier établissement réduisent les occasions de travail indépendant. Ces institutions subissent un haut taux d'abandon et démontrent un manque de débouchés pour des emplois dans les milieux ruraux ainsi qu'un manque de conscience de l'importance de ces institutions de la part de certaines communautés. Les instructeurs ne sont pas reconnus comme fonctionnaires et ne reçoivent que des salaires très bas. Selon ces résultats, il est devenu évident que le rendement et l'efficacité du fonctionnement des écoles polytechniques pour jeunes dépendent de l'apport d'outils appropriés et d'instructeurs qualifiés ainsi qu'une attitude positive des apprentis. L'introduction de métiers qui seront attirants pour les apprentis de sexe féminin est vitale. La plupart des instructeurs ne savaient pas qui étaient leurs employeurs; c'est-à-dire, le Ministère de la Culture et des Services Sociaux ou le Comité Local de Gestion. L'étude a démontré que l'admission d'élèves de régions éloignées affectait le développement des régions rurales près desquelles les institutions sont situées. Finalement, les comités locaux ignoraient souvent l'importance économique des écoles polytechniques pour jeunes leur région.

...

Acknowledgements

The author wishes to acknowledge his sincere appreciation to all who assisted directly and indirectly in the completion of this study. He desires most of all to express his greatest appreciation to his academic and thesis advisor/supervisor, Dr. Gary Anderson. It was through his pertinent advice and critical editing that the study was a success. The author is indebted to Mary-Lynne Keenan, who typed the interview protocol and organized the page numbering in the final version of the thesis. Appreciation is expressed to Sylvie who translated and typed the thesis abstract, and to Dr. C. Barnabe for proofreading.

The finances provided by the sponsor, Kenya General Training Fund (GTF) enabled the author to accomplish a difficult task in the research study. Gratitude is expressed to the Ministry of Culture and Social Services, Government of Kenya, and the managers and instructors of the Kenyan youth polytechnics whose permission and cooperation enabled the author to collect adequate data for the study.

The author is grateful for and appreciates all comments and discussions held with J. Abagi, Loise Konana, and G. Besha. An immeasurable credit goes to the author's family for their understanding and encouragement during his studies away from home.

TABLE OF CONTENTS

List of Appendices

List of tables

List of figures

CHAPTER I

STATEMENT OF THE PROBLEM

1.1 Introduction

The role of formal education inherited by the developing countries from the colonial governments has been an area of major debate in the last three decades. The debate has centered on whether formal education is an active vehicle to promote social, economic and political development (Foster, 1965; Blaug, 1970; Clarke, 1973). Formal education has been used as an instrument of change and prosperity in every society, however its role in equipping individuals with the right skills, adaptable to their communities, has been a problem in most developing nations. This has not prevented governments from continuing to invest large sums of money in education. In the post-independence era most developing countries embarked on the expansion and development of their educational systems in order to cater to the needs of the people as well as to make the education systems more supportive of national goals (Merryfield, 1986; Sheffield and Diejomaoh, 1972, 1973).

In African independent countries there was a rapid expansion of formal education. The purpose of expanding educational opportunities, especially primary education, was in an endeavor to achieve universal primary education (Sifuna, 1984; Merryfield, 1986). The rapid expansion of primary education and later secondary education caused two major problems: 1) unemployment of school

graduates who, in some cases, did not have relevant skills required for jobs; 2) rural-urban migration. This situation was more crucial among primary school leavers (Hall, 1973; Sheffield, 1973; Blaug, 1974; Woodhall, 1981). The unemployment among primary school leavers led to the conviction that there was something wrong with the educational system and the pattern of development in African countries (Njunji, 1974; Sheffield and Diejomaoh, 1972).

This led to a new wave of restructuring of educational systems in search of an appropriate system based on the practical skills needed in rural areas. Various education commissions were appointed to examine the existing educational system (Sifuna, 1984; Coombs & Ahmed, 1974; Sheffield, 1973). These commissions advocated schooling which would encourage self-employment and hence reduce the trend to rural-urban migration among youth, especially school leavers. Vocational and technical education was seen as a solution to social problems especially unemployment caused by mass education.

Many types of vocational programs have been established in developing countries, and Kenya is no exception (Anderson, 1970; Coombs, Ahmed & Prosser, 1973). The main purpose of this emphasis has been to provide practical skills to youths which will assist them to become self-employed. Some political leaders and members of the public see the increasing unemployment as a result of the inherited system of education which emphasizes academic subjects, hence luring the youth

to search for white-collar jobs in urban areas (Angi & Coombe, 1970; Yambo, 1986).

The Kenyan government demonstrated its concern for the slow rate of rural development, and the growing unemployment among school leavers, through its creation of training programs for both youth and adults (Brownstein, 1972; Geoffrey, 1979). Such programs were intended to train and equip the students with technical and vocational skills, tied to rural development (Anderson, 1970; Coombs & Ahmed, 1974; Sheffield, 1974; Nkonoki, 1976). This was also intended to reduce the migration rates of young people from rural to urban centres. The endeavor to provide technical and vocational skills led to the establishment of Harambee Institutes of Science and Technology, Farmers' Training Centres, National Youth Service, Christian Industrial Training Centres, and the Youth Polytechnics among others (Sifuna, 1984; Godfrey, 1973; D'Souza, 1976). This commitment is clearly expounded in the new education system in Kenya: Known as 8-4-4, the system proposes 8 years of primary and 4 years of secondary education followed by 4 years in university. This was introduced in 1985 (Kenya Government, 1981).

1.2 Purpose of the Study

The purpose of the study was to examine the youth polytechnics of Kenya as one of the educational programs aimed at addressing the questions of unemployment and further training among school leavers,

especially primary school graduates. The study focused on the efficiency and effectiveness of youth polytechnics (the benefits which accrue as a result of the establishment of such institutions in a particular local rural community).

The main objectives of the study were:

1. To examine and analyze the similarities and variations in the courses offered in Youth Polytechnics in different local rural communities in the Eastern Province of Kenya.

2. To examine the Youth Polytechnic administrative structures and their effect on the program.

3. To examine the equipment/tools, training materials, and their effect on the quality of graduates.

4. To examine the development of rural areas in relation to manpower training in the institutions.

1.3 Research Questions

The study addressed the following questions:

1. What is the nature of the youth polytechnics (formerly: Village Polytechnics)?
   a) What is the context of a youth polytechnic in relation to (i) location, and (ii) other educational Institutions?
   b) Do they differ in size in terms of numbers of (i) programs offered, (ii) instructors, (iv) administrators?
   c) What type of courses are offered in the youth polytechnic program?
   d) What is the composition of the student body in terms of the ratio of males to females?
2. What is the administrative structure of the youth polytechnics? That is, how are they organized, how are they staffed, and what is the extent of community involvement?
   a) Have these elements changed over time?
   b) Are there variations among the youth polytechnics?
   c) Does the administrative structure affect the effectiveness and efficiency of the institutions?
3. Who finances the establishment and operation of youth polytechnics?
   a) What other sources of finance are available to youth polytechnics?
   b) Do the institutions engage students in money-making activities such as contracts, sale of products made?

c) Are there variations among the Youth Polytechnics?

4. How efficient are the various programs in the various youth polytechnics?

5. How effective are the youth polytechnics?

   a) How relevant are the youth polytechnics to rural development?

   b) What happens to graduates after training?

   c) Do graduates make use of skills acquired from their training?

6. What changes are being considered for the youth polytechnic program?

   a) What are the projected future trends?

   b) Would they improve or change the program's effectiveness and efficiency?

1.4 Background and Significance

In developing an education system relevant to the demands of a society, many factors have to be considered. This is reflected in the fact that over the past two decades there has been an increased emphasis on a relevant education for development of the rural areas in developing countries (Ahmed, 1975; Lema, 1976).

Considerable efforts have been made in developing countries to enrich the school curriculum with appropriate skills, knowledge and attitudes for rural development (Akwenye, 1975; Fuller, 1985). A most innovative design of education for rural development in formal education was Nyerere's (1967) community-based "Education for Self Reliance." Many programs designed in Africa have undergone continual revision to make the curriculum content and process relevant to the needs of rural development (Clarke, 1973; Weiler, 1978). The Kenyan Government's commitment to this goal is clearly documented in various official reports (Republic of Kenya, 1983, 1984, 1986, 1987).

The provision of technical-vocational education in Kenya comprises a complex network. This ranges from industry-based on-the-job training, apprenticeships, and health care, organized by the ministry of health, training programs organized by private firms; and the National Youth Service organized and managed by the Kenya Government (Blaug, 1972; Joyner, 1987). All this is an attempt to train manpower required by the economy as a whole and even more so in rural

development. In the rural development strategy, the government of Kenya has established several programs which cater to the development of the agricultural sector. These include Farmers' Training Centers, Agricultural Colleges, Agricultural Research Stations, as well as refresher courses for farmers and extension workers (Republic of Kenya, 1984; Ahmed, 1975; Sheffield & Diejomaoh, 1972). The government has tried to implement the UNESCO (1968) recommendations that primary schools should inculcate positive attitudes towards manual work, and also that the whole education system be integrated within a plan geared to rural development (Njunji, 1974; Sifuna, 1977).

The pressure of rural-urban migration and unemployment among primary school leavers led to the establishment of the youth polytechnics. The program was started following a conference on Education and Manpower development held in Kericho in 1966, and the publishing by the National Christian Churches of Kenya (NCCK) of their document "After School What?". Currently, there are about 600 institutions in the country with an enrolment of nearly 22,900 students (see Appendix III). Of these, only 321 are government assisted. The rest are supported by international organizations and the local community. Such a system is manageable only if there exists proper manpower planning, development, and utilization of the skills learned.

The youth polytechnic program was designed originally for further training of primary school leavers. The program, with an emphasis on technical-vocational orientation, was supposed to be based on the needs of the local rural communities in Kenya. Analysis of documents and research studies on the development and growth of youth polytechnics in Kenya (Anderson, 1970; Court, 1973; Sifuna, 1975) revealed that the program was handicapped by the following problems:

1. Lack of a standard curriculum for specific trades.
2. Lack of full integration into the technical-vocational system of education.
3. Lack of a formalized training program for the instructors in the youth polytechnics.
4. Lack of or little evaluation done on the youth polytechnic program.
5. Attitudes of communities towards the youth polytechnics.

Despite such problems, the government has continued to encourage the construction of youth polytechnics because of the impact in some communities. Tracer studies of graduates from the youth polytechnics suggest various trends. Currently, the youth polytechnics are producing graduates with skills which, when coupled with the certification obtained by sitting for the Government Trade Test, enable some to secure formal employment and others to be self-employed. However, some studies have shown that many youth polytechnic graduates engage in employment in sectors where they cannot apply the skills learned in the institutions (Sifuna, 1977;

Yambo, 1986). The Youth Polytechnic Program is conceived as one method of manpower training for rural needs and development (Court, 1973; Ruparunganda, 1980). The skills learned are assumed to accelerate rural development. Such an education system, informal in nature, could decrease the rate of migration to the towns, create jobs at low cost, and encourage self-employment in the local rural communities in Kenya (Ahmed, 1975; Lema, 1976; Republic of Kenya, 1986).

The study could be of benefit to curriculum development and research. Questions such as the following could be asked: what is a relevant curriculum for the needs of the rural communities and the target population? What effects do the Government Trade Tests have on the rural-urban migration of youth? The study could be of interest and benefit to professional administrators, vocational training institutions, government ministries and departments which are responsible for rural development, community development, culture, and youth development. Within the present education system in Kenya, teachers of technical-vocational oriented subjects could find this study of benefit as well.

1.5 Limitations of the Study

The field work took approximately two and a half months to complete. However, the researcher faced some difficulties which constituted some of the limitations of the study. These were:

1. Sample Size:

Due to limitation of time and funds the study was restricted to 16 youth polytechnics in the Eastern Province of Kenya. This gave the researcher an opportunity to conduct an extensive study of the selected institutions. The results are therefore limited to these institutions.

2. Travel problems and Time Schedule:

In some places the researcher had to walk long distances (10-15 km.) to reach the institutions, or to find members of the management committee. The above, coupled with the problem of not being able to reach some of the key interviewees, made the researcher rely on substitutes for interviewees.

3. Insufficient sources of data:

a) People

Most of the interviewing took place during class hours, and it was difficult to extend the time required. Individual interviews were to have taken approximately 20 minutes, so the interviewer had to limit interviews and try to condense the time required in order to get as much information as possible.

b) Records, Documents

Some of the institutions lacked adequate records demonstrating the gradual growth of the youth polytechnics.

1.6 Outline of the Study

The study is presented in five chapters. Chapter I provides the background for the study in the Kenyan context. Chapter II gives a general review of the system of education in Kenya before and after independence. Emphasis is laid on the development of vocational education through the establishment of vocational training institutions including the youth polytechnics, Harambee Institutes of Technology, National Youth Service, and Rural Craft Training Centres. As well, an overview of the Youth Polytechnic Program, which is the focus of the study. Chapter III outlines the scope of the study, the view and experiences of the researcher on rural development, and the methods and procedures of data collection. Chapter IV presents the data and its analysis, while Chapter V consists of the conclusions, recommendations, and the expected future trends of the youth polytechnic program.

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

This chapter deals with the review of literature, related to the problem in question. The literature helped the researcher to embark on the study and formulate research questions. The review is divided into the following sections:

1. Trends in the development of education in Africa
2. Background on education in Kenya
3. The youth polytechnic program
4. Analysis of previous studies on youth polytechnics.

2.2 Trends in the development of formal education in Africa

After independence, most of the developing countries expanded the narrow, elitist educational systems they inherited using very similar policies towards education as their colonial masters. The policy goals were aimed at human resource development. However, the scarcity of resources was a limiting factor in expansion of primary, secondary and higher levels of education; it was also a major drawback in generating employment opportunities commensurate with the output of the educational systems (Ahmed, 1975; Blaug, 1972). After independence, there were rapid changes in population of school age children coupled with increased demand for formal education. African governments had to increase opportunities for education to cater to the needs of their countries (Angi & Coombe, 1970; Godfrey, 1973;

Sifuna, 1975). The expansion created an unforeseen problem of higher unemployment coupled with increased rural-urban migration.

The problem of unemployment among school leavers is a factor influencing current thinking on education. The crisis has been viewed as entirely an educational problem, but it is also economic and requires solutions which are outside the education system (Stohr & Taylor, 1981; Ahmed, 1975). It is not a question of inappropriate education, as is often argued, but the expansion of educational opportunities not accompanied by or preceded by job opportunities (I.L.O., 1967; King, 1974; Kipkorir, 1975).

The relationship between the rate of expansion of jobs in public and private sectors and the rate of growth of educational enrollments for the period 1949-1976 is shown in Table 2.1. The long-term trend has been one of jobs increasing at a slower annual rate than output of the education system; consequently, educated unemployment is bound to become a permanent feature in the labour market (Kinyanjui, 1979; Woodhall, 1981).

The most serious question was how the school leaver could be further educated and trained, and be provided with relevant vocational skills to promote a transition to self-employment (Cameron, 1970; Lillis, 1984). Such problems led to the search for a relevant education directed to the needs of the developing countries. Technical

Table 2.1: Expansion of employment opportunities and education, 1949 - 1976

Year	Employment		Education Enrollment	
	Public	Private	Primary	Secondary
1949	105,200	324,900	326,400	6,000
1952	115,600	360,000	363,300	8,100
1955	175,600	439,500	432,700	10,000
1958	157,700	435,500	651,800	15,100
1961	167,000	422,800	870,400	21,400
1964	182,000	393,400	1,010,900	35,900
1967	212,100	419,300	1,133,200	88,800
1970	248,000	397,300	1,427,600	126,900
1973	298,900	462,400	1,816,000	175,300
1976	356,400	501,100	2,894,600	280,400

Notes: Source: Kenya, statistical abstract, 1955 - 1976 and Kenya, Ministry of Education, Annual Report, 1948-1975. Quoted in Kinyanjui, 1979. Education for rural development in Kenya: A critical note. A discussion paper No. 264.

education and training in nonformal education was the only feasible system (Coombs, 1985; Sheffield & Diejomaoh, 1972). This was expected to enhance the economic growth and development of both the rural and urban areas (Hinzen & Hundsdorfer, 1979; Leonor, 1985). In some African countries such as Kenya and Tanzania, primary school enrollment had increased rapidly; Tanzania had an increase of 72% between 1961 and 1967. Increase in primary school enrollment led to expansion of secondary schools to satisfy to the increased demand. In 1967, Kenya had double the number of secondary school places that it had in 1963 (Blaug, 1974; Sheffield, 1973).

Investment in education in the developing countries was intended to help achieve the national policies and goals of economic growth and development (Hall, 1977; Foster, 1982). Formal academic education is vital for economic and social development, but restructuring of education systems in developing countries has often focused on the development of "practical skills" so as to meet the demand of manpower with skills relevant to development for both rural and urban areas (Sheffield, 1974; Sheffield & Diejomaoh, 1973; Hoppers et al, 1980).

Attempts by educational planners to find ways of generating manpower with skills required in development of rural areas has met with little success (Psacharopoulos, 1981; Mukras, 1985). The above stems from the fact that the current macroeducational techniques of social

demand, rate of return, and manpower planning will never be used in planning a system responsive to individual motivations of the learners and the general economic incentives (Windham, 1982; Leonor, 1985). This is a result of the lack of accuracy with which planners have predicted manpower requirements in specific skills. Mark Blaug (1972) states that "... vocational training provided within the formal educational institutions could never become an effective method of accelerating economic development" (p. 456). He further suggests that special vocational institutions could be created in particular cases where their endeavors could be closely meshed with on-the-job training. Yet, most of the developing countries have had problems in discovering how to accelerate economic development, and have emphasized technical education in their schools to further this goal.

Tanzania started its community-based schools, "Education for Self Reliance", with the main aim of preparing the young people to play a dynamic and constructive part in the development of their society (Nyerere, 1967; Morrison, 1976; Nkonoki, 1976; Lillis, 1984). What was needed was to orient the idle school leaver to "Ujamaa" villages and to the land (Leonor, 1985; Morrison, 1976; Sheffield & Diejomaoh, 1973). This led to the introduction of "education for self-reliance" and the National Youth Service, to provide the vocational orientation required.

The nature of colonial education in most African countries emphasized general education, but rising unemployment among school leavers, especially the primary school graduates, caused a lot of concern among many governments. The kinds of modern industrial sector jobs associated with the various educational credentials chasing after them become increasingly scarce. Several tracer studies of school graduates in developing countries (Coombs, 1985; Martinus, 1984; Thompson, 1981; I.L.O., 1973; Tregar, 1962), indicate that aspirations and the actual job opportunities in developing countries is mainly a function of four dynamic variables:

1. the number and proportion of young people entering the employment market per year with various educational credentials.
2. the size of the modern sector and the proportion of the total national labour force it employs.
3. the annual growth of new jobs in the modern sector.
4. the proportion of non-manual (white collar) jobs offered by the modern sector.

Since independence, most of the African countries provided a general type of education with technical education following formal schooling, usually in industries as apprenticeships in urban centres (Lema, 1976; Kipkorir, 1975). This, coupled with the fact that the attitude of the people was biased towards white collar jobs, resulted in a high rate of rural-urban migration. The result of such a migration is a retardation of rural development as most educated

people moved to the towns (Unesco, 1984; Shiundu, 1986). Since the 1970's the educational policies have changed. More stress has been placed on ruralization of education with an aim of developing rural areas.

In rural development endeavors, Zambia provided a program for the training of farmers. Its development could lead to a solution to the problem of school leavers' unemployment (Thompson, 1981; Lillis, 1984). This could be compared to the development of the Farmer Training Centres in Kenya, whose main aim is to train extension workers to work with farmers in rural areas, so as to enhance the development of the agricultural sector.

In Botswana, the Youth Brigades program has had success in its aim to develop managerial and non agricultural skills in rural areas (Sinclair, 1975; Sheffield and Diejomaoh, 1973; Rensburg, 1970). Senegal has a program of youth centres, the Rural Training Centres, which trains artisans in metalwork, carpentry, and building. In Kenya, several vocational training centres have been in operation for quite some time since independence (D'Souza, 1976; King, 1977). Some of these include the Rural Crafts Training Centres, the National Youth Service, and the youth polytechnics (formerly referred to as Village Polytechnics), and more recently the Harambee Institutes of Science and Technology (Anderson, 1970; Godfrey, 1973; Raju, 1973; Kinyanjui, 1979). In Tanzania, the Folk Development colleges are

also institutions offering vocational skills for rural development (Nkonoki, 1976; Martinus, 1984). The programs above are meant to base their training on the needs of the local population. All of them were intended to absorb and train primary school graduates in skills relevant to rural development (Brownstein, 1972; Hallak and Caillods, 1981).

The above is a general overview of the emphasis which has been placed on technical-vocational education in Africa. This applies as well to most other developing countries. The reason some of the programs have not succeeded is probably due to the way in which they were initiated without serious involvement of the local population.

2.3 Background of Education in Kenya

2.3.1 Introduction

Traditional African education (aimed at providing individuals with a wide range of knowledge and skills) existed before Islamic education (now found mostly in the Coast Province of Kenya) and formal education were introduced in Kenya. It was linked to the social, economic and political aspects of the society. The main objectives of traditional African education were to: 1) preserve the cultural heritage of the extended society; 2) adapt members to their environment by equipping them with knowledge and skills required in the society; 3) allow individuals to explain, understand and perpetuate the inherited institutions, laws, language and values

(Sheffield, 1973; Wood, 1974; Morrison, 1976; Mambo, 1980; Datta, 1984). The Church Missionary Society established their first school in 1846 near Mombasa (Mambo, 1980; Raju, 1973; Sifuna, 1973). The main objective of education was to make the African easy to convert and hence assist the missionary in spreading the Gospel of Christ (King, 1975). During the period 1900-1910, there was a scramble by many missionary groups to gain influence in Kenya (Raju, 1973).

2.3.2 Education during the colonial period in Kenya

In 1911, a Department of Education was started by the British and the first government schools for Africans were established. The education system was designed such that the different immigrant races, that is the Asians, the Whites, and the Africans, were provided with education differentiated with respect to expenditure. The racial stratification led to the formation of separate education advisory committees in 1924 for the three racial groups (Sheffield, 1973). Not only was the expenditure per pupil more than five times higher for Europeans than for Africans, but in relation to the total population, the imbalances were even greater (see Table 2.2).

Between 1947 and 1957, European education was allocated KSh. 13,414,000 (C$ 982,710.63) or KSh. 11,660 (C$ 854.21) per head; Asian KSh. 12,730,000 (C$ 932,600.73) or KSh. 3,480 (C$ 254.94) per head; and African education was allocated KSh. 16,120,000 (C$ 1,180,952.38) or KSh. 4 (C$ .29) per head (Bogonko, 1986). The differences in the

Table 2.2: Kenya Education Department Expenditures by Race in 1926

Race	Number of pupils	Expenditure (in U.S. Dollars)	Expenditure per pupil
African	6948	232,293	33.4
Asian	1900	70,329	37
European	776	140,041	180.5
Total	9624	442,663	46

Notes: Source: James R. Sheffield (1976). Education in Kenya, Teachers' College Press: New York.

funding of education for the three racial groups led to differences in the quality of education provided.

Studies conducted on the influence of per pupil expenditure on achievement or school performance showed that the marginal cost per pupil increases the performance in examinations. Fuller (1985), on reviewing several research studies, found that inputs such as text books per pupil and access to library facilities do increase the quality of training in the schools (p. 74). Other subjects taught in African schools such as agriculture were for subsistence purposes but not to make African development in the reserves balance with that in the European settlements. That is, whatever development was to take place in the reserves, it was not to enrich Africans to the point where they would no longer provide labour for the European farms (Bogonko, 1986; Fuller, 1985).

The main aim of education in the colonial period was to give a minimum basic education to the African labour force to help the colony develop (Foster, 1982; Munyua and Muhia, 1974). This type of education was mainly general academic with aspects of vocational technical subjects in agriculture and carpentry (Court, 1973; Blaug, 1972, 1974; Sifuna, 1986). Raju (1973) indicates that the missionary's purpose was to design a curriculum which incorporated crafts and arts, and, most of all, to appreciate the Christian faith through the ability to read and write (p. 110).

The Government's policy, contrary to the mission's, was to give both general education and technical training in carpentry, masonry, and agriculture. The Colonial Government made the policy following the recommendations of the Phelps Stokes Commission on Education in East Africa in 1924 (Sheffield, 1973; 1974). The Jeannes schools, modelled on the Negro Industrial Schools operating in parts of the United States of America, were an example of this type of education (Kinyanjui, 1979; Sifuna, 1975). The situation of the black Americans in the United States rural south was equated with that of the peoples of Africa. In 1925, an "Education Memorandum" laid down the basis of education for all British-African colonies (Sifuna, 1973; Raju, 1973; Koech, 1983).

One principle was that education should be adapted to the local needs, preservation of the traditional culture and preparation of students for the world of work (Sifuna, 1977; Wanjala, 1973). This contradicted the mission's aim, which was for the African to remain simple and help expand Christianity. The colonial masters believed that the only way to keep the African as a source of manpower in the farms was to provide technical training rather than academic education (Raju, 1972; Morrison, 1976). Lord Delamere, a former settler in the Kenya Highlands, remarked that, "... there should be a widespread teaching of the native African in the skilled work of the use of his hands" (Sifuna, 1975; Raju, 1973).

Hence most schools taught agriculture, masonry and carpentry (King, 1974; I.L.O., 1967).

2.3.3 Education in post-independence Kenya

The question of orientation of formal education in Kenya to rural development has been reflected in interest by the state, local voluntary agencies, and international organizations (Lema, 1976; I.L.O., 1973; Brownstein, 1972). The concern arose from the assumption that the colonial and post-colonial education system was academic, did not inculcate skills and values that were and are needed in the society, and in particular, for rural development (Ahmed, 1975; Coombs and Ahmed, 1974; Raju, 1973). Immediately after independence, in 1963, the Kenya Government appointed a Commission to review the education system, under the chairmanship of Professor Ominde. The Ominde Commission on Education focused mainly on manpower development, and at this time secondary, technical, commercial and higher education were a priority (Homm, 1972; Mambo, 1980; Unesco, 1968).

The Ominde Commission recommended that agriculture and carpentry be abandoned and that, instead, general science be included in the primary school curriculum (Njunji, 1974; Sifuna, 1986). Kenneth King (1974) indicates that, due to the number of primary schools in relation to the availability of trained competent teachers and administrators with the relevant interest and skills in vocational

subjects, it was difficult to offer agriculture as a separate subject.

The expansion of primary schools has been greater than for other higher levels of education, such as secondary schools (Sheffield, 1973; Sifuna, 1975). The primary schools were said to have increased by over 100 percent in 1985 over 1963 (Republic of Kenya, 1986). This is due to the rise in school-age population. The result of such expansion at the basic level of education is an output of primary school leavers who cannot all be absorbed in the formal system of education at the secondary school level due of lack of adequate places (Clarke, 1973; Lewis, 1969; Tregar, 1962).

It has been estimated that approximately 12 per cent of primary school leavers get places in government-maintained secondary schools, 23 per cent are admitted in Harambee and private secondary schools, and only five per cent of secondary school graduates (i.e. Form 4's) enter form five. Consequently less than 0.5 per cent of those admitted in standard I of primary schools get places in our universities (Republic of Kenya, 1983). One problem for the educational planners was matching the manpower requirements and/or projections in future demand to the skills produced in the education system.

The interest in nonformal education arose in the 1970s and it was further prompted by some proclaimed strategies which included: a stronger, more integrated, and more community based approach to rural development and a commitment to meet basic needs of the poor (Shiundu, 1986; Sheffield & Diejomaoh, 1972). Nonformal education is a distinct and separate education system parallel to the formal education system. It is simply a handy generic label covering:

> any organized, systematic, educational activity outside the framework of the formal system, to provide selected types of learning to particular sub-groups in the population, adults as well as children. Thus defined, nonformal education includes, for example, agricultural extension and farmer training programs, adult literacy programs, occupational skill training given outside the formal system, youth clubs with substantial educational purposes, and various community programs of instruction in health, nutrition, family planning, cooperative women groups and the like (Coombs, 1985, p.23).

The purposes of nonformal training are thus:

(i) to equip primary school leavers with vocational skills in the youth polytechnics;

(ii) to upgrade training programs for industry, in National Youth Service;

(iii) to upgrade training programs for farmers in the Farmers' Training Centres.

2.4 The Youth Polytechnic Program

2.4.1 Historical background

In the 1960's and 1970's the main educational goal of most independent African countries was expansion of education at all levels. This expansion boosted the output of students (Foster, 1982; Bogonko, 1986). From the late 1970's the trend has changed and

emphasis has been placed on strengthening primary education (Weiler, 1978; Sifuna, 1986). In Kenya, the growing number of primary school leavers led to an alarming situation of unemployment (Lewis, 1969; Coombs, 1985). There were few jobs available and the leavers lacked the relevant employable skills (Court, 1973; Ahmed, 1975; Wanjala, 1975). In 1966, a conference held in Kericho on Education, Employment, and Rural Development observed that only a small proportion of primary school leavers got places in secondary school, or got employment. The same problem was foreseen by the National Council of Churches of Kenya which produced a document "After School What" which analyzed the education and training of the primary school leavers in Kenya (Sifuna, 1975; Wanjala, 1975). The Anglican Mission had earlier started Youth Centres for the training of primary school leavers at Nambale in Busia District-Kenya (Godfrey, 1973; Hall, 1977; King, 1977).

The youth polytechnic program, which is the basis of this study, was started in 1966, after the conference held in Kericho. The institutions were meant to serve as skill training centers for primary school leavers who did not get admission in secondary schools, and for early school leavers (drop-outs) (Wanjala, 1973; Sifuna, 1975). The program was also aimed at making youths play an active role in rural development, and hence contribute to national economic growth and development through the establishment of small-scale enterprises (Court, 1973; Shiundu, 1986). This was

expected to help reduce the number of people migrating to towns in search of employment, and therefore the spirit of self reliance would be encouraged and maintained.

2.4.2 Administrative organization

There is a central co-ordinating committee for the organization of the program. Members are drawn from the government ministries of Co-operative Development, Culture and Social Services, and the District Development Committees. Elected executive members of the committees deal with management, development, and finances, and also research and training aspects of the program (Court, 1973; Wanjala, 1975).

In each particular youth polytechnic, a management committee elected from the members of the community handles the internal affairs of the institution (Anderson, 1970; Sheffield & Diejomaoh, 1972; Coombs and Ahmed, 1974). The instructors for the institutions are Kenyans with a few volunteers sponsored by non government organizations. The funds for the program in each particular community depend on whether the institution is government assisted, or self-help. Self-help projects are those institutions which have been started by the communal action which is known in Kenya as "Harambee" ("Harambee" is a term which means "let us pull together." It is a popular national motto (slogan) which was introduced by the first president of Kenya, and is used to mobilize people to participate in development projects locally and nationally by contributing funds, materials or even human

labour). Thus, funds to run these institutions come from community members, government, churches and private organizations and, in some cases, international organizations (Mackenzie & Taylor, 1987). Student tuition fees play a part in the financing and buying of materials used in the training process in the workshops (Sifuna, 1975; Department of Social Services, Annual reports, 1986).

2.4.3 Organization of the Curriculum

The content of courses depends on what the needs of the community are. The diversity of the program in each institution is influenced by the availability of resources, including instructors. Some typical courses include: carpentry, masonry, general agriculture, domestic science, and tailoring (Anderson & Windham, 1982; Ahmed, 1975). To facilitate instruction in other courses, academic subjects such as English grammar and Mathematics are supposed to be taught (Wanjala, 1973; Sifuna, 1975). The youth polytechnic curriculum is designed such that it encourages the development of skills which allow graduates to participate fully in the economic development of the rural areas in Kenya, and discourages migration of the school leavers to urban centres.

2.4.4 Students: Target group

The intended group is primary school leavers, but there has been a flow of secondary school leavers as well (Sheffield & Diejomaoh, 1972; Lillis, 1984). The institutions generally admit both boys and

girls although there are more boys than girls in most institutions. There is a high drop-out rate among the students, especially in the youth polytechnics in the more arid areas of the country where it reaches approximately 44% (Statistics: 1973; annual reports: 1986). The factors attributed to such drop-outs include excessive tuition fees in some of the youth polytechnics and attractive employment opportunities. Those students who leave before the completion of their respective courses do not contribute much to the community due to limited skills and experience (Court, 1973; Leonor, 1985).

Apart from the previous objectives of the youth polytechnics, other additional objectives have arisen. These include the following:

(a) education of the community to understand the value of the institutions to local rural development;

(b) achievement of a more balanced economy between the rural and the urban areas by increasing rural job opportunities.

Despite the emphasis on the development of youth polytechnics in Kenya, the literature has shown that there are several issues which curtail the program's development. Some of the most intriguing issues and problems include: serious dilemmas for policy makers in developing countries in connection with the apparent confusion of objectives, contradictory approaches, lack of coherent planning, and duplication of effort. Other problems are administration, organization and staffing difficulties, training which is sometimes not linked to job opportunities, and a lack of follow-up programs

(Ahmed and Coombs, 1974). The youth polytechnic program has also been viewed as a shadow system, playing an ancillary role to formal education by accepting the failures of the formal system (Court, 1973).

2.5 Analysis of previous studies on youth polytechnics

Past studies on the youth polytechnics focused mainly on the graduates and the kind of occupations they held after graduation. The information used in most studies was based on self reports from the youth polytechnics (Court, 1972). The studies by Court, (1972), Odegi-Awuondo (1975), Brown (1975), Orwa (1982), and Ongolo (1983) fall under this category.

Two other studies have been conducted in the 1980's. One focused on eight youth polytechnics in Machakos District (Nzioka, 1986) while the other, which was more extensive, was conducted by Yambo sponsored by the Danish International Development Agency (DANIDA), and the Kenya Government (Youth Development, Annual Report, 1986). Evaluation studies by Court (1972) and Awuondo (1975) form a base-line for all the other studies. Such studies focused on the employment status of the youth polytechnic graduates. Court (1972) and Yambo (1986) found that about 64 per cent of the graduates were in wage and self employment and using skills learned in the institutions while 13 per cent were employed but were not using the skills. The studies also examined the significance of certification,

on the one hand, and the ease of obtaining employment. It was found that 16 per cent of the graduates interviewed indicated that it was not easy to be employed without the Government Trade Test Certificate (Orwa, 1983). The problem of the lack of basic tools by graduates was found to have very little effect on the recent graduates who are in formal employment. Other researchers, such as Migot-Odholla and Okoth-Owiro (1981) suggest that the possession of basic tools is very vital in the utilization of skills to the leavers as quoted in (Yambo, 1986 Manundu, 1987). Court (1972) also found that most women in tailoring were gainfully employed, while those who did courses in domestic science tended to stay at home. Among the men, it was the carpenters and masons who tended to work within the rural region, as compared to other trades (Mikkelsen, 1987; Kasina, 1987).

The list of problems facing youth polytechnics in Kenya cited in the literature can be classified into the following categories:

a) Policy issues like sources of funds, staff, development, and salaries;

b) Internal administrative problems relating to admission of students, equipment/tools;

c) Professional tasks like needs assessment in program improvement and expansion, and development, evaluation and follow-up;

d) Sustainability of the continued construction and growth of the youth polytechnics;

e) The question of duplication of courses;

f) The diversification of the programs offered in the institutions, so as to cater to the needs of the female community;

g) The lack of a follow-up program for former graduates to ascertain whether they are applying the skills learned in the institutions.

In summary, with the introduction of the new education system (8-4-4), which has a vocationally oriented curriculum and the District Focus Development Strategy, it is important to examine the efficiency and effectiveness of the youth polytechnics in Kenya.

CHAPTER III

METHODOLOGY

3.1 Introduction

This chapter offers a brief summary of the scope of the study and gives an outline and discussion of the methods and procedures used in data collection. The first phase of the study included the review of literature on youth polytechnics and institutional evaluation in order to identify issues related to the successes and failures of youth polytechnics in Kenya. The second phase involved the field work conducted in the Eastern Province of Kenya.

The research study was conducted in Kenya during the months of October, November and December, in the year 1987. The study concentrated in the Eastern Province of Kenya, in the districts of Machakos, Kitui, Embu, Meru, and Isiolo. Table 3.1 shows the district names and the total number of youth polytechnics in each. The development of the institutions in each of the districts is very different, in that the size of the district does not reflect the number of institutions. Isiolo and Marsabit are among the largest districts in the province, but there are few institutions compared to others areas. The two districts are in the semi-arid regions of Kenya, and as such they are less populated. This might be a factor which could hinder the growth and development of the youth polytechnics.

Table 3.1: Number of Youth Polytechnics in six districts in the study area - Kenya

Name of District	Number of Youth Polytechnic Projects[a] GOK (assisted)	Self help or Harambee	Total
Machakos	18	26	44
Kitui	7	13	20
Embu	7	5	12
Meru	13	9	22
Isiolo	2	1	3
Marsabit[a]	2	[b]	2

Notes: [a] Marsabit district was not included in the sample.

[b] The number of youth polytechnics under self help basis was not available.

[c] It is possible that there are more institutions which are not in the table above, as the Department of Social Services enumerates only those institutions which submit their monthly reports.

The number of institutions in the eight provinces in Kenya, and the sample chosen for the study are shown in Tables 3.2 and 3.3, respectively. The sample is divided into those institutions which are under Kenya Government assistance and the harambee or self-help projects (the latter are started with communal action or efforts). The sample of institutions selected for the study with their respective districts is shown in figure 3.1. The study was restricted to the 16 youth polytechnics selected during the field work, and the results can only be generalized in the particular province. A Map of Kenya, showing the districts where the study was conducted is shown in fig. 3.2. All the institutions are started on harambee basis, and later the Government takes responsibility for assisting through grants, mainly to pay instructors' salaries. Occasionally, development aid is channelled through the district development office to the institutions.

3.2 Instruments

The study was based on three methods of data collection: library search, interviews, and personal observation and analysis of institutions' annual reports and records. Recent studies have tended to use questionnaires as well as the interview method, but for more in-depth enquiry the interview was used as the main method. The choice of the interview protocol and observation as the main instruments was decided on quite early in the study. The critical reason for the choice of the interview protocol was that respondents

Table 3.2: Youth Polytechnics in eight provinces of Kenya

Name of Province	Number of Youth Polytechnics[b]
Eastern[a]	49
Coast	44
Central	66
Nairobi	2
North Eastern	8
Nyanza	55
Rift Valley	53
Western	43

Notes: [a] indicates the province which was included in the research study field work.

b The institutions shown in the table are only those which are under the Kenya Government assistance. The self help projects are not included.

Table 3.3: Youth Polytechnics in the study area, showing the Government of Kenya-assisted and the self-help projects

Name of District	GOK assisted	Self help Projects	No. in Sample	
			GOK assisted	Self help
Embu	7	5	2	1
Isiolo	2	1	1	0
Machakos	18	26	5	2
Kitui	7	13[a]	2	0
Marsabit[c]	2	[b]	0	0
Meru	13	9	2	1

Notes: [a] In the district, there are other self-help projects which are combined with the youth polytechnic projects. There specific self help youth polytechnics.

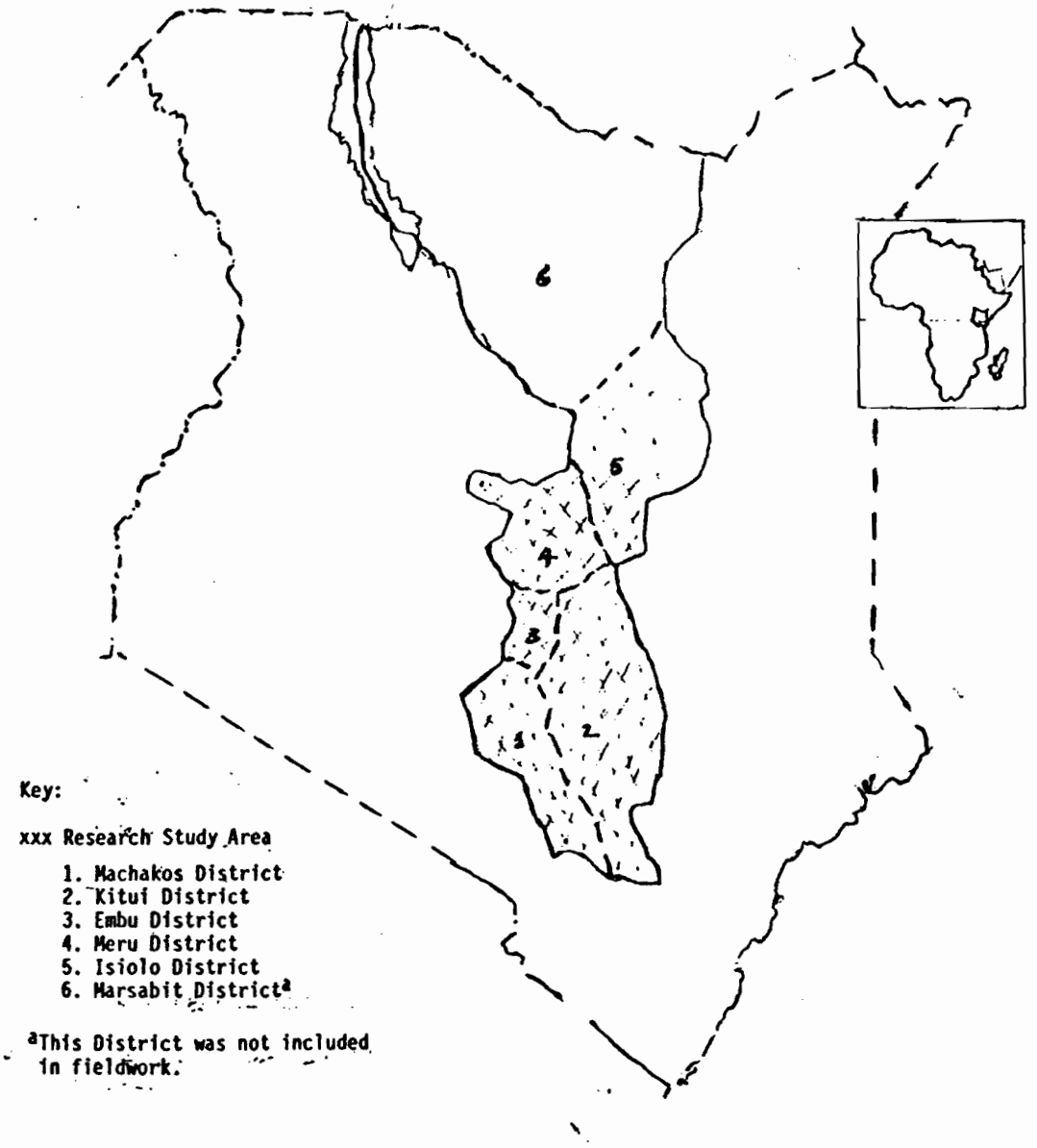
[b] It was not possible to determine the number of YPs in the district.

[c] This district was not included in the study sample.

Fig. 3.1: List of Youth Polytechnics included in the study by district

Name of Youth Polytechnic	Name of District
Kimutwa	Machakos
Mitaboni	Machakos
Masii	Machakos
Ngenda	Machakos
Katangi	Machakos
Kithaayoni	Machakos
Matuu	Machakos
Kitui	Kitui
Mulango	Kitui
Karurumo	Embu
Iria Murai	Embu
Miramba ya Njau	Embu
Kiranga	Meru
Kithoka	Meru
Kianjai	Meru
Isiolo	Isiolo

Figure 3.2 Map of Kenya



Key:

xxx Research Study Area

1. Machakos District
2. Kitui District
3. Embu District
4. Meru District
5. Isiolo District
6. Marsabit District[a]

[a]This District was not included in fieldwork.

would not be able to complete the questionaires in time. Although questionnaires would have facilitated the collection of data, the time limit on the researcher was a major factor in determining the instrument. The use of interviews and observation imposed a limit on the number of institutions that could be reached or covered in the study, but still they rated as the most convenient. As well as the interview protocol, observations were recorded in field notes and photographs were included as part of the data collected.

A library search was used to obtain an overview of the institutions and development of the program as a whole. The issues raised in the most recent studies, notably the tracer study by Mauri Yambo (1986), were very important in shaping the ideas of the researcher about the program. In the literature reviewed, Court (1972) referred to the youth polytechnic program as a "shadow system", meaning that it would absorb the failures, that is, those students who could not get places in secondary schools. In addition, the system has a tendency of trying to replicate the formal system (Kinyanjui, 1979; Psacharopoulos, 1981). This assertion made the researcher much more aware of the main question. These issues were developed into a framework containing the broad issues and major questions to be answered, together with the sources of the data (see Appendix IV). This framework then enabled instruments to be written and data collection to proceed.

3.3.2 Field site visits

The 16 institutions visited are shown in table 3.3. Appendix V shows the number and kind of people interviewed during the field work. In some cases it was not possible to interview some of the members of local youth polytechnic committees.

During typical visits the researcher talked about the particulars of the institutions and examined the records of youth polytechnic development from annual reports. The researcher considered changing the names of the institutions to protect their identity, but felt that for the sake of accuracy it was necessary to keep the original names.

3.4 Sample and Sampling

Within the Kenyan context, the concept of vocational training is wide and complex for it includes quite a number of institutions. This present study was confined to one category of these institutions, the youth polytechnics. Further, knowing that the institutions are spread all over the country, the researcher chose to narrow the study area.

The Eastern Province where the study was conducted had 49 Kenya Government assisted youth polytechnics, and over 61 non-government-assisted youth polytechnics (see Tables 3.1 & 3.3). Although, the choice of which institutions to study was initially planned to be

random, the researcher later modified the plan. The following factors (criteria) influenced the selection of the 16 youth polytechnics in the research study:

1) whether the institution was under self-help or Government of Kenya assisted;

2) location: infrastructure, that is, if it is easily accessible by road; and

3) number of institutions per district;

4) years in operation, and expansiveness of program.

By this procedure the researcher selected 16 youth polytechnics within the Eastern Province of Kenya which offered a mixture of the four characteristics.

CHAPTER IV

DATA ANALYSIS

4.1 Introduction

In this chapter, data collected during the field work are analyzed and interpreted, and conclusions are drawn. Also, the implications of the study on the youth polytechnics in Kenya are mentioned. The chapter is divided according to the research framework (see Appendix IV) which has the following main sections: context of the youth polytechnics; size of institution; administrative structure; finance for the program; program structure; program efficiency; program effectiveness; program changes; and anticipated future trends. Problems associated with the effective and efficient functioning of the youth polytechnics are also discussed.

4.2 The context and location of Youth Polytechnics

The youth polytechnics are located in the rural areas, and specifically there is an average of one per sub-location. For more contextual data see Appendix VII. This was well exemplified during the field work. Some of the sub-locations had two institutions or more, but only in the areas which have high potential in agriculture. There were two cases where the institutions were found to be located near the town, Kitui Youth Polytechnic in Kitui district and Isiolo in Isiolo district. Kitui youth polytechnic initially served as a youth centre and when the need arose to start a youth polytechnic, the availability of the buildings influenced the location. However,

the case of Isiolo is influenced by the fact that most of the development is concentrated around the town. Also this is a nomadic area where people do not settle in one area for long, hence it was difficult to start any more of such projects.

The study found that of the 16 youth polytechnics, 12 were located within a half kilometre from a primary school. Most of the secondary schools, however, are not near the institutions. Of the secondary school leavers admitted, four out of five came from a different location or division. This was partly due to the widely dispersed location of the secondary schools.

In the Eastern Province of Kenya, where the field work was conducted, it appeared that other educational institutions, such as institutes of technology, are a rare phenomenon. Among the five districts, there are about three institutes of technology which are located far from the youth polytechnics.

4.3 Size of Institutions

4.3.1 Introduction

The field study assessed the size of institutions in terms of students, number of courses in the program, and the number of instructors. As will be shown in the analysis, the longer the institution has been in operation, the larger the enrolment and the number of instructors. However, in some cases it is evident that

there has been little expansion in relation to the number of courses the trainees are taking.

4.3.2 Target population, and Enrollments

The institutions where data was collected during the field work were all co-educational, and served youth aged between 17 and 22 years. The level of education of the students admitted to some institutions ranged from primary early leavers to primary graduates. Others admit only students with primary school certificates or at least an indication that the individual completed the seven or eight years of primary or basic education. The demand for technical and vocational training has been growing at a high rate and now the institutions are offering courses to secondary school leavers. The enrolments in the specific institutions, as of the time of the study or field work, and the number of females and males in the institutions visited, are shown in Tables 4.1, and 4.2, respectively.

It is clear from Table 4.1 that quite a number of the institutions have high enrolments, while others seem to have relatively few students. This can be said to be due to high dropout rates and non-enrolment of the students. There are relatively fewer girls enrolled than boys in the institutions in total. The main reason given was that there were not many courses which are liked or preferred by the females. It was possible to find only one or two courses where girls were enrolled. The question about the programs

Table 4.1: Student enrollment[a] in 1986/87 period

Name of Institution	Enrollment
Kimutwa	12
Mitaboni	150
Katangi	74
Matuu	172
Ngenda	70
Masii	150
Kithaayoni	109
Kitui	71
Mulango	200
Iria Murai	150
Karurumo	200
Miramba ya Njau	71
Kianjai	200
Kithoka	78
Kiranga	77
Isiolo	172

Notes: [a] The enrollment shown is during the school year. There may have been other changes after the field work.

Table 4.2: Student enrollment in the Youth Polytechnics as of the time of the study site visits[a], and the dropouts

Name of Institution	Present Enrollment, Males	Females	Dropouts	Total Enrollment during the year	% DO
Kimutwa	0	4	8	12	67
Mitaboni	92	61	23	150	13
Katangi	41	19	14	74	19
Matuu[b]	105	46	21	172	14
Ngenda[c]	40	20	10	70	14
Masii[c]	95	40	15	150	10
Kithaayoni	71	32	6	109	6
Kitui[d]	69	2	0	71	0
Mulango[b]	103	60	37	200	23
Iria Murai[b]	63	40	47	150	31
Karurumo[c]	130	62	8	200	4
Miramba ya Njau	30	0	41	71	58
Kianjai[d]	129	61	10	200	5
Kithoka	45	26	7	78	9
Kiranga[b]	48	22	7	77	10
Isiolo	101	21	51	172	30

Notes: [a] The enrollment is as of field visit, October-Nov., 1987. Dropouts refers to those who do not complete their program.
Abb.: DO =Dropouts.

offered will be discussed in the following section on program diversity.

The literature on youth polytechnics shows that the majority of the students should be coming from the local area where the institution is located. However, it was evident from the study that most of the students in the institutions covered in the study (75%) come from outside of the location (see Table 4.3). Some of the reasons were: a) lack of adequate understanding on the part of the students of the importance of the institutions to the local area's development; b) lack of confidence in the instructors from the local area; c) opportunity for an individual to travel to and experience a different area.

The negative attitude towards manual jobs was still in the minds of some people, who believed formal education was the answer to economic or unemployment problems in the area. The above attitudinal problem arose despite the fact that those who went through the training in the youth polytechnics were able to earn some income, however small. The income differential between those who were able to get jobs in towns or urban centres and those who remain in rural areas encourages rural-urban migration.

In summary, the question of low enrolments, dropouts, and the effectiveness of the program in youth polytechnics needs further

Table 4.3: Enrollment in the youth polytechnics

Name of institution	Enrollment during the year. from community	from other communities	Total
Kimutwa	3	9	12
Mitaboni	74	102	176
Katangi	19	55	74
Matuu	43	129	172
Ngenda	28	42	70
Masii	60	90	150
Kithaayoni	27	82	109
Kitui	18	53	71
Mulango	50	150	200
Iria Murai	60	90	150
Karurumo[a]	160	40	200
Miramba ya Njau[b]	43	28	71
Kianjai[a]	160	40	200
Kithoka	20	58	78
Kiranga[b]	46	31	77
Isiolo	27	145	172

Notes: [a] The figures in the two institutions are based on 80% of students from the local area and feeder schools, while,
[b] is based on 60% of students from the area. The rest of the figures are based on 75% composition, as from outside the local area.

investigation. If an institution has very low enrolment, it is true that it is not cost effective and the fact remains that there is a need to find out why. Dropouts will continue, but could be reduced by improving some of the poor conditions prevailing in the institutions. The provision of boarding facilities, equipping the workshops and offering diversified courses may help alleviate the problems.

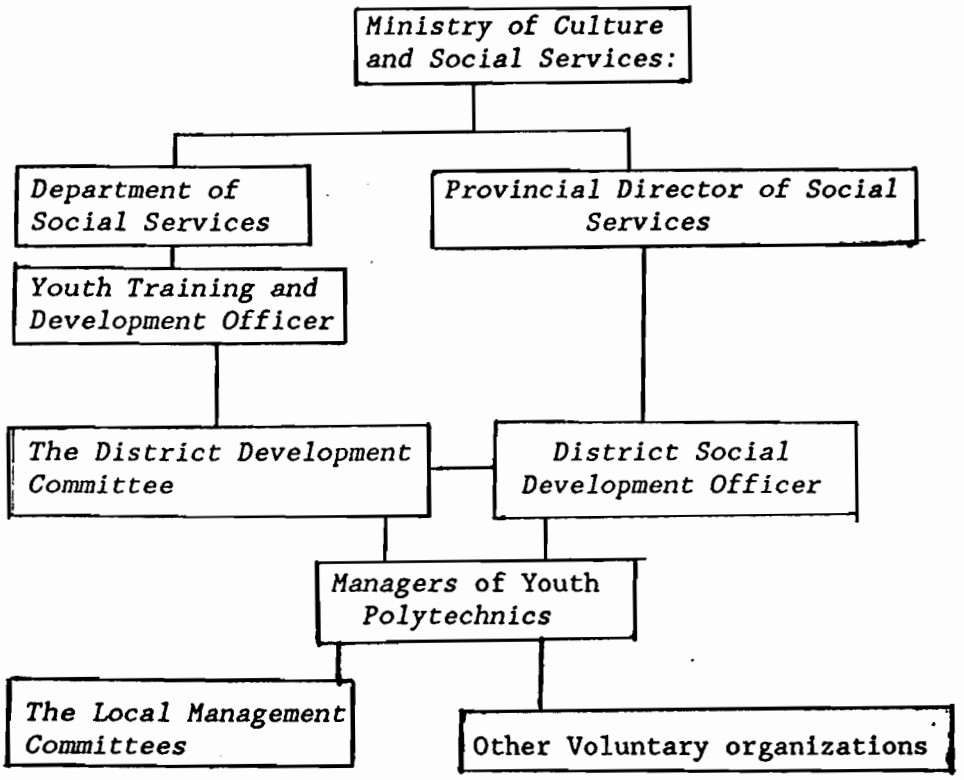
4.4 Administrative structure

4.4.1 Management of the institutions

The youth polytechnics are organized under the Ministry of Culture and Social Services. The Ministry has a department of youth development under which the institutions are organized as one of the informal systems of education (see Figure 4.1). The managers of the institutions look after the affairs of the respective institutions as far as internal administration is concerned. At this level a selected committee from the local community aids the managers, especially with those particular issues which affect both the community and the institution.

The youth polytechnics are organized at the local level by locally elected members of the community. The Management Committee, as it is referred to, together with the institutions' managers manage the institutions. The committee is supposed to be elected every three years. Most of these committees consist of an executive committee of

Fig. 4.1: Organization chart of the Youth Polytechnic program in Kenya.



Notes: The charts indicates the hierarchical model of administration experienced in the Youth Polytechnic program.

five people. The study found that the administration of the institutions, particularly those that are government supported is rather complex. A cumbersome bureaucracy makes it difficult for the managers or the committee members to make decisions without consulting the ministry official at the district level, that is, the District Social Development Officer (DSDO). It is the DSDO who supervises the progress of the institutions by examining the monthly reports from each institution. The institution can get government grants or grants from international organizations upon recommendation of the above government officer.

4.4.2 Staffing

Staffing of the institutions is done by the management committee, with assistance of the manager of the institution. The Ministry of Culture and Social Services occasionally assists in making available trained staff. The number of instructors in Government-assisted youth polytechnics in the eight provinces of Kenya is shown in Table 4.4. It is clear from the tables that, except for Nairobi, the rest of the provinces have equal numbers on average. There are three staffing issues: the number of instructors, the involvement of expatriates, and the level of training of staff (instructors). With respect to the first issue, the number of instructors in each of the institutions visited during the field work is shown in Table 4.5. The number of instructors roughly matches the number of courses offered, that is a one to one mapping. The smaller the number of

Table 4.4: Youth Polytechnics[a] and average instructors[b] per Institution

Name of Province	Number of Youth Polys.	Total No. Instructors	Average Instructors
Eastern	49	256	5
Coast	44	232	5
Central	66	422	6
Nairobi	2	24	12
North Eastern	8	41	5
Nyanza	55	299	5
Rift Valley	53	331	6
Western	43	239	5

Notes: [a] The institutions shown in the table are only the Government assisted.

[b] The instructors shown are an average of the total in the province divided by the number of institutions.

Table 4.5: Courses offered with respective number of instructors per youth polytechnic

Name of Institution.	No. of courses.	No. of Instructors
Kimutwa	1	1
Mitaboni	7	8
Katangi	3	4
Matuu	6	7
Ngenda	4	4
Masii	5	7
Kithaayoni	3	5
Kitui	5	9
Mulango	6	8
Iria Murai	4	5
Karurumo	9	11
Miramba ya Njau	2	2
Kianjai	8	9
Kithoka	5	5
Kiranga	3	3
Isiolo	5	6

Notes: In all the institutions the managers are included in the total of instructors, but they generally do not teach, because of administrative matters. In a few cases, the instructors have no alternative, and though the work load is overbearing they continue to teach. This condition is caused by lack of finances to employ extra instructors.

courses offered, the fewer the instructors. The breakdown of the instructors in the institutions, by origin (Kenyans, expatriates,) and also in terms of training is shown in Table 4.6. There are only three institutions where volunteer instructors are working. The volunteers (expatriates) work as technical advisors in the institutions visited during the research study. Though most instructors are indicated as trained, it was clear from the interviews that most never attended instructors' courses where they could improve their teaching skills. Other instructors have only been trained in the youth polytechnics program, and then were employed by the management committees.

In summary, it appears there is acute need to train more instructors for the institutions so as to improve the efficiency and effectiveness of the institutions. The effectiveness of the youth polytechnic program is so dependent on the quality of both staff and students enrolled, as well as the attitude of the graduates after completion of the training. There is a need to increase the number of instructors per course so as to ease workload.

4.5 Finance sources

4.5.1 Introduction

Funds to the youth polytechnic program come from four main sources. These include the following: a) The Kenya Government grants and development funds; b) The community resources, through harambee

Table 4.6: Number of instructors per institution; trained and untrained, and expatriates

Name of Institution	Staff			Training of Staff.	
	Kenyan	Expats.	Total	Trained[a]	Untrained
Kimutwa	1	0	1	1	0
Mitaboni	8	0	8	8	0
Katangi	3	1	4	3	1
Matuu	7	0	7	6	1
Masii	7	0	7	7	0
Ngenda	4	0	4	4	0
Kithaayoni	5	0	5	5	0
Kitui	8	1	9	3	5[b]
Mulango	6	2	8	5	3
Karurumo	11	0	11	11	0
Iria Murai	5	0	5	5	0
Miramba ya Njau	2	0	2	2	0
Kianjai	9	0	9	9	0
Kithoka	5	0	5	5	0
Kiranga	3	0	3	3	0
Isiolo	6	0	6	6	0

NB:[a] The trained instructors is a total of those who have been in training institutions and those who learned the skill on-the-job.

[b] In this YP the staff of five has been trained within the institution (former students), and were recruited to be instructors. None of them had ever attended formal instructional training or seminar. The Polytechnic admits form four graduates only.

(self-help) efforts; c) International voluntary organizations, Churches, and local voluntary agencies; d) students' tuition fees which vary from one institution to another. Other sources of funds include contracts, such as construction of buildings, making of school uniforms (see Table 4.7).

4.5.2 Government of Kenya Grants

The youth polytechnics which are assisted by the Kenya Government usually get financing for instructors' salaries, and also for construction and purchase of equipment and materials. The instructors who are employed by the Local Community Management Committee are paid by the school. These funds are available through the Ministry of Culture and Social Services and the District Development Committee (DDC) in each District.

4.5.3 Community resources

The youth polytechnics which depend on community resources are started through the initiative of local community members. The initial investment is provided by the community members through "harambee funds" or communal fund-raising methods. It was evident from interviews that most communities are active in the initial stages of the institution's development. In most of the institutions studied, it was clear that the community had already started thinking that the government should be able to provide all the necessary funds and other resources for the continued existence of the institution.

Table 4.7: Major sources of finance: Youth Polytechnics in the study area

Name of Institution	GOK. Grants	NGOs	Community resources
Kimutwa[b]	N/A	N/A	x
Mitaboni	N/A	x	x
Katangi	N/A	x	x
Matuu	N/A	x	x
Ngenda	N/A	x	x
Masii	x	N/A	x
Kithaayoni[a]	x	x	?
Kitui	x	x	?
Mulango	x	N/A	x
Iria Murai	x	?	x
Karurumo	x	?	x
Miramba ya Njau[b]	N/A	N/A	x
Kianjai	N/A	?	x
Kithoka	N/A	?	x
Kiranga[c]	N/A	x	x
Isiolo[d]	x	x	?

x indicates that the source is applicable, ? information is unavailable.

[a] the institution is sponsored by the town's municipal council, while

[b] and [c] are community sponsored with aid from the international agencies, and

[d] was started by the church, a Catholic mission, and even today the church is a major financier of most of the activities.

Unfortunately, there have been no recent harambee efforts in most of the institutions visited during the field work. The community members have tended to relax their efforts in building the institutions. The only evidence of the spirit of harambee is found in those communities where the institution is newly started.

4.5.4 International Voluntary Organizations

The youth polytechnic program is aided with funds from several international voluntary and church organizations. The main voluntary and church organizations include the following organizations:

1. Action Aid (Kenya);
2. World Vision;
3. Baptist Relief Services;
4. Catholic church-mostly in Isiolo;
5. ASAL project in Kitui (USAID);
6. Danish International Development Agency (DANIDA);
7. C.A.R.E. (Kenya);
8. Foster Parent Plan International-in parts of Embu district.

The study found that the various voluntary organizations operate in different parts of the country. The organizations help primarily where there are signs of progress. The Catholic Mission in Isiolo is fully supporting the institution at the outskirts of the town of Isiolo. The international voluntary organizations usually aid with both funds and equipment where it is acutely required.

4.5.5 Tuition fees

The tuition fees range from Ksh. 800.00 to 1500.00 (C$ 58.61 to 109.89) per year, from one institution to another. The differences in tuition fees charged are due to the fact that some offer accommodation while others do not. The fees charged are not adequate to cover all the financial needs of the institutions, and hence the institution engages in contracts with individuals or institutions who need to have houses constructed. This source of finance is discussed below.

4.5.6 Other sources

The funds provided through the sources mentioned above are not adequate and the institutions usually have to find other means of making more money to finance the program. The trainees in the institutions engage in money-making activities, such as building contracts (school houses, churches, and community centres). The tailoring and dressmaking trainees occasionally engage in making clothing for schools, or women's groups, and other organizations. Such activities help in exposing the trainees to real work experiences which are necessary in vocational and technical training.

4.5.7 Finance issues and needs

The issue of finance is of great concern in all organizations and discussion is usually centered on the sources and uses of such funds. Financial management is one of the methods by which funds can be

controlled effectively. One of the major findings in the study was that the majority of institutions are not able to hire qualified personnel such as book-keepers or accounting clerks to keep financial records up to date. Of the 16 institutions visited during the study two had book-keepers; in others the manager, assisted by a typist, handled the funds. Audited financial statements were available in only one institution. Since most of the institutions are still growing (expanding their programs and developing physical plants) most of the money is used in the following ways:

1. Construction of buildings, such as classrooms/workshops, instructors' houses;
2. Purchase of training materials, equipment and other types of tools as required;
4. Maintenance of the institutions, and
5. salaries to the instructors.

Funds collected have not been adequate in most of the institutions and there is an acute lack of important equipment in most of the institutions visited during the field work.

In summary, while it may appear that there are never adequate funds in many types of projects, it is essential that the most pressing needs of a project be well funded. There is a critical need to assess the financial needs of these institutions in order that they can carry out their mandate. This can be done through a thorough evaluation of the budgetary needs of the institutions.

4.6 Program structure

4.6.1 Goals and objectives

The literature review on the youth polytechnics indicates that their purposes are to equip the trainees with skills which would make them self-reliant, thus encouraging self-employment. This implies that the graduates would be able to start their own businesses and/or enterprises within the local rural areas in Kenya. These objectives and goals are well outlined in the section on youth polytechnics initiation and growth (see Chapter II).

The objectives are similar in all institutions, however, the method of achieving them seems to differ. In most institutions the trainees are supposed to sit for a Government Trade Test, set by the Ministry of Labour; successful completion results in a certificate as artisans. These Government Trade Tests are supposed to enable the graduate to be hired in formal organizations (as opposed to self employment).

The study found that the objectives are now modified in practice, in the sense that the trainees can look for job opportunities anywhere within the economy. There is very little encouragement for the graduates to be self-employed within their local areas thereby enhancing local rural development in compliance with the District development strategy. It was evident from the study that a few of the graduates have ended up in jobs quite unrelated to the training

skills acquired in the institutions. This is common among all graduates whether they remain in the local rural areas or migrate to the urban centres in search of employment.

4.6.2 Courses offered

A profile of the number of courses offered in the institutions and the year the institution was established is shown in Table 4.8. The expected general trend would have been that the older the institution the larger the number of courses it offers, with, the exception of Kithaayoni. This was due to lack of instructors, and other essential resources to expand the program.

It appears that there are reasons why some of the institutions still offer few courses in the curriculum. Kithaayoni, begun in 1972, and Iria Murai, which began in 1974, do not reflect or relate the development of the program to the time they were established. Kimutwa, 1982, has one course compared to Miramba ya Njau, 1985, with two courses. However, in the former case, two courses ceased to be taught because of a lack of both student enrolments and instructors. In the extreme, there are two institutions which were started early (Karurumo, 1967 and Kianjai, 1969) which have maintained a continual expansion of the program.

The courses offered in the respective institutions are shown in Table 4.9. It is evident that certain courses are popular. Among the 16

Table 4.8: Institutions' date of establishment and number of courses offered

Name of Institution	Year established	Program No. of Courses
Karurumo	1967	9
Kianjai	1969	8
Isiolo	1972	5
Kithaayoni	1972	3
Kithoka	1973	5
Mulango	1973	6
Iria Murai	1974	4
Kitui	1975	5
Mitaboni	1975	7
Masii	1975	5
Katangi	1977	4
Matuu	1977	6
Ngenda	1979	4
Kimutwa[a]	1982	1
Kiranga	1985	3
Miramba ya Njau	1986	2

Notes: [a] There were 3 courses in the institution when it was started but due to lack of instructors (and probably students) the three have not been taught for some time. This was as of the time of the field visit.

Table 4.9: Programs in the institutitions in the sample

Name of Institution	Program (Name of Course).[a] Gen. Agric.	Carp.	Mas.	MVM.	L/work.	Mw.	P1/ H/E.	T/D.	B/Ed.	Elec
Kimutwa							x			
Mitaboni	x	x	x	x	x	x	x	x		
Katangi		x	x				x	x		
Matuu	x	x	x			x	x	x		
Ngenda		x	x				x	x		
Masii		x	x	x			x	x		
Kithaayoni		x	x					x		
Kitui[b]				x		x				
Mulango	x	x	x				x	x	x	
Iria Murai		x	x				x	x		
Karurumo	x	x	x	x	x	x	x	x		x
Miramba		x	x							
Kianjai	x	x	x		x	x	x	x	x	
Kithoka	x	x	x			x		x		
Kiranga		x	x					x		
Isiolo		x	x	x			x	x	x	

Notes:[a] T/D.= Tailoring and dressmaking. B.ED.= Business Education; Elec.= Electricity; Gen. Agric.: = Agriculture; Mas.=Masonry and joinery; Carp.= Carpentry; MVM.=Motor mechanics; L/work= Leatherwork; P1/Mw.= Plumbing and Metalwork.

x: indicates, the course offered, whereas the blank space indicates not applicable.

[b] Kitui YP. offers courses which are slightly different from the rest of the other institutions.

youth polytechnics where the data were obtained, 14 instruct in carpentry, masonry, and tailoring/dressmaking, while 12 instruct in home economics. Agriculture (general) is taught in few institutions in contrast to expectations (see Table 4.10). Agriculture is taught in six of the 16 institutions included in the study. The study found that there is a lack of qualified staff or adequate land to accommodate a school farm, and that students are interested in those courses included in the Government Trade Test. Other courses gaining popularity are motor vehicle mechanics, leatherwork, plumbing/metalwork, and business education. Kitui youth polytechnic is different from the others, in the sense that it offers courses to secondary school leavers. Hence it is logical to show such an institution by itself. The courses offered at Kitui Youth Polytechnic and the respective enrollments are shown in Table 4.11.

4.6.3 Program diversity

Predominantly male enrolment is evident in all courses/programs in most institutions studied. This fact is illustrated in Tables 4.11; 4.12; 4.13 which demonstrate that women tend to enroll only in tailoring/dressmaking and home economics. There are a few women enrolled in courses like motor mechanics and welding in the institutions where such courses are offered. In most cases there are no women enrolled for courses like masonry, carpentry and motor mechanics. The only course which has a majority of women is tailoring/dressmaking. This is a common phenomenon in all

Table 4.10: Number of institutions offering courses[a] in various programs

Course Name	Number of institutions which offer each course
Carpentry	14
Masonry	14
Tailoring/dressmaking	14
Home economics	10
Agriculture[b]	6
Motor V. Mechanics	5
Leatherwork	3
Plumbing/Metalwork	6
Panel beating	1
Welding	1
Electrical	1
Business education	3

Notes:

[a] The courses offered in few institutions are mostly newly introduced. However, there are cases like motor mechanics, where it is a question of equipment which hinders their development in the institutions.

[b] This course has been emphasized in all vocational training institutions in the country, so as to increase the choices of occupational aspirations for the graduates. But it is clear from the table that it is taught in relatively few institutions; the reasons are given in the text.

Table 4.11: Kitui Youth Polytechnic's training program including the enrollments as at the time of field work

Program course name	Number of students	
	Males	Females
Fitter general	31	1
Welding	5	0
Panel beating	7	0
Motor Vehicle Mechanics	20	0
Plumbing/Metal work	6	1
Totals	71	2

Notes: [a] The program in this institution is slightly different from that offered in other institutions, as shall be seen in other tables in the analysis.

[b] Enrollments show a very negligible number of female students. The factors hindering their registration and enrollment include the nature of the courses offered which like other institutions are not favorable to female cadre. Ratio of male to female students 35:1

Table 4.12: Kithaayoni Youth Polytechnic training program[a] showing the enrollments[b] in various courses

Program course name	Number of students	
	Males	Females
Carpentry	46	0
Masonry	10	0
Tailoring/dressmaking	16	35
Totals	72	35

Notes: [a] The training program consists of three courses though the institutions has been in operation for at least five years.

[b] Female enrollment is nonexistent in the carpentry and masonry courses. All girls are doing tailoring and dressmaking.

Table 4.13: Isiolo Youth Polytechnic training programs and respective enrollments

Program course name	Number of students	
	Males	Females
Carpentry	27	0
Masonry	21	0
Tailoring/dressmaking	4	19
Home economics[a]	—	—
Motor Vehicle Mechanics	26	1
Totals	101	20

Notes: Ratio of boys to girls 5:1.

[a] This course ceased instruction because the instructor was unavailable. Previously, the present acting Manager was the instructor, but had to stop instruction because of administrative work.

institutions the researcher visited during the field work. The study showed that it is necessary to increase or diversify the course offerings in most of the institutions. The female student population could be increased by offering courses which are preferred by women.

It was also evident from the study that there is an acute need to encourage the teaching of agriculture because Kenya is an agricultural country. The present emphasis on agriculture at the basic education level should be extended to youth polytechnics.

4.6.4 Curriculum

The study revealed that there was no approved curriculum for specific courses. Course content depends on the experience/judgement of individual instructors; most base their teaching on the probabilities of preparing students to pass the Government Trade Test (i.e. instructor feels certain knowledge will lead to successful completion of the course).

Attempts have been made to come up with a syllabus for courses of the same type. This is in an endeavour to standardize the content taught, and also to try to produce graduates of a comparable character and quality required by the labour market. Since such attempts have met with little or no success, it has remained a matter for the experience of the instructor to guide the course work.

4.6.5 Equipment and books

It is difficult to appreciate/understand the situation in the youth polytechnics without visiting the various sites. The use of equipment in the institutions is shown in Figures, 4.2; 4.3; and 4.4. Examining the figures closely show that the students are sharing machines, especially in tailoring and dressmaking. Although this sharing of equipment is prevalent in all the institutions visited, it is clear that practical experiences are being promoted with the use of the existing equipment and tools. In tailoring and dressmaking practical classes students are able to design and make clothes (see Fig. 4.2). A carpentry class is shown in Figure 4.3 where students are making stools and desks under the guidance of an instructor. However, it can be deduced that, the lack of adequate equipment and tools for practical lessons has had adverse effects on the quality of training in the institutions. In some courses such as motor mechanics the training equipment, tools and materials are available, some are in parts, e.g. a dead engine, an old motor vehicle which does not operate.

The question of textbooks is even more serious: they are practically nonexistent. Where there are texts students have to share. Often instructors simply refer to their own notes, which they made in training courses or in seminars they have taken.

Figure 4.2 Tailoring/dressmaking class in progress.

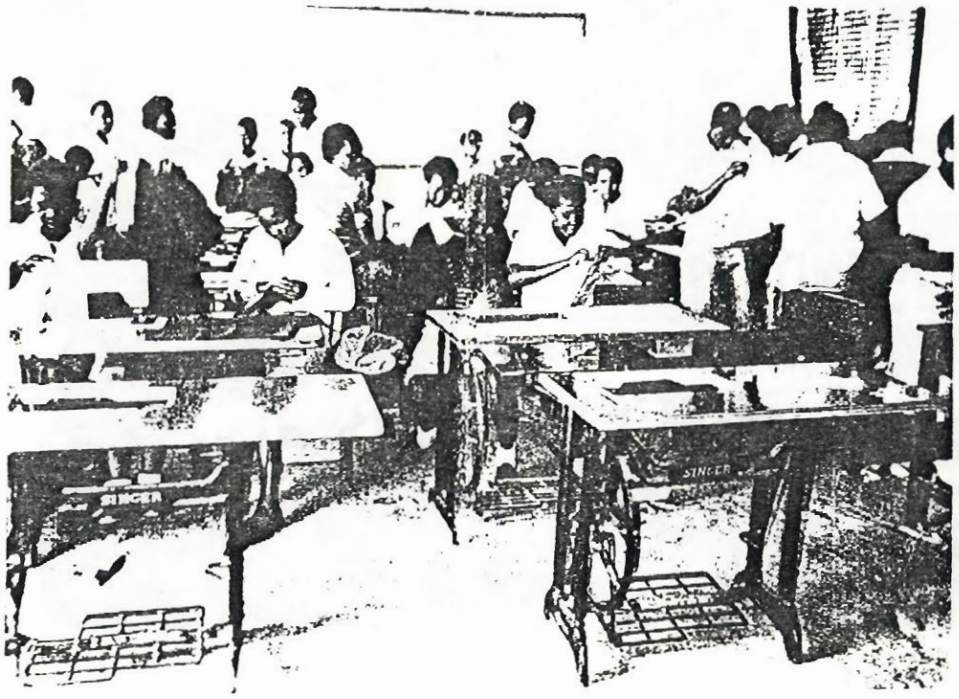


Figure 4.3 Carpentry class, showing students in the background.

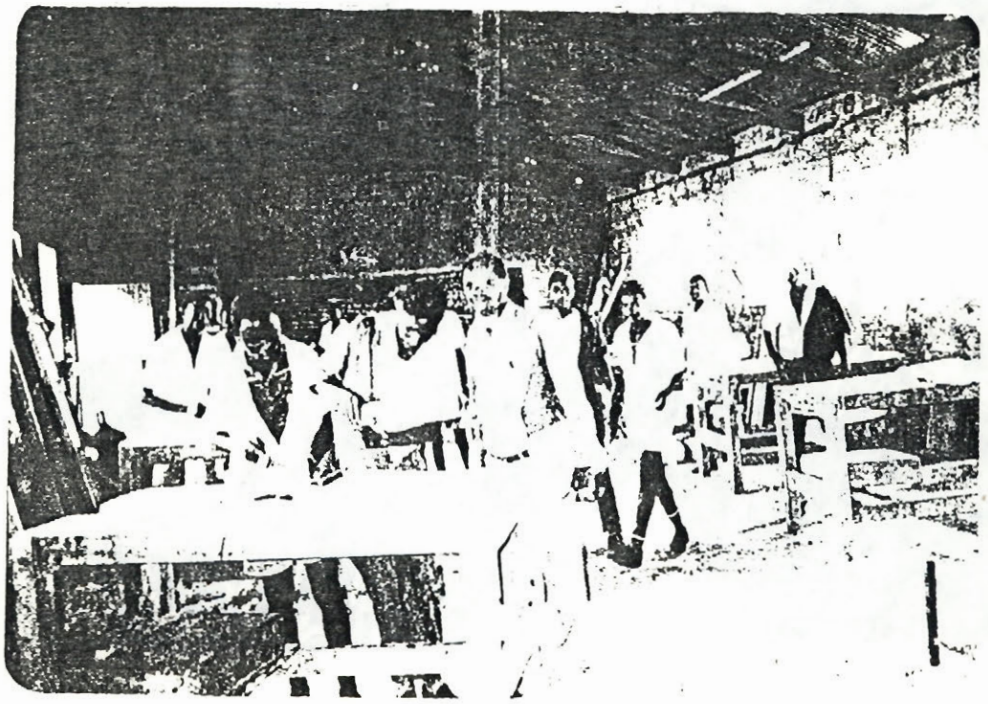


Figure 4.5 A Masonry practical class.

Figure 4.6 A room used as a Carpentry Workshop.

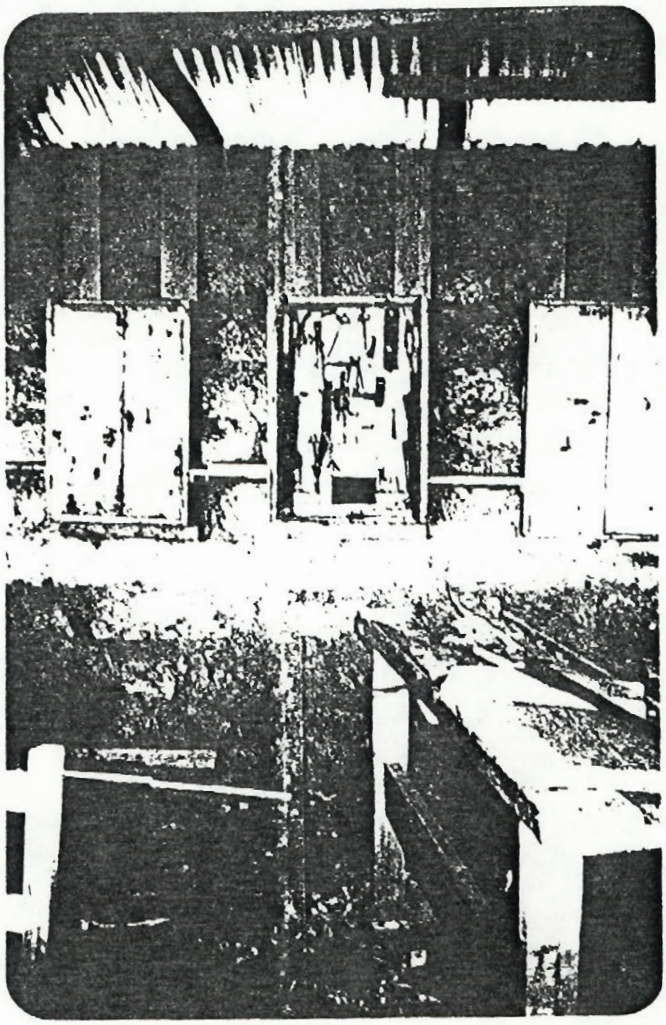


Figure 4.7 A Masonry Class.

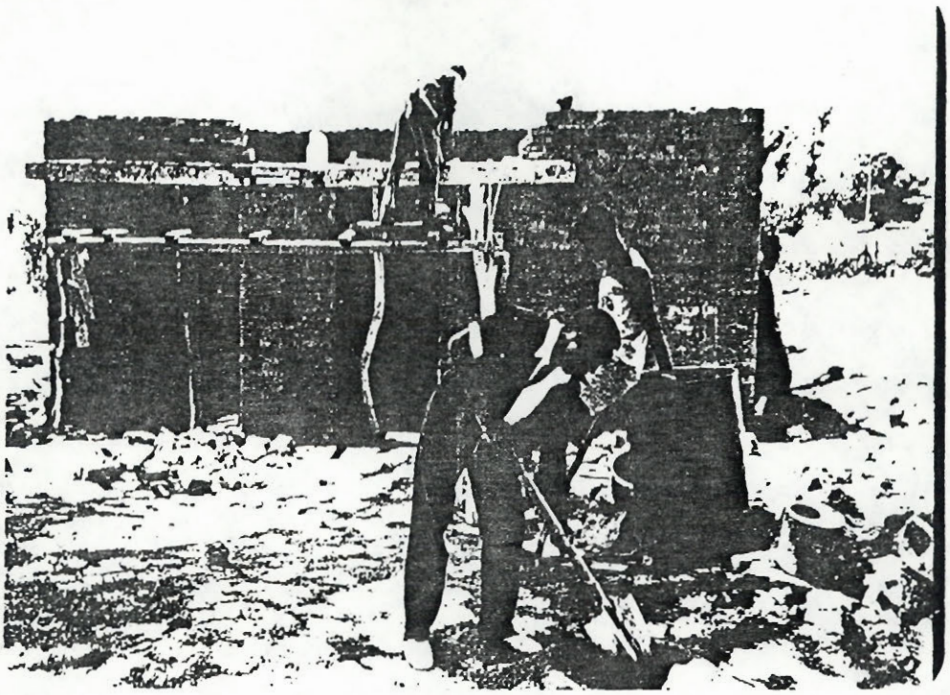


Figure 4.8 A Youth Polytechnic Agriculture Farm.

output of the institutions. There is very little or no exposure of students to real work experiences. The institutions can be very useful in equipping students with the necessary skills if the programs are well developed, coordinated and maintained.

4.7 Program efficiency

4.7.1 Dropout rates

The term dropouts is used to mean the failure of an individual to complete a training program or educational cycle/level. The reported dropout rates throughout the country range between 3%-10% on average. The actual dropout rates in the institutions studied are much higher; the range is 15%-60%. A number of reasons were given for these high rates of leaving the institutions without completion of the training program. They include the ability to obtain employment after the student has gained some skill, and involve the problem of lack of adequate equipment in the institutions (this applies mainly in trades like carpentry and masonry). Other reasons are: a) leaving due to financial and other family problems; b) pregnancies and marriage among the women; c) leaving after finding that one's abilities were not meant for the kind of training they were able to get; d) lack of a decision on what the individual wants to do in their life; and e) leaving due to lack of instructors in some of the important trades an individual would like to pursue.

The study found that an institution's low enrolment is often attributable to high dropout rates (See Table 4.2, page 50). The number of dropouts varies from one polytechnic to another. It was also difficult to get an accurate number of dropouts because of inadequate records. It was clear that those who leave the institution do not come back for completion of the training.

4.8 Program effectiveness

a) Graduates

After completion of the training in the intended courses, some graduates seek jobs in the local rural areas mainly among the small business enterprises such as the carpentry workshops and the individual masons who are already established. Others migrate to the urban areas in search of formal employment in the factories, or the part-time jobs with the open air garages. Most of the graduates who migrate to the towns end up in jobs unrelated to the training they acquired in the institutions. Several factors lead to graduates moving to towns in search of employment. These include:

1. Lack of adequate initial capital to start personal businesses. This affects primarily the graduates trained in tailoring and dressmaking. (The cost of sewing machines is quite high and spare parts have to be imported).

2. Keen competition from established former graduates, institutions, and other contractors. This is true of masonry skills and like occupations making self-employment difficult.

b) Dropouts

Students who leave before completion of the training period and hence do not acquire the intended skill face difficulties in the labour market. These dropouts can only obtain jobs (manual) where technical expertise or specific skills are not required. Those who migrate to towns look for any job; what is available is mostly part-time employment in the manufacturing industries and the informal sector of the urban areas. Some dropouts get jobs as casual labourers in factories and gain some skills. It is evident from Table 4.2 that the number who leave early ranges between eight and 51. It was also found that some institutions do not keep track of those who leave early.

4.8.1 Private/Public enterprises within the local rural areas

The study found that the existing enterprises in the rural areas of the study were very small and could not hire many employees. Most of the businesses are small retail stores, carpentry workshops, and some individual building and construction businesses (sole-proprietorships and occasionally partnerships).

The few carpentry workshops and tailor shops (sole-proprietors), can only hire one or two employees on part-time basis. A few graduates band together and start a business such as tailoring, carpentry or masonry. Some of these organizations face problems which range from misunderstandings among the members to lack of capital to expand and

purchase materials. The individuals who start businesses on their own are most prosperous because of their autonomy. Most jobs for masons are usually contracts with private individuals who wish to renovate their homes or have new houses constructed.

4.8.2 Training and the relation of the program to job creation and rural development

The most common courses offered in most youth polytechnic programs are quite appropriate for the local needs and demands of Kenyan society. In rural areas, the skills required are those in which local materials can be used. Skills in carpentry, masonry, leatherwork, agriculture, tailoring/dressmaking, are very easily applied in the local rural areas of Kenya. The only difficulty is the question of duplication of such skills or the production of artisans at a rate higher than the economy can absorb. Skills in motor vehicle mechanics, electricity, and plumbing/metal work may be useful in the future when electrification has reached most of the rural areas. At present the graduates can only hope to get jobs in the industrial sector or in towns. People who own vehicles tend to have them repaired in the towns by mechanics in the towns who have established their reputation.

It is necessary to do a thorough needs assessment of the demands of the local rural population before launching more of the type of course, recently started; otherwise, it is a waste of resources and will not promote employment. Most of the institutions are now

encouraging the teaching of basic business studies including simple profit and loss calculation, writing of balance sheets and other financial statements useful in the running of any business.

4.8.3 Community development

It was clear from the study that some of students have been able to start their own businesses. These are mostly those trained as carpenters, masons, and tailors. However, these graduates face competition from contractors who are already well known. Some of the less established graduates thus face the choice of moving to towns in search of employment in carpentry workshops or masons in building construction or waiting without much hope, to get formal employment with other established contractors or carpentry shops.

Competition has also been provided by the institutions themselves because they seek local contracts to improve their financial situation. This has meant that the graduates who opt to start their own businesses have to operate in remote areas to avoid such competition. However, it is not possible to train manpower without matching it equally with job opportunities. Hence it is a challenge to the rural regions to start or maintain businesses which would require skills taught in the local institutions. Without this policy it will not be easy to achieve their ultimate goals and objectives.

In summary, the problem of unemployment will get worse or the rate of unemployment will increase for youth polytechnic graduates, if there is no progress (i.e. solutions are needed) made to increase job opportunities in the rural regions of Kenya. It is then necessary to train manpower in relation to the prevailing jobs and predicted opportunities in both the rural and urban labour markets.

4.9 Problems associated with the Youth Polytechnic program

It is true that the development and growth of any system of education is accompanied by many difficulties. The present study has revealed a number of these difficulties as they affect the effectiveness and efficiency of the youth polytechnics. The study found out that the problem of migration of graduates to the urban centres is still experienced in all places where the field work was conducted. The migration has been made worse by the Trade Tests the students sit following their two years of training. The study has revealed that some of the graduates have ended up in jobs in which they do not apply the skills learned during their training. Another problem is the continued construction of institutions in all parts of the country: they may become difficult to sustain in the future. At this point, it is appropriate: Will the labour market not become saturated if too many students are trained in the same skills? How is the future of the informal sector going to be affected by the training in the institutions?

Based on the study findings, it was evident that the following problems constrain the development of the institutions:

1. Lack of a well-structured administration and organization;
2. Lack of adequate tools and equipment in the institutions;
3. Lack of adequately trained instructors;
4. Lack of exposure of the trainees to practical work experiences;
5. Lack of proper management of financial affairs of the institutions;
6. Poor morale among the instructors due to working conditions, lack of incentives, and low salaries.

4.10 Anticipated future trends of the youth polytechnic program

This section of the chapter contains more speculation than in previous sections. The main themes discussed include the problem of vocational training in the institutions, including ensuring quality of the trainees as the construction of new institutions continues and a concern about possible duplication of courses and skills taught. In the region studied, it was evident that more institutions were under construction. In addition, the programs offered have continued to grow in some institutions while others are stagnant. It is necessary to think about the availability of the most important resources required for the success of the programs before embarking on expansion.

The increased demand for vocational and technical training in the country necessitates an increase in the provision of facilities. The study found that there are more students of secondary school level, that is, those who have completed the first four years of secondary education, being admitted or seeking admission in the youth polytechnics. A general diversification of the program, especially changing teaching programs to cater to secondary school leavers, will have to be instituted. This is because there is intense competition for the available places in the youth polytechnics.

In summary, it has to be understood that the quality of training in practical skills requires a combination of good qualified instructors, satisfactory living conditions, and adequate facilities, in addition to a willing and interested clientele of students. It is important that these institutions' trainees should be exposed to real work experiences either in the institutions or in a form of apprenticeship. The study has shown that youth polytechnics still have a role to play in Kenya regardless of the problems they are facing; these, in essence are, more of an external than internal nature.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

The findings from the study give important meaning to the training of "practical" skills which are relevant to the needs of the local rural areas of Kenya. Such skills should work as an incentive for individuals to start their own small scale businesses, hence creating job opportunities in rural areas. Although it was clear from the data collected during the field study that the institutions train skills which may be geared towards self-employment in the rural areas, graduates from youth polytechnics face a number of problems which affect the application of their training.

Many of the graduates from the youth polytechnics try to find jobs or get established within the rural areas or the nearest town. The major reason some of the graduates are not able to work in the rural areas is lack of adequate initial capital. The fact that the clientele of the youth polytechnics do not come from wealthy families exacerbates the problems. After initial difficulties in obtaining employment, the alternative remains to move to the urban centres where there is an expectation of earning income by doing odd jobs. The study indicated that the lack of tools and equipment is a major deterrent to self employment because most of the graduates want to get some experience first with other existing contractors. This is especially true in carpentry and masonry. However, it has been

extremely difficult to be self-employed as a tailor because sewing machines or knitting machines are expensive. Hence a lack of capital is deterring some graduates from starting their own businesses.

The data revealed that the instructors are not well qualified, academically and professionally. There are several alternative procedures which could be used to rectify this problem; one could recruit qualified staff from Kenya Technical Teachers' College or the Harambee Institutes of Science and Technology, or organize and improve the present in-service training for instructors. Quality "products" can only be achieved with quality "inputs" effective institutions will accelerate the development of the rural areas of Kenya. Qualified personnel are required to produce students who have the desired positive attitude towards rural development.

A syllabus is an important aspect of any educational or training program. A standardized curriculum (this could be in line with the requirements of Government Trade Tests) is required if the graduates in the youth polytechnics are to acquire the skills and pass the Trade Test. If a well-formulated content is followed in the institutions will automatically mean the instructors' knowledge will have to be adequate for their work. Supervision of the youth polytechnics needs to be streamlined and strengthened. The field work also examined the administrative structure of the institutions and it was evident that the instructors are not aware who their

employer is; that is, whether the management committee is in authority or the ministry. The complexity increases when it comes to the question of hiring and firing (laying off) the instructors or any other staff members. The study revealed that the instructors have low morale due to the fact that they are not recognized by the ministry as civil servants, and hence have no fringe benefits as enjoyed by other government employees. Their salaries are also relatively low. Thus, it is important for the Ministry of Culture and Social Services to examine the remuneration of staff in youth polytechnics. This will act as an incentive to the people concerned.

The study showed that it was necessary to educate some of the local communities about the economic importance of the youth polytechnics. It was evident that in some rural local communities it never occurred to the members that the manpower trained is meant to help contribute to the economic development of the area. Hence there are few community resources used in the institutions. By developing the physical plant, living conditions in the youth polytechnics can be improved and therefore help reduce the number of dropouts and encourage increased enrolment. In addition, it is necessary to start a follow-up program to trace the whereabouts of graduates to chart the successes of institutions. It is true that the migration to the main towns is increasing because of the imbalance in economic development and differences in income level. In spite of the fact that youth polytechnics are increasing in number, a majority of

secondary school graduates have not yet changed their negative attitude towards manual jobs. The fact is made even worse due to the possibility of certification provided by the institutions. It was evident from the study that trainees were interested in courses where there was an opportunity of writing the Government Trade Test. This is because a holder of the Government Trade Test Certificate tends to have more chances of getting employment in the formal sector.

It should be noted that the youth polytechnic program if properly organized, could be very useful in creating job opportunities by permitting individuals to acquire the relevant skills for self-employment. As has been indicated, there are a few former graduates who are doing well in formal employment or in self-employment which includes workshops and other types of businesses. However, what is the future of such businesses given the increasing competition from the institutions themselves for contracts? The informal sector is not expanding at a rate equivalent to the output of graduates from the institutions. What is going to happen to the surplus graduates who cannot get jobs in the informal non-agricultural sector of the economy? The question of unemployment among school leavers will persist for some time to come. There is no permanent solution to such economic matters. A critical evaluation of all technical and vocational training institutions and programs is very vital at this time when Kenya is doing a survey of education and manpower-training in the country.

5.2 Recommendations

The current research study has vital economic implications for the growth and development of youth polytechnics in Kenya. It is important to mention at this point that the said institutions are among the complex network of institutions or programs which are meant to train manpower in vocational skills. Some of the recommendations include the following:

1. Youth polytechnic programs should qualify for financial support from the government, to provide tools, and equipment, and material support from the government.

2. It is necessary to restrain the continued construction of institutions in some of the provinces, and encourage the development of those already in existence.

3. It would be important for the continued existence of the institutions to establish enterprises where the trainees can be given real work experiences, rather than competing for the few contracts which the former graduates are seeking.

4. It would be worthwhile to consider the idea of starting a scheme to give loans to graduates who show initiative and wish to start their own businesses; repayment of the loan could be subsidized. This might encourage self-employment among the youth polytechnic leavers.

5. There should be a systematic and regular inspection of youth polytechnics.

6. To ease the workload in the institutions the number of instructors per course should be increased. The above, coupled with a standardized curriculum can improve the program and also make it more effective and efficient. The government should provide an in-service training program which will enable instructors in youth polytechnics to be efficient and effective in their work.

7. To attain a balance in the male/female ratios the institutions should offer programs with courses preferred by females. This could encourage more to register in the institutions in future.

8. In order to evaluate more adequately the accomplishments of the youth polytechnic vocational education program, there is a need for more effective use of follow-up studies.

   Educators and researchers can utilize the following practices and procedures:

   a) Establish rapport with the students before graduation, where the administrator/manager informs the students of the importance of follow-up.

   b) Regular follow-up surveys of all graduates should be conducted. If sufficient resources are not available to survey all graduates, many one-year sampling techniques can be utilized.

5.3 Suggestions for further study

It is recommended that another study concerned with the evaluation of the youth polytechnic program be done. The study could be based on the cost-effectiveness of the program. This study suggests the use of additional methods to improve future research in this program. The research design of future studies in program evaluation at the youth polytechnic level should include a wider representation of the population, and could include a survey of: a) graduates who obtain jobs unrelated to their training; and b) youth polytechnic drop-outs from the program.

B I B L I O G R A P H Y

Anderson, J. (1970). The Village Polytechnic Movement. IDS/SRDP evaluation report, No. 1. Macmillan: Nairobi.

Anderson, L. & Windham, D. G. (1982). Education and Development. D. C. Heath and Co.: Toronto.

Ahmed, M. (1975). Education and Work: Elements of a Strategy. Prospects.5(1), 53-64.

Ahmed, M. (1975). The economics of nonformal education: Resources, costs and benefits. Praeger: New York.

Akwenye, O. S. (1975). Education for self reliance in Tanzania: From theory to practice, 1967 - 1974. Unpublished master's thesis, McGill University: Montreal.

Angi, C., & Coombe, T. (1970). Primary school leavers and youth programmes in Zambia. Education in Eastern Africa. 1(2), 27-41.

Blaug, M. (1972). Economics and Educational Planning in developing countries. Prospects 2(2), 431-441.

Blaug, M. (1974). Education and the employment problems in developing countries. ILO: Geneva, Impremerie La Concorde.

Bogonko, S. N. (1986). Aims of education in Kenya considered in the context of independence. Kenya Journal of Education. 3(1), 112-137.

Brownstein, Lewis (1972). Education and Development in rural Kenya: A study of primary school graduates. Praeger: New York.

Cameron, John (1970). The development of education in East Africa. Teachers' College Press: New York.

Clarke, R. F. (1973). Linking formal and nonformal education. Education in Eastern africa. 3(2), 81-88.

Coombs, P. H., & Ahmed, M. (1974). Attacking rural poverty: How nonformal education can help. John Hopkins university Press: Baltimore.

Coombs, P. H., Prosser, R. C., & Ahmed, M. (1973). Nonformal education for rural development: New paths to learning for rural children and youths. Prepared for UNICEF, by International Council for Educational Development.

Coombs, P. H. (1985). The World Crisis in Education: The view from the eighties. Oxford University Press: New York.

Court, D. (1973). Dilemmas of development in Kenya: The Village Polytechnic movement as a shadow system of education in Kenya. Comparative Education Review. 30, 321-327.

Comte, M. (1977). Harambee. Ceres. 10(3), 34-36.

Datta, S. (1984). Education and Society: A Sociology of African Education. Macmillan: London.

D'Souza, H. (1976). Some problems in technical education in Kenya. Education in Eastern Africa. 1(1), 136-150.

Foster, P. (1982). The educational policies of post colonial states. In Anderson, L., & Windham, D. M. (Eds.). Education and development. D. C. Heath and Co.: Toronto.

Fuller, B. (1985, Sept.). Raising school quality in developing countries: What investments boost learning? Discussion paper: The World Bank, education and training department.

Geoffrey, M. (1979). Training in Kenya: Need versus Effective demand. Comparative Education Review. 5(2), 187-195.

Godfrey, E. M. (1973, June). Technical and Vocational training in Kenya and the Harambee institutes of technology. Discussion paper: Institute for Development studies, University of Nairobi.

Hall, B. L. (1973). Tanzania mass education campaign. Education in Eastern Africa. 3(2), pp. 89-97.

Hall, B. L. (1977). Non-formal education, redistribution of wealth and production. Education in Eastern Africa. 7(1), 1-9.

Hinzen, A. R., & Hundsdorfer, V. H. (Eds.). (1979). Education for Liberation and Development. Hamburg: Unesco Institute for Education and Evans brothers.

Homm, E. C. (1972). Teacher training for the development of technical education. Kenya (Mission). Report.

Hoppers, W. B., C. Kamya, A., Schultz, M., & Tembo, M. (1980). Youth Training and Employment in three Zambian districts: A Survey on training facilities for out-of-school Youth and their scope for expansion and/or supplementation by the Ministry of Youth and Sport. Lusaka: Institute for African Studies, university of Zambian.

Hallak, J., & Caillods, F. (1981). Education, training and the traditional sector. Unesco: 7 Place de Fontenoy.

I. L. O. News, (1967). Vocational Education must meet modern requirements. Technical and Vocational Education in Canada.

Joyner, C. W. (1987). A Case Study of Mombasa, Kenya, and Dawson Staff Development Project. Unpublished Master's Thesis, McGill University, Montreal.

Kinyanjui, K. (1979). Education for rural development in Kenya: A critical note. Discussion paper No. 264. Kenya: Institute for Development Studies, University of Nairobi.

Kasina, K. (1987). Relevance of youth polytechnic/harambee institutes of technology to society today and tomorrow. Proceedings of a Seminar held in Silver Springs Hotel, May, 1987, Nairobi.

Kiboi, Waigwa (1987, Dec. 4). Finance project to aid artisans. Daily Nation, p. 4.

King, K. (1974). Productive Labour and the school system: Contradictions in the training of Artisans in Kenya. Comparative Education Review. 10(3), 181-191.

King, K. (1977). African Artisan: Education and the informal sector in Kenya. London: Heinemann.

King, K. J. (1977). The politics of agricultural education for africans in Kenya. Education in Eastern Africa. 7(2), 165-176.

Kipkorir, B. E. (1975). Kenya: Development and coordination of nonformal program. In, Ahmed, M., & Coombs, P. H. (Eds.). Education for rural development: Case studies for planners. Praeger Publishers: New York.

Koloko, E. M. (1980). The Myth of education for development: The Tanzanian case. International Education. 9(2), 18-32.

Lema, A. A. (1976). The integration of formal and non-formal education. Education in Eastern Africa. 1(1), 99-111.

Leonor, M. D. (1985). Unemployment, Schooling, and Training in developing countries: Tanzania, Egypt, the Philiphines, and Indonesia. Croom Helm: London.

Lewis, B. (1969). The case study of the Kenya preliminary examination candidate: Mass education in a developing country. Doctoral dissertation. John Hopkins University.

Lillis, Kevin M. (1984). Problems associated with vocational education in less developed countries. In Garret, R. M. (Ed.). Education and development. Croom Helm: Beckenham, Kent.

Mackenzie, F., & Taylor, D. R. F. (1987). District focus as strategy for rural development in Kenya: The case of Murang'a District, Central Province. Canadian Journal of development studies. 8(2), 299-316.

Mambo, R. M. (1980). Challenges of western education on the coast province of Kenya, 1890-1963. Doctoral dissertation. Columbia University, University Microfilms.

Manundu, M. (1987). Impact of tools and skills utilization. Proceedings of a Seminar held in Silver Springs Hotel, May, 1987, Nairobi.

Merryfield, M. M. (1986). Curriculum reforms in Kenyan Primary Schools: A comparison of classroom instruction in social studies with geography, history and civics. Kenya Journal of Education. 3(1), pp. 64-84.

Migot-Adholla, S. E., & Okoth-Owiro, (1981). The Village Polytechnic and the Family Life Training Programmes: Purpose, progress, and problems. Nairobi: Institute of Development Studies, Kenya (Working Paper No. 387).

Morrison, D. R. (1976). Education Politics in Africa: The Tanzanian case. McGill-Queens Univ. Press: Montreal.

Mulusa, T. (1983). Structured courses as a strategy for rural development: A case study of the Kenya Farmers Training Centres. Doctoral dissertation, University of Massachusetts. Massachusetts.

Mukras, M. S. (Ed.). (1985). East African Economic Review. Economic Journal for Eastern and Southern Africa. 1(1).

Munyua,G. & Muhia (1974). A quest for a complete education. Education in Eastern Africa. 4(1), pp. 37-62.

Mwanakatwe, J. M. (1968). The growth of education in Zambia since independence. Lusaka: Oxford University Press.

Martinus, N. (1984). Out-of-school projects. In Paul Fisk (Ed.). International Review of Education. 30, 321-327.

Njunji, A. (1974). Transformation of education in Kenya since independence. Education in Eastern Africa. 4(1), pp. 107-125.

Nkonoki, S. R. (1976). A case study on the implementation of education for self reliance. Education in Eastern Africa. 6(1), pp. 77-84.

Nyerere, J. K. (1967). Education for self-reliance. Government Printer: Dar es Salaam.

Nzioka, C. B. K. (1986). Vocational training and rural employment: An investigation into some factors which influence the local employment of youth polytechnic graduates in Machakos District, Kenya. Unpublished Master's Thesis, University of Nairobi. Nairobi.

Psacharopoulos, G. (1981). Education and work: An evaluation and inventory of current research. In Woodhall, M. (Ed.). Education, work and employment: A summary review. IIEP: Working paper, Mimeo.

Raju, B. (1973). Education in Kenya: Problems and perspectives in educational planning and administration. Heinemann: London.

Rensburg, P. V. (1970). The brigade system of technical training and education in Botswana. Education in Eastern Africa. 1(1), 45-57.

Republic of Kenya, (1983). Kenya Government Plan. Nairobi: Government Printer, pp. 148-151.

Republic of Kenya, (1984). Development policies and issues: Situation analysis of children and women of Kenya. Nairobi: Central Bureau of Statistics. Sec. 1, pp. 19-26.

Republic of Kenya, (1984). Education: Situation analysis of children and women of Kenya. Nairobi: Central Bureau of Statistics. Sec. 4, pp.89-137.

Republic of Kenya, (1986). Economic management for renewed growth. Sessional paper No. 1. Nairobi: Government Printer.

Republic of Kenya, (1986). Syllabuses for Kenya primary schools: Vols. 1 & 2. Jomo Kenyatta Foundation: Nairobi.

Republic of Kenya, (1987). Technical education. Economic Survey. Nairobi: Central Bureau of Statistics.

Ritter, A. R. M. (1987). The Labour Force, Employment, and Unemployment in Kenya. Canadian Journal of Development Studies. 8(2), pp. 203-226.

Ruparunganda, J. (1980). Agricultural education for youth in Kenya, 1925-1976. Unpublished Master's Thesis, McGill University: Montreal.

Sheffield, J. R., & Diejomaoh, V. P. (1972). Non-formal education in African development. African-American Institute: New York.

Sheffield, J. R. & Diejomaoh, V. P. (1973). Botswana: Brigade training. Education in Eastern Africa. 3(2), pp. 107-117.

Sheffield, J. R. (1973). Education for adults and school leavers in Africa. Education in Eastern Africa. 3(2), pp. 71-80.

Sheffield, J. R. (1973). Education in Kenya: An historical study. New York: Teachers' College, Columbia University Press.

Sheffield, J. R. (1974). The challenges and the role of nonformal education in Eastern Africa. Education in Eastern Africa. 4(2), pp. 185-197.

Shiundu, J. (1986). Self employment efforts among primary school leavers in rural Kenya and their implications for the curriculum: The case of Suna. Doctoral dissertation, University of Nairobi: Nairobi.

Sifuna, D. N. (1975). Observation of some aspects of nonformal education in Kenya. Education in Eastern Africa. 6, 95-102.

Sifuna, D. N. (1977). Industrial or literacy training? A history of curriculum development in eastern Africa. Education in Eastern Africa. 7(1), 11-18.

Sifuna, D. N. (1984). Technical and vocational education in Kenya. Kenya Journal of Education. 1(1), pp. 22-45.

Sifuna, D. N. (1986). The vocational curriculum in primary schools in Kenya: An Evaluation. Prospects. 16(1), 126-134.

Sifuna, D. N. (1987). The diversity and quality of Youth Polytechnics and Harambee Institutes of Technology: Conception and reality. Proceedings of a seminar held in Silver Springs Hotel, Nairobi, May, 1987.

Sinclair, M. (1975). Brigades in Botswana and Village Polytechnics in Kenya. Canadian Association of African Studies. 5(42), 19-22.

Stabler, E. (1969). Education since uhuru: The schools of Kenya. Middletown: Weslayan University Press.

Thompson, A. R. (1981). Education and development in Africa. London: McMillan.

Tregar, D. S. (1962). The primary school leaver. Teacher education. 3(1), 8-88.

Unesco, (1968). Manpower aspects of educational planning. Place de Fontenoy. 75 Paris -7e.

Unesco, (1984). Harambee institutes of technology: Project findings and recommendations. Paris: Unesco.

Yambo, M. (1986). Technical training and work experience in Kenya: A National tracer study of the leavers of Harambee institutes of technology and Youth Polytechnics. Report (Study funded by Danish international development agency). Nairobi.

Yambo, M. (Ed.). (1987). Technical training and work experience in Kenya. Proceedings of a seminar held in May, 1987, in Silver Springs Hotel, Nairobi.

Wanjala, E. A. (1973). The Village Polytechnic movement in Kenya. Prospects. 5(3), 414-417.

Weiler, H. N. (1978). "Education and development:" From the age of innocence to the age of scepticism. Comparative Education. 14(3), 179-190.

Wood, A. W. (1974). Informal education and development in Africa. Mouton: Paris.

Woodhall, M. (1981). Education, work and employment: A synthesis of recent research. IIEP: Working paper, Mimeo.

APPENDIX I

NOTES

1. Government Officers will not be interviewed without prior appointment.
2. No questionnaire will be used unless it has been approved.
3. You must report to the District Commissioner of the area before embarking on your research.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.

GPK 302—2m—2/86

REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

APPENDIX I

OFFICE OF THE PRESIDENT

P.O. Box 3 510,
NAIROBI

Ref. [illegible] Date [illegible]

The Secretary,
National Council for Science
& Technology,
P.O. Box 30623,
NAIROBI.

RE: RESEARCH AUTHORIZATION

APPLICANT Emmanuel N. [illegible]

The above named has been authorized to conduct research on " [illegible] polymerics"

under the standing Research Clearance accorded to Department of the University of Nairobi/Kenyatta University College.

I herewith enclose copies of his/her application for record purposes. He/She has also been notified that we will need a minimum of two copies of his/her research findings at the expiry of the Project.

for: PERMANENT SECRETARY/ADMINISTRATION

C.C.
The Chairman,
Department of [illegible]

The Applicant

APPENDIX II

THE VILLAGE POLYTECHNICS: INTERVIEW PROTOCOL

SECTION 1

TEACHING STAFF

This section has questions which have to be answered by the teaching staff members. The questions in the section are both factual and perceptual. The respondents will be requested to be honest and frank in their responses to the interviewer.

BACKGROUND INFORMATION

1. For how long have you been teaching (in years)?

_____

2. For how many years have you been in the present institution?

_____

3. What course do you give instructions in?

_____

4. What is the size of your classes in your course?

_____

5. Did you attend a training college before you started your present career as a technical teacher?

_____

6. Is there an orientation for new members of teaching staff?

_____

STUDENT PERFORMANCE

1. How long does a student take to complete the training in the course?

_____

2. Is the attitude of students towards learning positive?

_____

3. Do students attend classes regularly?

4. How do you evaluate your students during the time they are in the program?

5. Do you face any problem when teaching your courses?

6. What is their age range?

7. Do any of the students who might be in academic difficulty come for help during their spare time?

8. Does this result in improvement in their performance?

9. What do you think is the reason for your success in teaching in this institution?

10. Do students achieve the objectives of the course?

11. Can the students perform tasks better after taking the course, than before?

12. Are there some students who leave before completion of the program?

13. During the term their courses in the program, do students get a chance to do real working situations?

14. Do the students use the facilities such as the workshops and laboratories effectively?

_____

15. Is the equipment in your workshops of the appropriate type in terms of the technology required at this level of education?

_____

16. Can you suggest any ways in which the program can be improved so that the graduates have a real experience before leaving the institutions?

_____

_____

_____

_____

INTERVIEW PROTOCOL (cont'd)

SECTION 2

ADMINISTRATORS

This section of the interview questions will be administered to the Principals and other administrative officials in the institutions.

BACKGROUND INFORMATION

1. What is your position in this institution?

   _____

2. How long have you held this position?

   _____

3. Is there a deputy principal? are there other administrators? is there a secretary?

   _____

4. When was this institution started?

   _____

5. Does your institution admit both male and female students?

   _____

6. How many students do you admit at any time?

   _____

7. Is this the total capacity of the institution?

   _____

8. Why do you think this institution was located in this particular place?

   _____

9. Are there other institutions of the same kind in the area?

   _____

10. How many primary schools are within this particular place?

    _____

11. Do they all send students to this institution?

_____

12. Who are the target population for the institution?

_____

13. What are the goals and objectives of the institution?

_____

_____

14. Are the goals and objectives adequately met in pursuance of the program? Are they appropriate for the institution?

_____

15. Are the goals/objectives written?

_____

16. Can I have a copy of your goals/objectives?

_____

17. Are there any changes in the goals/objectives since the inception of the institution?

_____

_____

18. What type of program is offered in this institution?

_____

19. Are there courses which are preferred by males and/or females?

_____

20. Who decides on what the institution should offer in its program?

_____

INTERVIEW PROTOCOL

SOURCES OF FINANCE FOR THE PROGRAMS

1. What are your main sources of finance for the programs offered?

_____

_____

2. What community resources does your institution make use of as far as the program is concerned?

_____

_____

3. Do the students engage in any money-making activities so as to help fund the program?

_____

4. How do these activities help in the performance of the students in the courses?

_____

5. Is the finance adequate in facilitating the efficiency and effectiveness of the program?

_____

6. What are the major financial needs in the institution?

_____

7. Do community members support the institutions financially and morally?

_____

STAFFING AND HUMAN RESOURCE DEVELOPMENT

1. How many instructors (teaching staff) do you have?

_____

2. What are your major staffing issues?

_____

3. How many teachers are trained?

4. Do the teachers attend any inservice courses?

5. Is there a particular institution where such inservice courses/ training are held?

6. Are there any foreign instructors among your staff?

7. What is the experience of the teachers mentioned above?

TARGET POPULATION OF STUDENTS

1. What is the total enrolment in the institution?

2. What is the capacity of the institution?

3. Is it growing or getting smaller?

4. What are the basic requirements for a student to be admitted in the program?

5. What is their background in education?

6. What is the age range of the students who attend the courses?

7. Do they all come from within the community?

_____

8. How many students graduate from your institution each year? How many graduated last year?

_____

9. What is the drop-out rate in your institution?

_____

10. Do you have a follow up program for your graduates so as to track their whereabouts?

_____

11. How many of them get jobs within the community?

_____

12. Do some of the graduates migrate to other places such as towns to seek employment?

_____

13. What are the main reasons why they do this?

_____

_____

14. What are the major issues regarding students?

_____

ORGANIZATION AND ADMINISTRATION

1. Who are presently involved in the organization of this institution?

_____

_____

2. How is the institution organized?

_____

_____

3. Does any Government ministry have any influence over the decisions made concerning the institution?

_____

4. Who has the responsibility of hiring the teaching staff?

_____

5. Has the administrative structure changed since the institution was established?

_____

6. Could any changes have been implemented because of pressure of community needs?

_____

7. Have any of these changes had any impact on the efficiency and effectiveness of the institution?

_____

8. Have you got any further comments on the efficiency and effectiveness of the program?

_____

_____

_____

9. What are the major administrative concerns, needs of the institution?

_____

INTERVIEW PROTOCOL (cont'd)

SECTION 3

COMMUNITY MEMBERS

Interview questions in this section will be administered to the local committee members of the village polytechnics. The main purpose of the interview will be to assess the influence of the committee on decisions, program evaluation, and changes affecting the latter.

1. What is the size of your committee?

_____

2. Who are elected in such a committee?

_____

3. How is it formed?

_____

4. How often do you meet? Why?

_____

5. What are your main responsibilities as an elected committee of this institution?

_____

_____

6. Do you participate in any events in the institution?

_____

7. Are you represented in the concerned ministry meetings?

_____

8. How is the information system between the community and the institution?

_____

9. Do members of the community help in the instruction of some of the courses offered or offer apprenticeship training to graduates?

_____

10. Is the program offered in this institution based on the demands and needs of the local community?

_____

11. Have there been any changes in the program?

_____

12. Are there any developments within your area which are as a result of the training of local labour in the institution?

_____

_____

_____

13. What are your major concerns as a committee? Do you face any problems in relation to the needs of the students and those of the community?

_____

_____

_____

14. Do you think the program is diverse enough to cater for all members who would like to further their skills?

_____

_____

15. Does your committee engage in the improvement and revision of the program whenever it is necessary?

_____

16. How does this kind of participation enhance the efficiency and effectiveness of the program?

_____

_____

17. What is the cause of some of the students leaving the program before the time period is over?

_____

_____

18. Do you get feedback information on the performance of the students regularly, especially from the teachers?

_____

19. Has the establishment of the institution affected the economic growth of the informal sector of this area?

_____

20. Can you comment on any other aspect of the institution as regards efficiency and effectiveness?

_____

_____

_____

_____

_____

It has a program of 3 courses, and a staff of 3 members and a technical advisor (expatriate), and a manager. It is co-ed, and has a population of 60 students.

Physical Plant: workshops/classrooms are permanent structures with a few staff houses.

Matuu - GOK.

Started in 1977, the institution is located in Matuu location in Machakos district. It has a staff of 7 members, of whom two are administrators, that is the manager and assistant manager.

Its program consists of 6 courses, which include, carpentry; masonry; agriculture; home econs.; metalwork; tailoring/dressmaking. It has a student population of 130, who constitute girls and boys. The enrollement was 151 but 21 students had left by the time of the study.

Physical Plant: Workshops/classrooms and the office block are permanent, while the few staff houses are temporary structures. There are no boarding facilities.

Ngenda - GOK.

Location: It is about 8km. from the market, and in Ngamba location of Machakos district.

Year established: 1979

Target student population: It is a co-ed. institution, with a population of 70 students.

Program: It offers 4 courses, which include, home econs.; tailoring/dressmaking; carpentry; masonry.

Staff: It has 4 instructors, including the manager is also an instructor.
Physical Plant: There are no boarding facilities for the students neither do the staff. The office block and two workshops/classrooms are permanent.

Masii - GOK.

Location: It is 3 Km. from the nearest market, but about 18-20 km. from the main town. The Institution is in Masii location of Machakos district.

Year established: 1972.

APPENDIX III

Youth Polytechnic development: Institutions in respective districts, total instructors in such districts

Name of Province	No. of Districts	No. of YPs
Eastern[a]	6	49
Coast	6	44
Central	5	66
Nairobi	1	2
North Eastern	3	8
Nyanza	4	55
Rift Valley	13	53
Western[b]	3	43

Notes: [a] denotes the province where the field study was conducted.

[b] indicates a province where there is a high number of Youth Polytechnics despite the fact that there are only three districts.

APPENDIX IV

Research Framework for the study.

Issues	Major questions	Sources of data
Context of the Youth Polys.:		
Back ground information	a. When was the institution started?	Docs. & Interviews
Organization	b. How is it organized?	Interviews
Location	c. What factors influence location?	Interviews
Institutions (others)	d. What other educ. institutions are in the locality?	Interviews
	e. What level of education do they serve?	Interviews & Documents
Size of Institution Target population and enrollments	a. What is the capacity of the institution?	Docs/Reports
	b. Has it increas-ed or decreased?	Docs. & interviews
	c. What is the current student population?	Records & Reports
	d. Is the institu-tion co-ed.?	Record & Interviews.
	e. What is the procedure on admission?	Documents Records Interviews

	f. What are the ages of students? girls? boys?	Records Documents Interviews
Follow-up program	j. What type of program is used to track and find what former graduates are doing?	Records & Reports Interviews
Administrative Structure. Mannagement of institutions	a. How many administrators (managers & assistants) are there?	Interviews Documents
	b. How is the Government ministry represented?	Records & Interviews
Staffing	c. How many instructors are there?	Docs/reports interviews
	d. Are there any expatriates in staff?	Reports & Documents interviews.
	e. Are there any untrained members of staff?	Reports & Documents Interviews
Staffing	f. Is there a training/inservice program?	Documents Interviews
	g. Does it help in facilitating training?	Interviews & Documents
	h. What are the major staffing issues?	Interviews Records

Management committee	i. Does the management committee influence decision affecting the program?	Reports & Documents Interviews
Management Committees continued	j. Has management changed?	Docs/Reports.
	k. How is the institution linked community?	Interviews
	l. What community resources are used in the Polytechnic?	Documents Interviews
	m. What benefits does the insti- tution avail to community memebers?	Interviews Reports
Finance for the Program Main Sources	a. What are the main sources of funds for institutions?	Interviews Documents
	b. Does the government provide some of the funds?	Interviews Records
Other sources	c. Are there other donors?	Records Interviews
	d. Do students engage money making activities?	Interviews Observation Records
	e. Do such activities contribute much to financial needs?	Interviews Records

APPENDIX IV

Finance issues and needs	f. What are the major financial needs?	Interviews
	g. Are the funds adequate?	Interviews
	h. What are the constraints?	Interviews
	i. Are there clear records on sources uses of funds?	Records Interviews
Program structure Goals and Objectives	a. What are the main objectives of the Institutions?	Documents Interviews
	b. Do the objectives differ from one institution to another?	Interviews Records
	c. Have the objectives changed overtime?	Records Documents
Courses offered	d. What training courses do the institutions offer?	Interviews Records
	e. Do the courses have strong bias to agriculture?	Interviews
	f. Is agriculture given top priority?	Records Interviews
Program diversity	a. How is the program related to the needs of the students?	Interviews Records
	b. Are there gender preferences?	Interviews Observation
	c. Do all the students have a wide choice	Interviews Records

	of the training courses?	Observation
	d. Does the program cater for needs of members of the community?	Interviews Documents the
	e. Who decides on the the course offerings?	Interviews
	f. How does this benefit the community?	Interviews
Rsources, Books Equipment	a. Are there adequate resources to enable program diversification?	Interviews Personal Observation
	b. Is there adequate equipment in workshops?	Interviews Observation
	c. How does the lack of adequate equipment and books affect the program?	Interviews
Curriculum for the program	a. Is there a syllabus or curriculum to guide training?	Interviews Records
	b. How does the above assist performance of the trainees?	Interviews
Program efficiency	a. Are program goals and objectives clearly stated?	Interviews
	b. Are the goals understandable and measurable?	Interviews Records
	c. Is there a comparable efficiency of the various	Interviews Documents

	programs in institutions?	
Dropouts	d. Do students leave before completion of training program?	Interviews Records
	e. What happens to such early leavers? Are they able to obtain employment?	Interviews
	f. What is the effect of such early leavers on the efficiency of program?	Interviews
Program effectiveness		
	a. Does the program cater for needs of all community members?	Interviews
	b. How does the program relate to the community needs?	Interviews Reports
After training what?	a. How many students complete training per year?	Interviews Records
	b. Are the trainees exposed to real work experiences?	Interviews Observation
	c. What effect does such exposure have on graduates? effectiveness of the institution?	Interviews Records Observation
	d. What type of skills are taught in agriculture?	Interviews
	e. How does the training affect the economic development of the rural areas?	Interviews Records

Private/Public businesses and enterprises	a. What job opportunities are available in the rural areas?	Interviews Observation
	b. How many graduates are self employed? wage employed?	Records Observation
	c. Are graduates migrating to towns?	Interviews
	d. What is the rate of unemployment among graduates in a year?	Interviews Records
Job creation and local development	a. Are graduates able start businesses as individuals and/or in groups?	Interviews Documents
	b. If not, why?	Interviews
	c. What constraints do new graduates face in search of employment?	Interviews
Community development	a. What is the relation between jobs started and the local area development projects?	Interviews
	b. Has the rural informal sector expanded in response to skills acquired in program?	Interviews Reports Observation
Program changes	a. Have there been any changes in the programs?	Interviews Records Documents
	b. What caused such changes?	Interviews

	c. Do such changes have positive effects on the program?	Interviews Documents Observation
	d. Did the changes affect the objectives?	Interviews
	e. How do the changes affect the local development?	Interviews
	f. Are such changes in observable?	Interviews Observation
	g. Do community needs influence such changes?	Interviews
Expected future trends	a. What major changes are being considered for the future of the program?	Interviews Documents
	b. Could such changes result in program effectiveness and efficiency?	Interviews Personal judgement

APPENDIX V

Sites visted during the field work.

Name of Youth Polytechnic	Date(s)	Major Activites: Interview schedules.
Kitui	10/15/87	Interviewed: 1 Manager 7 Instructors 1 Accounts Clerk 2 students 1 member of Management Committee.
Mulango	10/16/87	Interviewed: 1 Maanager 1 assisstant, 4 Management Committee.
Katangi	10/21/87	Interviewed: 1 Manager 3 Instructors 1 member of Management Committee.
Matuu	10/22/87	Interviewd: 1 manager 1 assistant 5 instructors and 2 members of the Management Committee.
Ngenda	10/27/87	Interviewed: 1 manager 3 instructors.
Masii	10/29/87	Interviewed: 1 assistant manager 3 instructors, and 1 clerk.

Mitaboni	10/30/87	Interviewed: 1 manager 1 assistant 6 instructors and 1 member of management committee.
Kimutwa	11/02/87	Interviewed: 1 manager.
Kithaayoni	11/03/87	Interviewed: 1 manager and 4 instructors.
Karurumo	11/05/87	Interviewed 1 manager 4 instructors and 1 member of management committee.
Iria Murai	11/06/87	Interviewed: 1 assistant manager 1 instructor.
Miramba ya Njau	11/05/87	Interviewed: acting manager, and 1 instructor.
Kithoka	11/10/87	Interviewed: 1 manager 4 instructors and 1 member of management committee.
Kiranga	11/11/87	Interviewed: 1 manager 4 instructors and 1 member of management committee.

Kianjai	11/12/87	Interviewed: the manager.
Isiolo	11/13/87	Interviewed: 1 manager 1 assistant 3 instructors and 1 memeber of the management committee.

Notes: In all the sites the researcher visited, documents, monthly reports, and other records were examined, with permission from the institution's manager.

APPENDIX VI

Main sources of Data

Objectives/ Goals Publications	Managers	Instructors	Management Committee	Files/Docs
Context of Polytechnics	X	X		X
Size of the Institutions	X	X	X	X
Administrative structure	X	X	X	X
Finance for the program	X	X	X	X
Program structure	X	X	X	
Program efficiency	X	X		X
Program effectiveness	X	X	X	
Program changes	X	X		X

APPENDIX VII

Description of Youth Polytechnics visited

Kimutwa - Self help project.

Location. This youth polytechnic is located in a small market which is about 10 km. from the main urban centre. It is in Kimutwa location of Machakos district.

Year established: 1982.

program: In the program it offers 2 courses, which include Home economics, and Tailoring/dressmaking.

Target student population: Admits both girls and boys. The current population is 4 students (c.f. time of the study). Staff: It has one instructor who is also acting as the manager.

Physical Plant: There one building which houses classroom/workshop and an office for the manager.
There are no boarding facilities nor teachers houses.

Mitaboni - GOK.

Location: It is about 15 Km. from the nearest market or town and is in Mitaboni location of Machakos district.

Year established: 1975, but previously it was a youth centre, as from the early 1960s.

target student population: It is a co-ed. institution, with a population of 176 students, of whom 23 of them have left (dropouts), and 8 instructors who include a manager. There is no assistant.

Program: It offers seven courses which include motor mechanics; home econs.; carpentry; masonry; leatherwork; agriculture; tailoring/dressmaking; plumbing/metalwork.

Physical Plant: Most workshops/classrooms, staff houses, and office block are permanent. The institution is in the process of constructing more workshops, to be ready in 1988.

Katangi - Self help project.

The institution is located in Yatta in Machakos district, and it is 15 Km. from the town. It was started in 1977, on self help basis and with assistance from an Irish Mission.

program: It offers 5 courses, which take two years for a student to complete. Courses offered include, Home econ.; Tailoring/dressmaking; motor mechanics; carpentry; masonry.

Target student Population: It is co-ed., and students come from all over the district. Currently there are students.

Staff: There are seven instructors, who include a manager and an assistant.

Physical Plant: The classrooms/workshops are in the process of being build on permanent basis; the office block and staff houses are temporary structures. Boarding facilities are provided for some of the students, both boys and girls.

Kithaayoni - Municipal Council (Machakos Urban)

Location: The institution is located in Kithaayoni location of Machakos district. It is located about 2 km. from the town, and it is sponsored by the Machakos Municipal council.

Year established: 1972.

Target Student population: It is co-ed., with a total population of103.
Program: offers 3 courses, which include, home econs.; carpentry; masonry; tailoring/dressmaking.

Staff: It has 5 instructors who are employed and paid by the Machakos Municipal council.
Physical Plant: The workshops/classrooms and the office block are permanent. There are no boarding facilities nor staff houses.

Kitui - GOK & SIDA.

This is located 200-350 Metres from the town of Kitui, in Kitui district. It was started in 1975, and is co-ed., but admits only those students who have completed the first four years of secondary school education.

They requirements are such that they cannot admit primary school graduates. The program consists of 5 courses, of which one is considered as the basic which all students must pass before making a choice of their specialization. The courses are: motor mechanics; fitter general; plumbing/metalwork; panel beating; welding.

Physical Plant: All workshops, staff houses are permanent. There are no boarding facilities for students.

Mulango - GOK.

It is located in mulango village, in mulango location of Kitui district. It is approximately 12 km. from the town and was started in 1973.

It is co-ed., admitting both primary and secondary school graduates. It has 7 members of teaching staff and 4 subordinates.

Its program consists of 5 courses, which include, carpentry; masonry; business education; home economis; tailoring/dressmaking and general agriculture which is taught to all students.

Physical Plant: There a few staff houses, workshops/classrooms, but no boarding facilities.

Iria Murai - GOK.

It is located in Murai location and about 30 km. from the main district headquarters of Embu, and was started in 1974.

It is co-ed. with a current population of 70 students and 5 staff members. It has a program of 4 courses. The courses include, carpentry; masonry; tailoring/dressmaking; home economics.
Physical Plant: There are no boarding facilities, staff houses, and classrooms safe for one on construction by the time of the field work, are temporary. The office block newly build is permanent.

Karurumo - GOK.

The institution is located in karurumo village in the location of karurumo, in Meru district. The distance from the main urban centre is 14 km., and was started in 1967.

The institution of co-ed. and has a total of 200 students,and a staff of 10 and a manager. Its program consists of 9 courses. The course include, carpentry; masonry; electricity; motor mechanics; home economics; agriculture; business education; plumbing/metalwork; leatherwork.

Miramba ya Njau - Self help project.

It is located in Ishiara location in Embu district and a distance of about 35 km. from the town. The institution was established in 1986, on self help basis. The program is really young and it is hoped that within the next three or four years it will expand.

It has two courses which include, carpentry; and masonry. It offers courses to boys only, due to the fact that the nature of the program does not attract girls. There are 2 staff members, one of whom is the acting manager as well as an instructor.

Physical Plant: There is a workshop/classroom which includes an office. There are no staff houses nor boarding facilities.

Kianjai - GOK.

It is located in Kianjai village, in Kianjai location of Meru District. The distance from the main town is approximately 16 km. The institution was started in 1969.

It is co-ed., and admits students of both primary and secondary school level, with the former group being the majority. The current student population is 200.

Its program consists of 8 courses, with a staff of 10 instructors and a manager. The courses include: carpentry; masonry; leatherwork; plumbing; motor mechanics; agriculture; home econs.; business education.

Physical Plant: There permanent houses for boarding, staffhouses with only a few temporary ones, classrooms/workshops, and so on.

Kithoka - GOK.

Location: In north Imenti of Meru District and it is about 8 Km. from town.

Year established: 1973.

Target student population: It is a co-ed., and has 76 students.

Program: It offers 5 courses, which include, carpentry; masonry; home econs.; metalwork; and agriculture

Physical Plant: Though some of the classrooms/workshops are on construction they are build to stay. Staff houses and dormitories (boarding facilities) are temporary.

Staff: It has 6 instructors, and 3 subordinate members of staff.

Kiranga - Self help project.

The institution above is located in south Imenti, in Meru District. It is about 10 km. from the main urban centre, that is the District Headquarters.

The institution was started in 1985, on self help or "harambee" that is communal action. There are 70 students, both boys and girls of primary and secondary school level. The staff consists of a manager, and 2 instructors.

The program consists of 3 courses, which are, carpentry; masonry; tailoring/dressmaking. There are plans to expand, that is add more courses in the future.
Physical Plant: Workshops and office block are permanent, and there is workshop on construction. There are no staff houses, neither are there any boarding facilities.

Isiolo - GOK & Catholic church.

This institution located in the out-skirts of Isiolo town, in the district of Isiolo. It was started by a Catholic mission in 1972.

It has staff of 5 instructors and a manager. It has a program of 5 courses, of which by the time the study was in progress one of the courses had ceased to be taught due to lack of an instructor. The courses include, carpentry; tailoring/dressmaking; motor mechanics; business education; masonry.

It is co-ed., admitting both primary and secondary school graduates, and it had 121 students.

Physical Plant: The workshops/classrooms, office are permanent. The staff houses are temporary structures. However there are plans for the future construction of staff houses, and boarding facilities.
