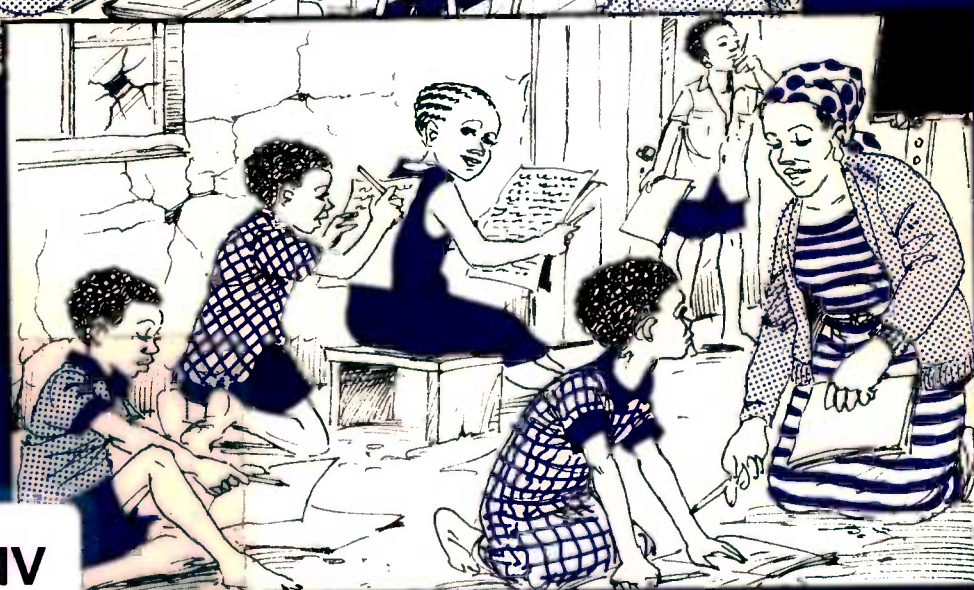


The Quality of Primary Education in Tanzania



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THE QUALITY OF PRIMARY EDUCATION
IN TANZANIA

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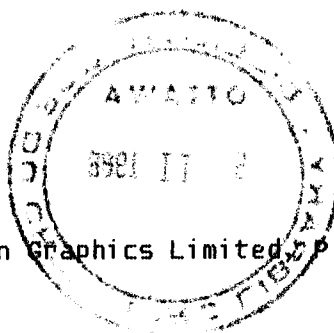
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INTRODUCTION AND ACKNOWLEDGEMENTS

This study was commissioned by the 1980 Workshop on Decentralization of Educational Research and Evaluation Capacities in Tanzania (Omari and Mosha, 1980) held in Arusha. The study was intended to be a collaborative effort between academics from the University, field officials from the regions and operatives from institutions dealing with the education process in Tanzania.

Therefore a project planning committee was constituted as follows:

1. Mr J. Mwaga, R.E.O. for Dodoma
2. Mr S. Kazimoto, R.E.O. for Lindi
3. Mr G. Lubasha, R.E.O. for Tabora
4. Mr C. Mahimbo and Mrs G. Shekilango, R.E.O. for Dar es Salaam
— Coast
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11. Mr E.E. Moshi, Senior Education Officer (Research), Ministry of Education.

The study was jointly funded by the Rockefeller Foundation and the International Development Research Centre (IDRC), Canada). We thank these funders. Appreciation also goes to DAAD and the Max Planck Institute for Human Development for assistance in data processing. The authors of the report would also like to express gratitude for the co-operation of the members of the team, the research assistants, and the teachers and pupils of participating schools.

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The study had twin purposes: first to facilitate acquiring of research skills by committee members, and second to produce some results on factors affecting the quality of primary education in Tanzania. These objectives were achieved in varying degrees but the report demonstrates both the complexities of conducting research on such intricate issues as quality and effectiveness of education, and reflects both the weaknesses and strengths of committee work as a modality for conducting research. However, the authors alone are responsible for the content of this report as committee members have not been involved in editing it.

Finally the authors, on behalf of the committee, wish to thank the Ministry of Education for allowing the team to conduct this study in its schools and hope that this spirit of openness in the conduct of research will continue and that legitimate and valid findings will receive attention from appropriate authorities.

I.M.O.

H.J.M.

Chapter 1

STATEMENT OF THE PROBLEM AND THE PURPOSE OF THE STUDY

Since independence the Tanzania Government has taken measures to provide relevant quality education for primary school children. Most of these measures were aimed at enabling them to acquire the basic skills, attitudes, motivation and knowledge needed for effective participation in national development and in individual actualization. The seriousness attached to primary education was clearly underscored in Nyerere (1967b) and in the Second Five-Year Development Plan (1969 - 1974) where it was stipulated, among other things, that all school-age children should be in school by 1989. This target was subsequently revised by the Party in 1974 and universal primary education (UPE) was to be achieved in 1977. However, UPE came at a time when:

1. The Government and the Party were expressing concern about the lack of marriage between theory and practice in schools, children acquired theoretical knowledge, irrelevant to the characteristic survival activities they would be required to perform after leaving school;
2. Parents and the community were questioning school as an institution since, according to them, many children came out of school illiterate and unfit for rural life;
3. Educators, besides being concerned about (1) and (2), were expressing dissatisfaction with efficiency-oriented issues such as:
 - (a) Dropouts, absenteeism, repetition and pregnancies in schools
 - (b) Overcrowded classes and the low quality of classrooms, teachers, equipment and teaching methods
 - (c) Overloaded administrative and teaching staff;
4. A general concern by legislators and politicians about deteriorating standards of schooling in the country.

Desirable though it might be, universal primary education, aggravated these concerns. It was in this context of concern for quality education that it was resolved during an educators'

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conference (Omari and Mosha 1980) that a study be conceived to elaborate and examine factors affecting the quality of education in Tanzania. Representatives of Regional Education Officers, the Ministry of Education, the Institute of Education, the Institute of Adult Education, and the Department of Education of the University of Dar es Salaam formed a steering committee to initiate and implement the study being reported here. The study was conceived in the context of the aims and goals of education in Tanzania which have been variously articulated as follows:

- (a) The achievement of permanent literacy in reading, writing and arithmetic;
- (b) The achievement of basic attitudes, values, knowledge and skills for functioning and survival in a primarily rural agricultural environment; and
- (c) The development of co-operative and collective behaviour and responsibilities for furtherance of the socialist revolution.

THE PURPOSE OF THE STUDY

The study had two major purposes:

1. (a) To identify, through extensive review of literature, factors affecting primary school education quality in Tanzania;
- (b) To explore, through field investigation, the manner in which the specific factors and variables interact and militate against the achievement of excellence;
2. (a) To develop and strengthen interest and awareness of the place and utility of educational research among educators in Tanzania;
- (b) To explore the possibilities for developing a more effective system for monitoring and control of quality;
- (c) To develop a foundation for the teaching of research skills and their dissemination to a broad spectrum of educators.

CONCEPTUAL FRAMEWORK

Any study of the factors influencing the quality of primary education requires a model that reflects the complexities of the issues being examined. Since no one set of constructs identified through a review of the literature could have served as an adequate structure for the study, an eclectic approach was chosen.

The attainment of the aims of primary education as given in

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Ministry of National Education (1980a) is affected by the magnitude and quality of various programme input variables and resources. These are presented in Figure 1. Among global extra-school environmental variables, the important ones are political, legal, technological, economic, demographic, ecological, and cultural conditions.

The intra-school variables include aspirations, expectations and motivation of both students and their teachers, school structure and technologies, and school management policies and practices. Obviously, in a single study it is not possible to collect adequate data on all the factors and variables related to quality of education. Yet attempts have to be made to come to grips with these possible input variables and then to eliminate the insignificant ones and concentrate on the most significant ones.

RESEARCH TASKS

Consistent with the conceptual framework as represented in Figure 1, the following tasks and questions were framed to guide the investigation, although not all the variables were included in the actual field investigation.

Variables Category A: Extra-school environmental variables

Tasks

- I. Explore the nature and type of policy-making strategy in Tanzania
 - i. What Party and Government policies guide implementation of:
 - (a) Education for self-reliance (ESR)
 - (b) Universal primary education (UPE)?
 - ii. How does Party interference in school affect programmes and activities?
 - iii. To what extent does frequent staff-turnover at the Ministry affect implementation of policies and programmes?

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E I. Political Conditions

- (i) Party and Government policies on UPE.
- X (ii) Party and Government policies on ESR.
- (iii) General Party interference in school programmes and activities.
- T (iv) Management issues in the relevant ministries, officials, both at headquarters and regional and district levels.

R

II. Legal Conditions

- A (i) Laws and regulations guiding the conduct of education.
- (ii) Laws and regulations guiding the implementation of UPE.
- (iii) Circulars and directives.

S

III. Technological Conditions

- C (i) Nature of activities performed by the local community.
- (ii) Type of technology used by the community.
- H (iii) Tasks undertaken by graduates.
- (iv) Tasks undertaken by scholars.
- O (v) Community literacy level.

O IV. Economic Conditions

- (i) Percentage of the total regional budget spent on education.
- L (ii) Percentage of the total Ministry budget spent on education.
- (iii) Percentage of the total national budget spent on education.
- (iv) Other educational spending on UPE, TES, Institute of A.E.
- (v) Extent parents are paying the fees and other dues.
- E (vi) Grants and aids received.
- (vii) Local input labour, money, advice, etc.
- N (viii) Economic status of parents.

V U. Demographic Conditions

- (i) Total number of eligible pupils by age and sex.
- I (ii) Percentage enrolment of eligible students by age and sex.
- (iii) Drop-out rates, repetition by age, sex and cultural group.
- R (iv) Family factors -- parents' level of education, occupation, possessions in the home, number of persons, size, and structure, language.

O

VI. Ecological Conditions

- N (i) Location -- urban/rural.
- (ii) Geography -- topography, climate, soils, land-tenure system.
- M (iii) Transportation and communication pattern -- distance between school and home, school and towns, school and other facilities.
- E (iv) Influence by other organizations -- churches, parents' associations.

N VII. Cultural Conditions

- (i) Co-operation between school and the local population.
- T (ii) Marriage systems.
- (iii) Cultural initiation ceremonies and prohibitions.

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Figure 1 (contd)

- I I. Individual Characteristics
- N (i) Age, sex.
- T (ii) Individual needs and goals.
- R (iii) School goals for each/group of individuals.
- A (iv) Extrinsic motivation among teachers and students.
- (v) Pupils' expectations.
- S (vi) Impact of examination results.
- C (vii) Views on and relations to policy formulations (teachers and pupils).
- H
- O II. Teaching Techniques, Materials, and Equipment
- O (i) Teachers' qualities -- age, sex, training and experience.
- L (ii) Teaching methods.
- (iii) Basic pupils' abilities.
- E (iv) Availability of books and teaching materials.
- N (v) Physical plant.
- V
- I III. Management Policies and Practice
- R (i) Styles of management.
- O (ii) Involvement of teachers and pupils in planning of school activities.
- N (iii) Existence of school committees or councils.
- M (iv) Regularity of meetings and consultations.
- E
- N
- T

Figure 1. Factors and variables affecting school quality

- II. Find out laws, regulations and circulars that direct the Conduct of primary education
 - i. What laws and regulations guide the conduct of primary education in Tanzania?
 - ii. What laws and regulations guide the implementation of (a) ESR? (b) UPE?
 - iii. What circulars, directives and regulations have been issued to clarify and set the pattern for correct implementation of educational policies?

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- III. Uncover the type of preoccupations and nature of technologies used by the local community in carrying out daily chores
- i. What are the major occupations of the local community?
 - ii. What traditional and modern skills are used in their major activities?
 - iii. To what extent are ex-students using the basic knowledge, skills, and attitudes gained through schooling for functioning and survival in a primarily rural agricultural environment?
 - iv. To what extent are ex-students demonstrating acquisition of co-operative and collective behaviour and responsibilities for furtherance of the socialist revolution?
 - v. What is the educational level of the indigenous population?
- IV. Determine the magnitude of resources devoted to primary education
- i. How much money is allocated for primary education?
 - ii. What percentage of parents are paying fees and meeting other obligations of providing school uniforms, books and other essential materials to their children?
 - iii. How much co-operation is offered by the community in constructing new buildings and engaging in joint ventures such as farming, handicrafts, adult education, and accommodation of school leavers?
 - iv. What are parents' occupations? What assets do they possess?
- V. Discover the demographic factors that influence the quality of education
- i. How many children are eligible for primary education?
 - ii. What percentage of the eligible children are actually enrolled by age and sex?
 - iii. How many pupils drop out of school annually? What is the frequency of absenteeism? What is the rate of pregnancies, repetitions, transfers and empty places?
 - iv. What is the family structure and size?

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VI. Explore ecological factors that influence quality of primary education

- i. Where is the school located?
- ii. What are the general topographic and climatic conditions and the land-tenure system of the school catchment area?
- iii. What is the distance between:
 - (a) School and home for each pupil,
 - (b) School and major service centres?
- iv. What roles do the church, parent's associations and other related organizations play in the provision of quality education?

VII. Find out the nature and type of cultural conditions that have an effect on primary-school quality

- i. What is the community-school relationship like?
- ii. How many wives do pupils' fathers have?
- iii. What initiation ceremonies affect the quality of education?

Variable Category B: Intra-school environmental variables

Tasks

I. Identify individual characteristics that have an effect on the quality of primary education

- i. To what extent do pupil characteristics, e.g. sex and age, year of beginning school, pre-school experience, region of birth, occupation and training preference, affect pupils' performance at school?
- ii. To what extent do individual characteristics -- distance from school, eating before school, reasons for attendance, subject preference, general impressions about teachers and the school -- affect performance?
- iii. What extrinsic and intrinsic motivational factors of teachers and students affect the quality of education?
- iv. How do pupils' expectations affect school outcomes?
- v. What is the impact of examination results on subsequent school performance?
- vi. What are teachers' strongly held views on how school quality could be improved?

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II. Monitor the extent to which teaching techniques and availability of teaching/learning materials and equipment affect quality of education

- i. How do teacher qualities such as age, sex, training, experience, absenteeism and attrition rate affect performance?
- ii. What methods are predominantly used for classroom instruction?
- iii. To what extent do pupils' basic abilities affect their performance?
- iv. To what extent does availability of books and other teaching/learning materials affect student performance?
- v. To what extent is the physical plant safe? Does it provide a conducive learning environment?

III. Find out the extent to which school management policies and practices affect quality

- i. What are the school administration, management and inspection practices? How do they affect the standards of education?

Variable Category C: Interaction between status and process variables (derived variables)

Tasks

- I. Monitor the extent to which a combination of key status and process variables affects the outcome of primary education in Tanzania
 - i. To what extent do school characteristics and processes affect pupil performance?
 - ii. To what extent do family characteristics and the atmosphere of the home affect pupil performance?
 - iii. To what extent do pupil characteristics, expectations and motivation affect performance?
 - iv. To what extent do individual school characteristics affect performance?
 - v. What key variables, regardless of block, affect pupil performance most?

Chapter 2

THE PRIMARY EDUCATION SYSTEM IN TANZANIA

The Tanzanian educational system has evolved from a colonial past, through a national bourgeois-oriented educational system, to a national system of education based on a socialist philosophy. Current educational goals have to be understood within this historical and ideological context. The next section of this report analyses the goals, development, and organization of primary education in Tanzania.

THE GOALS OF EDUCATION

The current goals and functions of education are based on the national philosophy of Socialism and Self-Reliance as elaborated in the Party document The Arusha Declaration (Nyerere 1967a). On the basis of this declaration, Nyerere (1967b) propounded its educational implications in the now famous educational document: Education for Self-Reliance.

Accordingly, the school system and its goals should be fundamentally related to the new society Tanzania has decided to create which is self-reliant and socialist, where equality and dignity of man are guaranteed, where every person works and where exploitation has been eradicated.

The goals of primary education in Tanzania are subsumed under the need to achieve universal primary education as a basic human right. Emphasis is placed on basic Swahili literacy and numeracy skills. Specifically, primary-school education aims at enabling pupils to read and write fluently in Swahili and to perform basic mathematical operations. But, above all, the pupils should acquire basic civic and ideological values necessary for the appreciation of their Government and its ideology, culture and society in general.

Primary schools are also supposed to prepare students for secondary schools and for other tertiary and vocational educational institutions. They must also prepare the majority of students who will end up leading rural lives.

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With these multiple functions of primary education, educators in Tanzania are supposed to concentrate, in addition to academic and practical skills, on the affective aspects of education. Thus, ESR demands that the educational system should develop in children attitudes and work habits consistent with the socialist goals of living together and working together for the common good. "Our education system must therefore inculcate a sense of commitment to the total community and help the pupils to accept the values appropriate to our kind of future, not those appropriate to our colonial past" (Nyerere 1967b). The values stipulated have not been well operationalized, but the document calls for building socialist values of collectivity, equality and positive work habits. Nyerere summarized the position as follows:

This means that the educational system of Tanzania must emphasize cooperative endeavour, not individual advancement; it must stress concepts of equality and the responsibility to give service which goes with any special ability, whether it be in carpentry, in animal husbandry, or in academic pursuits.

There have been efforts to revise the curriculum in order to bring it into line with the aims of education. However, there are indications that the teaching methods, classroom organization and interpersonal relations have remained traditional, authoritarian, competitive and individualistic (Omari *et al.* 1983).

Cognitive dispositions stipulated in Education for Self Reliance have also remained unoperationalized, although there is plenty of literature in psychology that could have helped in this direction. For instance, Nyerere (1967b) points out:

The education provided must therefore encourage the development in each citizen of three things: an enquiring mind; an ability to learn from what others do, and reject or adapt it to his own needs; and a basic confidence in his own positions as a free and equal member of the society.

There is literature on discovery learning and the development of creativity which could illuminate these goals. However, in a situation where, out of necessity, most educators are more occupied with teaching and administrative duties than research, these educational goals have remained political platitudes and not operationalized objectives with comprehensive guidelines for effective and successful implementation.

As a policy, ESR has two main thrusts. Firstly, it aimed at making the school a production unit which can produce economic

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goods to reduce the financial burden of schooling for the Government and community. Secondly, it aimed at promoting socialist goals by creating cognitive and affective dispositions consistent with a socialist ideology. It would seem that the first focus has received more emphasis, and in that aspect some tangible results are observable. Each school in Tanzania actually has a production unit (farm, workshop, etc.), although the production falls far below expectations (King 1984). The second goal has remained elusive, and so far there have been no systematic attempts to evaluate achievements with respect to these socialist goals.

DEVELOPMENT AND ORGANIZATION OF EDUCATION

The evolution of the educational system in Tanzania can be seen as having taken place in phases, depending on who was ruling the country at the time. Before the colonial conquest in the late nineteenth century, Tanzania had an efficient (by the standards of the times) indigenous educational system with either the clan or the tribe as the basic unit. Within each clan or tribe the educational system emphasized certain essential skills (cognitive, motor, and affective) for the survival and continuation of the group and the individual. Thus, a child brought up in a pastoral tribe such as the Maasai, for example, acquired the skills of hunting and herding as opposed to those where motor or imaginative skills were emphasized, such as in the carving Makonde tribe. Likewise, farming tribes placed great emphasis on skills associated with crops and plants, and coastal or lake tribes emphasized fishing and boat building.

While indigenous education was largely oral and non-formal, and hence at times chancy as it depended on memory and circumstances, in some tribes it was well structured. There were secret societies and rites of passage to mark the gradual but progressive advancement of an individual from one stage of life to another, from birth until death. Furthermore, as Cameron and Dodd (1970) point out, "it was vocational, in that boys were prepared to become warriors as well as hunters, fishermen, or farmers, and the girls to perform domestic and agricultural duties with strong emphasis on their roles as future wives and mothers" (p.49). The system of education was personal and was aimed at transmitting group values and skills from one generation to another. In this way, it aimed at fitting individuals into their prescribed places in the society through a process of conditioning and coercion.

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As the instruction was verbal, the educational system depended heavily on memory skills. Thus, the death of grandparents could be equated to the burning down of a library in modern times since they were the carriers of wisdom and a storage of knowledge. Selection to a different status or occupation depended on the position of the clan and family within the tribe. Although there were no "school-leaver" problems, since education and work were inseparable, access to the less menial occupations was limited to the ruling clans and families. There was no equality of opportunities. However, on the whole, the educational system in each group emphasized collective instructions for group survival rather than the individualistic social attitudes of modern Western education.

Classroom education in Tanzania began with the arrival of the Arabs rather than the missionaries or colonial administrators. Koranic schools were started all along the coast and in Zanzibar and it is estimated that when the First World War broke out there were 700 Koranic schools educating about 8,000 pupils in organized classes (Cameron and Dodd 1970). Thus, the coastal Swahili people constituted the first literate group in Tanzania. Because of their literacy, they were incorporated into the colonial apparatus as lower echelon rulers, or *akida* as they were known during the German period. Thus Koranic education introduced Tanzanians to the skills of reading, writing and arithmetic but in the Arabic language. The use of Swahili and Arabic in these schools ensured that no African would expect to join the higher echelons of the ruling circles under German and British colonial rule.

There were two elements of Koranic education that made it consistent with traditional indigenous education. Firstly, it emphasized group feelings and collectivity. There was gross exploitation by the sheikhs and imams, but this was consistent with the traditional system where chiefs exploited their subjects. Secondly, it relied heavily on memory skills. The pupils memorized Koranic verses in the same way that they would commit to memory tribal legends, proverbs, court cases, and clan histories. Since the Arabs did not interfere with traditional systems of belief, their educational system penetrated easily into the tribal lands, although the coastal people, especially in Zanzibar, were more committed to Islam than the mainland tribes.

Modern education in Tanzania was pioneered by groups of missionaries who arrived before the formal colonizers. Their nationalities included American, British, French and German, and their beliefs ranged from traditional Catholicism to more progressive Protestantism. The converts had to be able to read

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and write since a knowledge of the Bible and hymn books was central to the religion.

Consequently, early education was a necessary concomitant to Christianity, and the churches functioned as schools. However, a characteristic of Christian-based education was its heavy emphasis on individualism, hard work, thrift, transcendental moral purity and monogamous nuclear-family structure. In Nyerere's (1967b) words: "It emphasized and encouraged the individualistic instincts of mankind, instead of his cooperative instincts". This emphasis in colonial education conflicted with traditional value systems and norms which stressed clan- or village-based collective activities and shared values and confidentialities such as those of the extended-family. Thus, the introduction of classroom-based education during the colonial period was the beginning of the alienation of the educational process from the realities of rural life. For, in traditional societies, as Nyerere (1967b) argues rather romantically, "The individuals of the families within a tribe were rich or poor according to whether the whole tribe was rich or poor". While no one would advocate an absolute return to traditional education, it would seem that it was more intimately integrated into the society of the time.

During the German colonial period, 1886-1919, the educational system was a three-tier hierarchy. It was composed of village primary schools that gave three years of instruction in reading, writing, and arithmetic. As most of these schools were owned and run by missionary groups, they were also the centres of evangelical work. Then, for the better pupils, there were the central schools that gave two-year courses with a strong vocational bias, mainly in local crafts and agriculture. Finally, there was the high school in Tanga which gave courses in clerical work, industrial arts, and teacher training as well as in academic subjects. Thus, those who did well in the educational system would eventually attend this high school where the courses lasted from two to three years. However, as one would expect, the colonial interest in education stemmed from the need for local clerks and junior officials as well as the need for literacy for civil responsibilities and the spread of religion. In the words of a German colonial administration (circular of 1903 cited in Cameron and Dodd 1970), education had two aims:

- (i) To enable the natives to be used in Government administration; and
- (ii) To inculcate a liking for order, cleanliness, diligence, dutifulness, and a sound knowledge of German customs and patriotism.

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In the literature about this colonial period, there is no mention of any alternatives for further education for Africans, although it has been suggested that some Africans were sent to Germany to improve their knowledge of the German language. Swahili was the medium of instruction at all three levels of education, although German was also taught as a subject.

During the British colonial period, 1919-1961, the educational pyramid changed slightly. Basically it consisted of four years of primary school, two years of district school, and four years of secondary school. The four-year primary-school course, which was the basic educational opportunity of the 1940s, offered reading, writing, arithmetic, religious knowledge, general knowledge, health and hygiene, physical education, agriculture, handwork, singing and Swahili in the higher classes. Primary school was followed by two years in what were then known as district schools. There were only a few of these and only the more outstanding primary-school leavers were admitted. The courses were a continuation of the primary-school syllabus except that history, geography and English became distinct school subjects. Then there was a four-year secondary-school course for the selected few, and a few schools such as Tabora had started to offer six years of secondary education in both arts and science subjects. The apex of the educational system was Makerere College in Kampala (Uganda) where a very small proportion of secondary school leavers followed a two-year diploma course of senior secondary subjects that qualified them for University of London certificates.

When political independence came in 1961, the educational pyramid was as follows: four years of primary education, four years of middle-school education, and four years of secondary education. Then there were two years of high school or senior secondary education for those who obtained high passes in the Ordinary School Certificate examination and possibilities for a three-year university course existed. However, before independence, very few secondary-school leavers actually did receive university education as within East Africa only Makerere gave such education, and the overseas opportunities were limited to children of chiefs and the rich national bourgeoisie. No more than 20 people had had university education by independence in 1961.

Much of the educational structure in place at independence is reflected in the current system of education, although some steamlining has taken place. For instance, primary education now lasts seven years instead of four. The middle-school and primary-school tiers have been combined but the total duration has been

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cut down by one year. This was done to reduce the costs of primary education and to achieve high- and middle-level manpower self-sufficiency more quickly. The duration of secondary-school education has remained four years with two years for high-school education, and university education now ranges from three years for a bachelor's degree in social sciences to six years for a degree in medicine (Figure 2).

Tanzania's educational system is heavily centralized and uniform. By Act of Parliament, an "Ordinance to make provision for a single system of education" was passed in 1961. It ordered the hitherto racially organized schools to form one integrated school system in which children of all races, creeds, and classes would be schooled together with identical facilities using the same curriculum. Furthermore, despite financial and managerial constraints, the education system is directed and controlled centrally by a Ministry of Education in Dar es Salaam. So, although school terms may differ from one region to another, the pupils follow a single curriculum which is centrally set and inspected. The training of teachers and their terms of service are centrally determined by a Government sponsored and controlled commission called the Unified Teaching Service, now the Tanzania Teachers Professional Association. Thus, while all syllabi for academic schools and teacher training institutions are, in principle, prepared by a single governmental structure, that is the Institute of Education, the control of school quality is vested with directors of education in the Ministry and the Inspectorate. At regional and district levels, there are education desk officers for the same purpose.

With the winning of independence in 1961, egalitarian policies were introduced in Tanzania. Education was made free for every citizen. School fees were first abolished for secondary and higher education in 1963. It was argued that school fees discriminated against the poorer children, thus mostly against Africans. Rich parents were sometimes expected to pay part of the costs of their children's education, but only non-citizens paid fully for the education of their children.

A nominal fee for primary education (especially for boarding schools) was retained until 1973 when all school fees for Government primary schools were abolished except for a nominal contribution of Sh 20 per child. Thus, theoretically, all children of sound academic ability could acquire education at public expense from primary school to university. This was also consistent with national socialist policies. However, there is still some debate as to whether there is in fact any contradiction between socialism and the payment of school fees by

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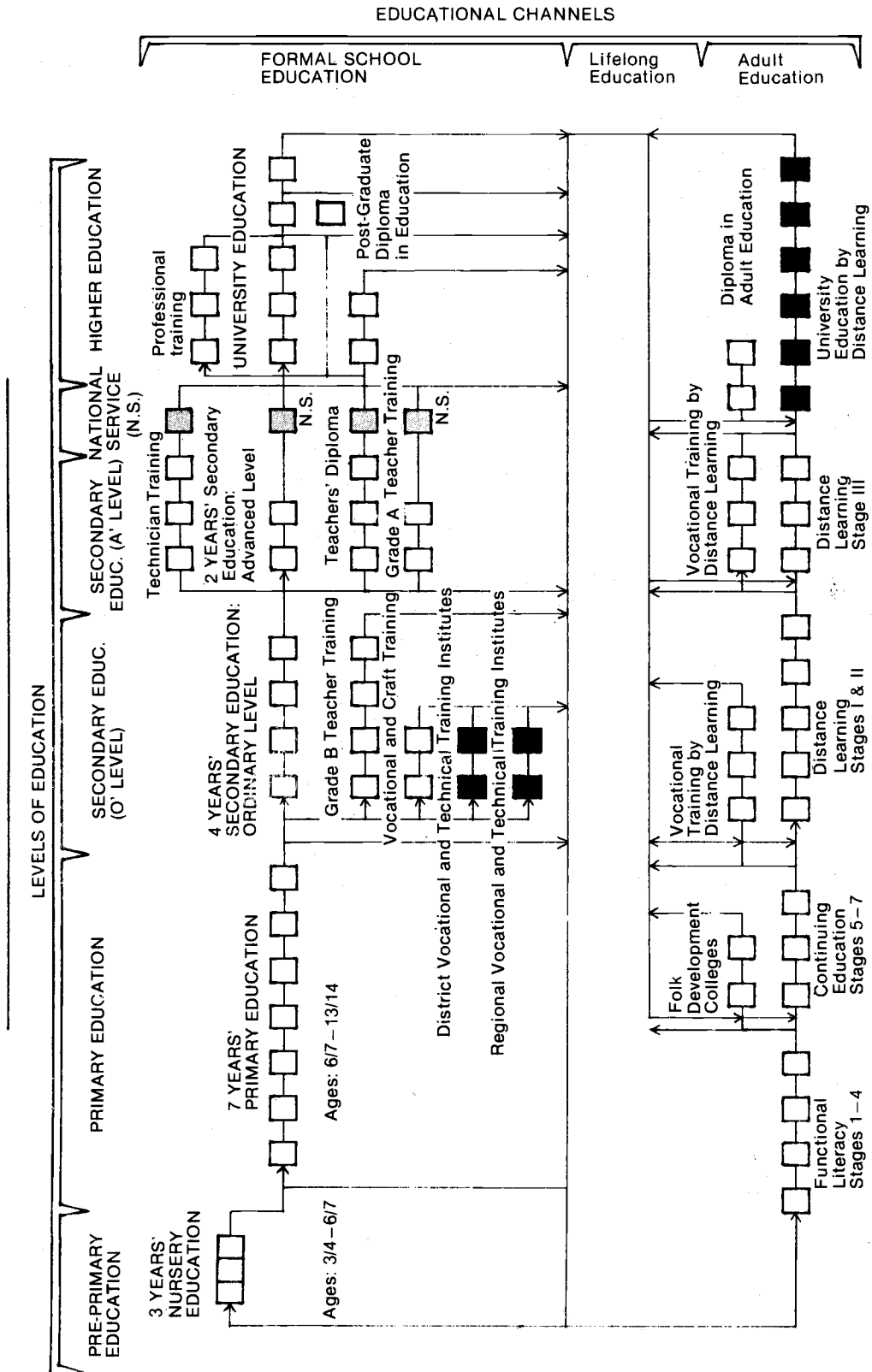


Figure 2. Structure of Education in Tanzania

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rich parents. Indeed, policy reversals by the 1984 Presidential Commission which reintroduced school fees indiscriminately seems retrogressive in many ways. Private tuition is also on the increase and only affluent parents can afford this.

UNIVERSALIZATION OF PRIMARY EDUCATION

Omari *et al.* (1983) reviewed the drive for universalization of primary education in Tanzania and concluded that although there had been some oscillations in the move, both within the Party and in Government, basically it still derives from the distributive ideology of the founding Party (TANU), as well as the social-demand approach to educational planning. The Party constitution stipulates the right to basic education for everyone. The Musoma UPE resolutions of 1974 merely reaffirmed these intentions. It was noted therein (TANU 1974) that only 48.6 per cent of school-age children were in school while the school capacity then (1974) was for 55 percent of the school-age cohorts. Therefore, there was concern that dropouts, absenteeism and truancy were rampant in schools. The resolutions went on to declare that by November 1977 all children of primary-school age should be between the four walls of school. Anticipating problems of shortages of teachers, teaching materials, and classroom facilities, the Party challenged the Ministry of Education to develop and adopt more innovative mechanisms for achieving this goal without necessarily involving heavy Government and community spending.

IMPLEMENTATION OF THE UPE RESOLUTIONS

In ordinary educational terms, universal primary education (UPE) in Tanzania implies that every child can be admitted into the first grade of primary school immediately on attaining the age of seven. In addition, all children of primary-education-age (7-13 years) should be enrolled in primary schools except, of course, those who have already completed primary education. An analysis of the 1980 enrolment statistics would demonstrate the position reached in 1980 when this study started. All data in all the five regions of the study show that there is a very great age range among children of the same grade (Table 1).

This is particularly noticeable in Class I where the age range is 5 - 17 years. These age differentials are known to have an impact on achievement and motivational variations. Indeed, in some countries pupils are streamlined by age so as to ensure equality of opportunities for learning.

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Table 1. Enrolment of children in the primary-school age range in the study regions, 1980

Regions	Age groups					
	7-year olds in Std.I			7-13 year olds in Std.I-VII		
	Total population	Total enrolled	Percentage enrolled	Total population	Total enrolled	Percentage enrolled
Dodoma	31,757	5,645	17.78	200,798	127,517	63.35
Kilimanjaro	30,109	8,754	29.07	201,623	159,755	79.23
Lindi	15,834	4,850	30.65	98,259	76,287	77.64
Coast	16,463	5,213	31.66	103,065	81,998	79.56
Tabora	26,246	7,195	26.35	160,239	101,502	63.34

The overload enrolment of 632,133 (Table 2) implies that if all places were used to accommodate only children of the official primary-school age range, there would be enough places to take 83.49 percent of such children. Unfortunately, quite a significant proportion of the places are taken up by children of ages outside the official primary-school age range.

Table 2. National overloading of primary-school grades, 1980

Grade	Official age	Overload							
		Official age		Underaged		Overaged		Total overload	
		Numbers	Percentage	Numbers	Percentage	Numbers	Percentage	Numbers	Percentage
I	7	31,657	27.39	2,894	2.50	80,988	70.09	83,882	72.60
II	8	30,871	28.08	2,517	2.29	76,547	69.63	79,061	71.92
III	9	30,613	17.27	2,529	1.42	144,101	83.30	146,630	84.72
IV	10	15,214	13.05	1,889	1.62	99,475	85.33	101,364	86.95
V	11	11,657	19.51	1,030	0.93	98,219	88.56	99,249	89.49
VI	12	8,341	9.93	1,002	1.19	74,652	88.88	75,654	90.07
VII	13	4,760	9.32	540	1.06	45,750	89.62	46,290	90.68
Total	7 - 13	122,133	16.51	12,401	1.57	619,732	81.92	632,133	83.49

Table 1 shows that the total number of 7-year olds enrolled was 31,657. When compared with the total population of this age group

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(120,409) estimated from the 1978 census results, this number would give an age-specific enrolment of 26.05 percent.

The total number of 7-13 year olds enrolled was 547,059. When compared to the total population of this age group (763,964) estimated from the 1978 census results, this number would give a net enrolment of 71.6 percent.

In addition, standard I enrolments have been declining year after year since the UPE apex in November 1977. This trend is illustrated in Table 3.

Table 3. Decline of Standard I enrolments, 1978 - 1980

Year	Boys	Girls	Total	No. of streams
1978	474,737	427,033	901,770	19,445
1979	276,961	263,457	542,418	12,693
1980	247,463	240,631	488,098	11,896

SOURCE: Sectoral Planning Unit, Ministry of Education.

Data in Table 2 show that there are very few children who are the "official" age for that particular grade. Practically every grade is heavily overloaded with over-aged children. Although there is gradual decrease of this overload from Standard II to Standard I, the rate does not reflect the rapid change that one would expect after the UPE bulge cohort enrolment in November 1977.

This decline cannot be explained easily by the "backlog" notion which would suggest that by November 1977 UPE had almost been attained and that the few children left out then would be absorbed within a few years, bringing the Standard I enrolments back to normal. The validity of this becomes questionable when one realizes that the majority of the 7-year olds were not admitted into Standard I in 1980.

The total number of children within the allowable age range for Standard I (7-12) not admitted in the 1970 class was 989,187 (Table 4). Had these children been admitted, it would have raised the 1970 Standard I enrolment to one which would compare favourably with the November 1977 UPE cohort.

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Table 4. Numbers of children excluded in the 1980 Standard I admissions

	Ages (years)						
	7	8	9	10	11	12	7-12
Total population	555,273	545,718	529,214	505,744	475,316	454,369	3,065,634
Total enrolled	143,279	273,507	369,214	435,630	424,844	429,973	2,076,447
Total excluded	411,994	272,211	160,000	70,114	50,496	24,396	989,187

Extrapolation of the 1980 enrolment to 1985, when the UPE bulge cohort completed primary education, reveals that, if the annual first-grade intake were to stabilize around 480,000 the total enrolment for 1985 would have been 3,216,788. When compared to the total population of 7-13 year olds estimated at 3,666,240 for 1985, this enrolment gives a gross enrolment figure of 87.74 percent. This is discouragingly lower than the 96.57 percent reported for 1980 (Table 5).

Table 5. Projected enrolment by grades up to 1985*

Year	Std. I	Std. II	Std. III	Std. IV	Std. V	Std. VI	Std. VII	Std. I-VII
1980	488,094	527,706	797,770**	507,699	456,597	378,590	211,188	3,367,644
1981	480,000	488,333	517,151	781,815**	497,540	447,465	371,018	3,583,322
1982	480,000	470,400	460,992	506,809	766,179**	487,589	438,516	3,610,485
1983	480,000	470,400	460,992	451,772	496,673	750,855**	477,837	3,588,529
1984	480,000	470,400	460,992	451,772	442,737	486,739	735,838**	3,528,478
1985	480,000	470,400	460,992	451,772	442,737	433,882	477,005	3,216,788**

Source: Ministry of Education statistics.

* Promotion rate of 98% p.a. assumed.

** UPE bulge cohort.

The UPE bulge cohort has shown a rather high dropout rate over the years' 1978-1981 (Table 6). The average dropout rate for this group was 5.4 percent per annum as compared to the national average of 2 percent per annum and the dropout rate for boys was slightly higher than for girls. In this period of four years 139,401 pupils (15.46 percent) were squeezed out of this one group. Strangely enough, even the number of streams for this group has been dropping. In the four years the number of streams dropped from 19,445 in 1978 to 18,100 in 1981. This loss of 1,345 streams in four years is not easy to explain unless the data are

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unreliable or there has been "collapsing" of streams, which is not unlikely since there is a reported decline in individual numbers.

Table 6. Dropout rate for the UPE bulge cohort, 1978 - 1981

Year	Std.	Boys			Girls			Total		Number of streams	
		Present	Dropped	% drop	Present	Dropped	% drop	Present	Dropped	Present	Dropped
1978	I	474,737	-	-	427,033	-	-	901,770	-	19,445	-
1979	II	447,352	27,385	5.77	408,208	18,825	4.41	855,560	46,210	19,148	297
1980	III	413,811	33,541	7.50	383,959	24,249	5.94	797,770	57,790	18,721	427
1981	IV	388,030	25,781	6.25	374,339	9,620	2.51	762,369	35,401	18,100	621
Total		388,030	86,707	18.26	374,339	52,694	12.34	762,359	139,401	18,100	1,345
											6.92

Source: Sectoral Planning Unit, Ministry of Education.

LITERATURE REVIEW

This chapter presents the results of a review of the literature on educational effectiveness. The review is divided into three sections: a theoretical approach to the analysis of educational effectiveness, empirical findings on the subject, and a synthesis of criteria for educational effectiveness.

THEORETICAL POSTULATES

Quality of education is an elusive concept. Much has been written about the need to raise the quality of education in Tanzania and elsewhere. Yet, there is little agreement among educators on the meaning of the concept, on what criteria to base assessment, and how it may be attained. There are those theorists who purport that quality is concerned with the soundness of the policies on which education is based (Dror 1968; Anderson 1975; Dye 1978; Dunn 1981).

Another group of theoreticians maintains that studies on quality of primary education should be mainly preoccupied with finding out whether the resources invested are utilized effectively (Blaug 1980; Psacharopolous 1972, 1979; Hanushek 1979; Monk 1981). This is the educational production functions approach. A radically different group considers that the quality of education is determined by interactions or processes between the intra- and extra-school environments (Dave 1963; Weiss 1969; McGuirk 1973; Bronfenbrenner 1974; Majoribanks 1978; Kilinowski and Sloane 1981), and at school (Bowles and Levin 1968; Guthrie 1970, Averch et al. 1972; Bloom 1976, 1980; Madaus et al. 1980). This is the interactive approach.

Then there is an old tradition of Coleman (1968, 1975), Jencks (1966, 1972) and contemporary theoreticians (Madaus et al. 1980 and Bloom 1980) who think that quality can be discerned by evaluating the outcomes of the process of education. This is the goals-achievement approach.

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Finally there is an emerging group of theoreticians who believe that there is no one best way of studying educational effectiveness since different problems and contexts would demand varying approaches and criteria. Hence, they have suggested a systems approach to the study of educational effectiveness as discussed in Strickler (1974).

In view of the complexity of these criteria theories, it appears that a multi-dimensional approach to the study of effectiveness of primary education in Tanzania is the most appropriate. The conceptual framework on which the study is based is the open systems model. This model provides a broad framework on which any study of quality of primary education could be based. Ideas drawn from Dror's optimal model, the educational production functions model, the interactive systems model, the optimal goals model, and the systematic approach model provide the detailed critical indicators for the study of quality of education.

THE OPEN SYSTEMS MODEL

The open systems model takes society in its holistic nature and examines inter-relationships and interdependence of the components of the given educational system. It consists of inputs, processes, and outcome components, all of which interact within a given environment. The influence of the environment is most pronounced, however, on systems inputs.

Two types of environment can be identified. These are the extra-school environment and the intra-school environment (see Figure 1). Input variables which can have an effect on quality include the nature of the students admitted (background factors), type and number of teachers recruited, the conditions of the physical plant, materials and equipment available, and the curricula (Daskin 1979). Also associated with input variables are policies, laws and regulations that direct the course of education. Whereas Coleman (1975) stresses the need to include the racial background and pupil's IQ as basic input considerations in the study of school effectiveness, in Tanzania cultural, demographic and ecological factors may be more important than racial factors, and independent measures of abilities (IQ tests) are proxies only.

The process components include all the activities that take place both at home and at school to produce certain educational or learning outcomes. These involve the intellectual climate of the school and home, methodology of teaching, and the nature of staff-student relationships.

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Outcomes, on the other hand, include all products of the education provided, both intended and unintended. Recent studies associate quality with measurable value added, whether in knowledge, ethical standards, or vocational skills. The input and process variables interact to generate outcomes. First we will give an analysis of policy formulation.

POLICY FORMULATION AND ANALYSIS

Mosha (1983) holds that, in the context of Tanzania, policy is the pronouncements by the Party or Government that direct the course of education. Two major policies guide the provision of primary education in Tanzania. These are ESR and the Musoma Resolutions. The former emphasized the need to provide high quality and relevant education by developing in each child an enquiring mind, positive attitudes towards the rural environment, self-confidence, and modesty.

The Musoma Resolutions, on the other hand, emphasized the need to provide primary education for all eligible children by 1977. A study of quality of primary education should first involve appraisal of the appropriateness of the basic policies on which education is based.

It is important at this juncture to review policy-formation models in order to discern how quality policies could have been made in order to overcome at least some of the shortcomings presented in the ensuing sections. Ideally, three styles of policy formation can be delineated. These are the naturalistic, idealistic and eclectic models of policy formation. Naturalistic models describe stages involved in formulating policies based on practical experience, whereas idealistic models prescribe the procedures for policy formation which hardly reflect reality. Eclectic models, on the other hand, are derived models built on salient constructs from an array of descriptive and prescriptive models with the objective of establishing a better fit between the purpose of a specific policy and the implementation framework.

Dror's Optimal Model

One of the most accepted naturalistic models of policy analysis, developed by Dror (1968), is referred to as the optimal model because it does not rely entirely on rationality but allows for elements of creativity. Dror develops three major stages of making workable policies, identified as meta-policy making,

policy making and post-policy making. These stages are divided into 18 phases as shown in the model (Figure 3). In the context of the systems model, the three stages of policy making suggested by Dror correspond with input, process and outcome components.

Metapolicymaking stage

- Phase 1. Processing values
- Phase 2. Processing reality
- Phase 3. Processing problems
- Phase 4. Surveying, processing and developing resources
- Phase 5. Designing, evaluating and redesigning the policy-making system

Policymaking stage

- Phase 8. Suballocating resources
- Phase 9. Establishing operational goals, with some order of priority
- Phase 10. Establishing a set of other significant values with some order of priority
- Phase 11. Preparing a set of major alternative policies, including some "good" ones
- Phase 12. Preparing reliable predictions of the significant benefits and the costs of the various alternatives
- Phase 13. Comparing the predicted benefits and the costs of the various alternatives and identifying the "best" ones
- Phase 14. Evaluating the benefits and costs of the "best" alternatives and deciding whether they are good or not

Post-policymaking stage

- Phase 15. Motivating the executing of the policy
- Phase 16. Executing the policy
- Phase 17. Evaluating policymaking after the policy has been executed
- Phase 18. Communication and feedback channels interconnecting all phases

Source: Dror 1968, p.163.

Figure 3. The phases of the Optimal Model

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Meta-policy making

This is the stage in which policy-making authorities delineate the rules of the game without necessarily changing the policy-making system. In Dror's own words, meta-policy making deals with "major operations needed to design and manage the policymaking system as a whole and to establish the overall principles and rules of policymaking" (Dror 1968, p.164). In other words, meta-policy means policy making on policy making.

Though Dror gave a detailed account of the phases in this stage, the most crucial point that he developed is reflected in the statement about values. He stipulated that,

Every society has a general reservoir of values that change constantly and that differ in degrees to which they are conscious, intensely held, realistic or backed up by power, in their structure and formality, and in the way they are distributed. These different raw values can be mutually reinforcing, contradictory or anywhere in between. In their raw form they are very useful for evaluating problems or formulating goals for public policymaking: for such purposes they must be ordered and be specific (p. 164).

The underlying significance of Dror's discussion on values is that before a policy maker embarks on a new policy there is a need to survey the context in which the changes are to occur and to assess the cultural ethics before even setting his meta-goals on which policy formulation and planning are to be based.

Policy making

Dror maintains that it is at this stage that the actual act of policy formation takes place. The major theme here is that of allocation of resources using modern budgeting techniques. After the allocation of resources, Dror suggests that the next logical phase is that of establishing operational goals with some order of priority, preparing major alternative policies, and applying both the pure rational and extra-rational or innovative strategies.

Then one has to prepare reliable predictions of significant benefits and costs of the various alternatives, to compare the predicted benefits and costs of the various alternatives and to identify the best ones. Dror, however, notes that:

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The main problems in this phase are trying to compare qualitatively different types of benefits and costs, but also in their chronological distribution and in how reliable the predictions that they will occur are (p.183).

So he suggests that:

It is very important in optimal policymaking to allocate proper weights to probabilities of various undesirable consequences ... in choosing the best alternative the policymakers must use the explicit criteria for decision-making to compare the advantages and the expected results of the various alternatives (p.186).

The criteria are tools for grading or ascertaining what the actual quality of policy making is. The policy maker deciding whether the standards are acceptable or not is the final step in the policy making cycle. Standards are tools for grading the ascertained quality. Dror maintains that optimal standards should always satisfy the following requirements:

1. A high probability that the society will survive (in the larger sense);
2. A high probability that the policy will be politically and economically feasible;
3. Continual improvements in the net expectation of policy making in the same unit and of new policies as compared with similar policies in the past, unless the major environmental variables become worse;
4. Better net expectations than in any comparable policy making system; and
5. Highly developed search for alternatives, with, at the least, extensive surveys of knowledge.

It should also:

6. Pressure policy making to be as good as possible by requiring checking up and appraising the policy-making phases through which the proposed alternative has passed, and by demanding independent simulation of some of them. It should
7. Generally be explicit, and known during all earlier policy-making phases, whose activities it will influence because the various actors will anticipate the verdict; and
8. Should have sound backing from experts or the literature. Standards should neither be too high -- difficult to attain -- or too low, hence one being contented with mediocre performance.

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Post-policy making

In this stage Dror discusses three phases of implementing public policy, namely motivating the execution of the policy, evaluating the policy after it has been executed, and communication and feedback channels.

Motivating the execution of the policy involves introduction of stimulating factors for executing the policy, which includes formal approval of the policy, allocating resources to an executing agency, and pushing the implementation process. One should also strive to gain the necessary support for a policy by co-ordinating the power centres -- the entire school community and all relevant external partners that together control the resources (human, materials and monetary) -- that are concerned with implementation of the programme that the policy is about. Executing a policy should also involve strategies for gaining support from the power centres and implementers and delineating the inducements required to obtain compliance of all the concerned parties. The inducements need not be in monetary form but should be appealing enough to persuade a person to forego equally compelling demands on his time and interests. Coercion and intimidation, characteristic of policy formulation in many developing countries, do not generate self-sustaining interest in the innovation. They should be avoided as much as possible.

Major guidelines that will ensure that the policy goals are realized must also be set. These guidelines must delineate the ways in which resources are to be allocated and used, and ensure that performance proceeds according to plan.

Extra-rational processes should also play some part in all the sub-phases for they allow individuals and groups to use their skills, knowledge, initiative and creativity in looking into the best ways of implementing the policy in order to maximize benefits and minimize costs.

The execution-of-policy phase is subdivided into two sub-phases: re-policy making and the way policy is to be executed. Re-policy making includes concrete translation of policy goals into targets, whereas the way policy is to be executed would involve charting the concrete steps for reaching the set targets.

Dror advocates that the last phase of the optimal model is evaluation. He maintains that evaluation cuts across and inter-connects all other phases. Hence he stresses that:

Evaluating the policymaking begins when any executing of the policy begins, and continues until the executing, including any necessary remaking of the policy and executing of the remade policy has been completed. This evaluation of policymaking has two subphases. (1) comparing the actual results of the executing, that is the actual policymaking output, with the expected results; and (2) evaluating the differences between them. Actual policymaking results can fall into four categories: (1) expected and desired results; (2) expected and undesired results; (3) unexpected and desired results; (4) unexpected and undesired results (p.193).

Dror then makes a crucial point as he states that "communication of feedback loops should not be left to spontaneous self-direction, but the more critical loops, especially, must be explicitly established and maintained". Hence, the need for establishing machinery for continuous review and revision of policies becomes important if their viability is to be sustained.

Dunn (1981) has also maintained that good policy ought to be evaluated against criteria of effectiveness, efficiency, adequacy, adequacy, responsiveness, and appropriateness. Other policymaking strategies are discussed below.

Idealistic models

Idealistic models normally tend to prescribe steps which are to be followed without taking into consideration inherent constraints in policy implementation. Dye (1978) and Mosha (1983) contend that a policy is a mere statement of intent, and it does not become public policy until it is adopted, implemented, and enforced. Idealistic models of policy formation can be examined from the perspectives of institutionalism, group theory, elite theory, rationalism, and incrementalism.

Institutionalism

The institutionalistic view of policy formation stipulates that policy is an institutional activity. Hence, party and government institutions give public policy legitimacy, universality, and monopolize coercion. The institutions for policy formation in Tanzania are mainly the Party's Central Committee, and the National Executive Committee (NEC). The Government, which is the implementation arm of the Party, controls legitimate power. On the other hand, the Party and the Government are jointly supposed

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to prepare the ground for universal acceptability of the policies. However, although such machinery has been established, coercive power is often wielded by those who have the authority to appoint and reshuffle key personnel in order to solicit temporary compliance and support of the policy regardless of problems in implementation. The frequency of turnover of too executives testifies to this phenomenon.

Group theory

The group theory is hardly applicable in the Tanzanian context as there is only one ruling party, whose supremacy is regarded as sacrosanct. However, where group theory is applicable, various interest groups interact, deliberate, and bring to bear various points of view in terms of alternative ways of making viable policy. The task of policy makers becomes that of selecting the best policies and most feasible alternatives for their implementation.

The elite theory

The elite theory, on the other hand, views policy as the preferences and values of the governing elite. The elite actually shape public opinion on policy questions and public officials and administrators merely carry out the policies decided upon by the elite group. The outcome in many cases is that public policies become evolutionary rather than revolutionary for each class, when in power, favours stability.

These basic characteristics feature in both ESR and Musoma Resolutions. The elite (mainly Party and a few Government officials) formulated both policies without consulting or educating the entire community which was to implement them. Although, in principle, both policies were intended to be strongly revolutionary, the results suggest that they became evolutionary for no far-reaching qualitative results have emerged.

Rationalism

The rational approach to policy formulation views policy as an efficient goal achievement strategy or one which maximizes "net value achievement". Net value achievement assumes that all relevant values of society are known. It also involves the calculation of all social, political, and economic values sacrificed and those achieved by a given public policy.

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This approach to policy formation is therefore based on the assumption that the value preferences of a society as a whole can be known and weighted, and there is machinery to facilitate pure rationality.

However, a number of impediments to the pure rationality model have been identified. These include lack of agreed-upon societal values and uncertainties in the environment which are difficult to predict, and lack of accurate data. It is not self-evident that a policy based on Tanzania's motto "We must run while others walk" takes into consideration such constraints.

Incrementalism

The incrementalist approach to policy formation, on the other hand, is a strategy which takes the policy-making process as a variation to existing policy. It views policy making as a continuation of past institutionalized activities for time and intelligence may make it difficult to implement radical policies.

Hence the position that public policy for universalization of primary education could be initiated and implemented in three years at the same time as sustaining quality would not be credible under the incremental approach. Resource requirements and support services would be difficult to mobilize within that short time.

The extra-rational model

The extra-rational approach tends to demand that policy makers should at times appeal to subconscious processes such as intuition and judgement in the process of policy formation. Analysis of the leadership styles of prominent politicians such as Bismark, De Gaulle, and Kennedy seems to suggest that at times they appealed to extra-rational processes in policy making. In short, the extra-rational model appeals to the innovative capabilities of policy makers.

THE PRODUCTION-FUNCTIONS APPROACH

The production functions approach is concerned with investment in education. It is based on the assumption that resources invested in education must be efficiently used in order to attain quality results as they are often scarce and highly valued by society.

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In Tanzania, for instance, about 20 percent of the national annual budget is spent on education (Ministry of National Education 1980a). Schools have also been used as key instruments for implementing public policy, and education is taken as investment in human capital required for implementation of all future national development plans.

The application of this approach to education has not been without difficulties. Hanushek (1979) maintains that:

While standard production theory concentrates upon varying quantities of homogeneous output, this is not easily translated into educational equivalents. Education is a service which transforms fixed quantities of input (i.e. individuals) into individuals with different quality attributes. Educational studies rightfully concentrate upon quality differences. However, simply because individuals can be ordinarily ranked in terms of cognitive test scores does not imply that such a measure is necessarily appropriate (p.355).

Most standardized achievement tests, he maintains, do not cover materials, knowledge, and skills valued by society, i.e. preparation for life. In fact, much of the documented interest in primary-school-system performance does not relate to the perceived importance of schooling in society but to future capabilities of students, that is, the ability to cope with and perform at higher levels of schooling.

Monk (1981) contends that the major difficulty of applying the production-function theory in education is that it assumes the production process (under study) operates with what economists call technical efficiency criteria. This amounts to assuming that all individuals with discretion over production seek to produce the maximum level of output obtainable from given inputs. He says that there are four interrelated reasons for questioning the assumption that educational systems operate using technically efficient criteria. First, a large number of actors have discretion over the production of education: Members of Parliament; school board members; national, regional, district, and school administrators; teachers, pupils and parents all affect what and how educational outcomes are produced. The assumption regarding technical efficiency is based on pursuit of specified goals. However, in the case of educational organizations, the size and diversity of the group of decision makers who influence production make it difficult to justify the assumption that such agreement exists.

Second, the outcomes of an educational process are numerous and difficult to define clearly. This characteristic exacerbates the potential for decision makers within the educational system to disagree over what to produce. The net result of these disagreements may be variation across regions and districts in the nature of the mix of outcomes which are being produced. To the extent that this is the case, the analyst is unable to justify the assumption that any one mix of outcomes is being produced in a technically efficient fashion.

Thirdly, it is difficult, and not necessarily desirable, to eliminate the diversity of goals pursued within schools and classrooms due to some variation of contextual factors.

Fourth, even if agreement could be reached among the decision makers regarding which goals are most appropriate, there is the further question of determining how to achieve the agreed-upon goals. If pupils' learning styles differ, procedures that are technically efficient for one group of pupils may not be efficient for another group.

Despite these shortcomings, advocates of the production-function approach in the study of school effectiveness have attempted to control some of the limitations through multiple regression analyses which estimate the relationship between students' achievement and educational inputs and production processes. The initial attempts to use a production-function model in education took a set of school and pupil's background factors and related them statistically to achievement, in most cases without discussing the underlying behavioural assumptions implied in their work. Hanushek (1979) maintains that pupils' level of achievement is clearly related not only to present influences but also past ones. Levin (1976) adds that:

...from the time a child is conceived, various environmental characteristics combine with his innate characteristic to mould his behaviour. More specifically, a child's achievement performance is determined by the cumulative amounts of "capital" embodied in him by his family, his community, and his peers, as well as his innate traits. The greater the amount and the quality of investment for each of these resources, the higher the student achievement level will be (p.273).

THE INTERACTIVE-SYSTEMS APPROACH

The interactive-systems approach to educational effectiveness is an attempt to relate the analysis of the learning process in the individual not only to the socio-economic conditions under which individual development takes place, but also to the processes and the varying systems that promote or inhibit learning. It is a departure from the structuralist approach to educational effectiveness, which was mainly concerned with larger, more formally defined status variables that characterize the school or the home, to include the socio-economic status of parents, the amount of resources available to a school, and ethnic and demographic variables.

Subsequent research following Coleman's study (1968), in which he had used status variables as measures of effectiveness, had shown that these indices were merely proxy measures of what a family or a school was. There were more direct and more accurate measures of effectiveness. Kilinowski and Sloane (1981) have stated that:

More clearly related to educational achievement is the attitudinal dimensions of the home, the values, attitudes, and objectives held by the parents, both with regard to themselves and their children... (p.89).

Bloom (1976) has added that while teacher virtues such as qualifications and length of experience are important, what teachers do is more crucial than their personal and cognitive characteristics. Numerous studies have also shown that:

What seem important in affecting achievement are the academic demands of the course, the student's concern for the commitment to academic values, the amount of time spent on study and homework, and in general, climate of high expectations on the part of the students and teachers (Madaus, Kellegan, Rakow and King 1979).

Therefore the interactive-systems approach to effectiveness is a theoretical reflection of the interrelationship between cognitive, home and school environments and how they affect learning.

On the home environment, existing literature (Bloom, 1980) shows that some degree of structure and routine in the home is essential for good work habits in the school as well as out of it. Ideally, and first, there should be some allocation of space in the home for various activities, including a time and a place to study in relative quiet. Second is emphasis on regularity in

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the use of time and space in the home and a balance among activities so that play, for example, does not take precedence over other activities. Third is priority given to school work, reading and other educative activities over recreation.

Bloom (1980) maintains that school learning is a long and difficult process for most children, and unless there is a great deal of support and encouragement, children will find it difficult to maintain their interest in and commitment to learning. The home should therefore provide children with the encouragement they need and help to overcome the learning problems encountered. Encouragement of the child should include frequent praise and approval for good school work, and parental knowledge of strengths and weaknesses in the child's school learning. It also means providing supportive help when it is really needed and making available a quiet place to study with appropriate reference books and other learning materials. The emphasis, however, should be on the use of these materials rather than on their quality or their mere presence in the home.

Activities with educative value should also be given preference where possible, and children should be guided to learn as much as possible from such encounters.

Accumulated evidence suggests that much of the learning in the school or at home is based on the use of language. Language is a vital tool for gathering, communicating, using and storing ideas. Since the home is the place where the child learns much of his "mother tongue", the learning of language and its use in the home should be enriched by family concern and help for correct and effective language usage through emphasis of good speech habits and use of words and phrases needed to communicate effectively with others. Family members should facilitate such learning by giving children opportunity to talk about the days' events and to be listened to at the dinner table or at some daily occasion when the family gathers together. The emphasis should be on ways in which each individual can communicate thoughts and feelings through accurate use of language.

Well informed parents may set the standards for the child's learning in and out of school regarding the quality of work expected of the child as well as marks and grades he should seek. Apart from setting standards, parents are also expected to provide constant support and even the direct help the child needs when he or she does not meet these standards. Parents should also help the child to aspire to excellence in all walks of life and in particular in education and vocation. Apart from communicating the level of education and occupation they would like the child

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to aspire to, they should also help him see present learning in relation to future goals, encourage him to make friends with other children who are serious about education and who have similar long-term goals and aspirations, and be prepared to make the sacrifices required for these aspirations in terms of time and money. Figure 4 illustrates this situation.

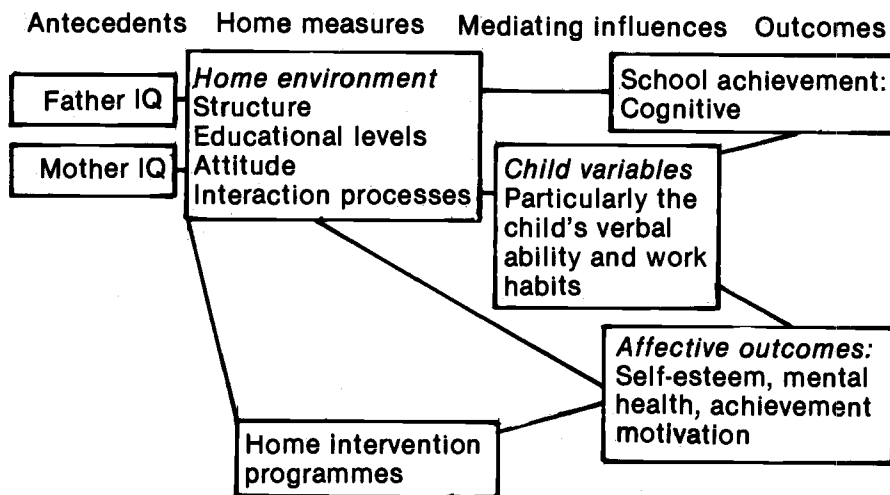


Figure 4. Cognitive map of the influence of home environment on school achievement

SCHOOL CLIMATE

School climate refers to characteristics found in the school environment that result largely from actions taken consciously or unconsciously by the members of the school community which, affect performance. Such characteristics include the intellectual climate of the institution, the method of teaching, the nature of staff-student relationships, and overall teacher motivation. Climate variables include perceptions of students, teachers, principals, and the community. Madaus *et al.* (1980) maintain that student climate includes,

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...(student sense of academic futility, student expectations, student perception of teacher "push" and norms), the teacher climate (teacher sense of academic futility, teacher evaluations and expectations for high rate school completion, teacher-student commitment to improve), and principal-teacher climate (principal's expectation and evaluation of students, and perception of parent concern, expectations for quality education (p.105).

While teacher virtues such as qualifications and length of experience are important, Bloom (1976) maintains that what teachers actually do is more important than their personal and cognitive characteristics. Hence the quality of teaching is related to student achievement. The kinds or behaviour identified with quality of teaching are clarity of teachers' presentation, including making points clearly, explaining concepts clearly, using a variety of teaching procedures and materials, enthusiasm in presentation as indicated by gesture and voice inflections, and the task orientation of the teacher such as focusing on the accomplishment of a definite task.

The nature of the staff-student relationship reflects the management practices of the school which have a bearing on scholastic achievement. The first component of management practices is shared purposefulness and mission. Smith (1976) contends that in a school which is characterized by such purposefulness, there is a match between parents', students', teachers', and administrators' notions of the important ends of education and all move toward those ends in a purposeful way. The second variable is cohesiveness or closeness as applied to the structure and directness of instruction. In this context, succeeding schools are those working towards the attainment of fairly well defined objectives. The third variable is time. Smith (1976) argues that the more time is devoted to teaching pupils the tasks considered important, the more likely it is that they will learn these tasks. Overall, then, the processes, pressures, and atmosphere of schools and classrooms are important variables in the study of school transactions that are related to educational effectiveness.

However, the motivational factor related to teachers who are supposed to carry out these key roles has often been under-emphasized in studies of school climate. Yet studies on personnel organization have consistently suggested that the key to school success lies in the manner in which teachers work together for goal attainment. Steers (1977) has pointed out that "If employees are not motivated to remain with and contribute to an organization, questions of effectiveness become academic."

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Teacher motivation is normally reflected in their attachment and commitment to school activities. Attachment is normally expressed in reduced turnover, absenteeism, and other forms of withdrawal and increased time spent on the work environment. Commitment, on the other hand, represents a state of affairs where individuals are strongly attracted to the goals, values, and objectives of the school. Commitment thus goes well beyond merely being a staff member and includes highly favourable attitudes towards ones' job and willingness to exert high levels of effort on behalf of the school in order to facilitate goal attainment.

The main factors that influence a teacher's decision to participate in school activities include pay, promotional practices, school size, immediate work environment (for example, supervisory style and group interaction patterns), job content (nature and amount of the task), autonomy, role clarity and personal details (age, tenure, personality and vocational interests). It is thus important that these factors be taken into account if performance is to be enhanced. If not, teachers may decide to leave for more satisfying jobs, thereby increasing an individual's opportunity for personal goal attainment. If chances of getting better employment are slim, one might decide to remain but embark on regular absenteeism. Three forms of absenteeism cited by Porter and Steers include negative withdrawal of the individual (such as taking sick leave while abiding to school sick-leave policies) without salary loss. Absenteeism is also a relatively easy method of working. Finally, absenteeism might represent substitute behaviour as reflected in temporary avoidance of duty (protracted coffee breaks and pretentious searches for rare commodities) or superficial accomplishment of duties provided one does not lose any benefits. The issue of withdrawal from the school, therefore, presents a complex problem that is not easily resolved. The goal of effective school management would likely be to increase and strengthen the attachment of their effective members, while attempting to improve the contribution of their less effective ones.

In addition, Steers (1977) maintains that a teacher's performance in school is enhanced by his abilities, traits, interests, and role clarity. He categorically states that if a teacher simply does not possess the qualities necessary for his job, or has little interest in the job itself, and his role is ambiguous, there is no reason to believe that his performance level would be high. Figure 5 provides a summary of the major interactions discussed under school climate.

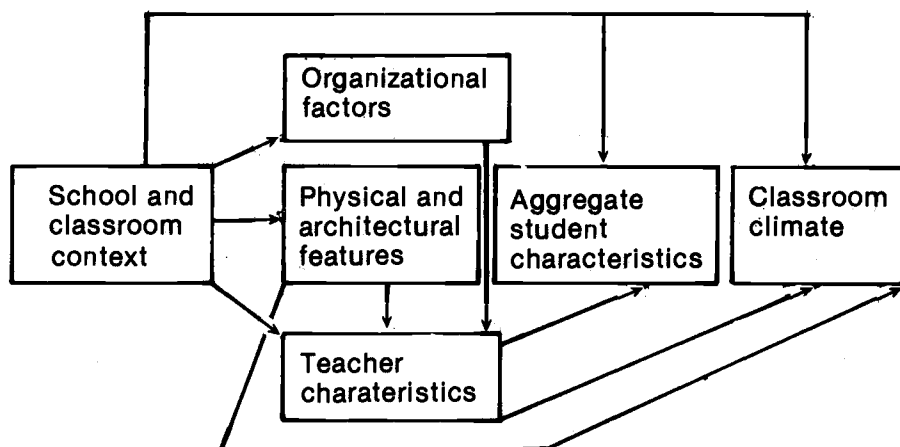


Figure 5. A model of the determinants of classroom climate

Finally, parents, the members of the community, organizations, party and government organs need to co-operate with teachers, students and school administrators in solving problems related to the home environment and school climate by providing the required support (materials, financial, moral or otherwise). Clearly, most of these factors fall outside the schoolteacher's domain of responsibility. Yet they have to be considered as natural interactive forces in looking for solutions to the problems of the effectiveness of education in any context. The relationship between input and process factors and educational effectiveness can also be monitored through measuring the outcomes of the various interactions.

THE OPTIMAL-GOALS APPROACH

A common defining characteristic of schools is their goal-seeking nature. Physical, financial and human resources are generally organized for the pursuit of school or system-wide goals. Educational goals may be defined as the desired state of affairs that schools strive to achieve.

The goals-approach to educational effectiveness is based on the reality that, even with a multiplicity of values and expectations, there are basic intentions that educational

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organizations strive to achieve. Furthermore, since educational organizations are in the hands of a rational group of decision makers, such goals can be identified. In addition, these goals are few enough to be manageable and can be defined well enough to be understood. Given that the goals can be identified, it should be possible to plan the best management strategies for attaining them. Within this framework, the way to assess educational effectiveness would be to develop criteria for assessing how well the goals are being realized. Furthermore, appropriate standards can be set up on which performance can be measured and quality of education discerned.

Fundamentally, educational goals provide direction to school activities, focus attention on the mission of schools, serve as a rationale for organizing teaching and learning activities and constitute a standard of assessment for a programme. Goals also constitute a source of legitimacy for a school and justify its activities and its very existence to the public at large.

Likewise, goals can be functional for the individual pupil or staff member of the school. At the individual level, goals provide direction on one's studies or job and a rationale for schooling or working, serve as a motivation for personal goal attainment, provide a sense of psychological security, as well as acting as a source of identification and status for the employees and pupils (Steers 1977).

In order to be able to evaluate goal attainment, one would need to translate the official goals into operative goals and objectives. Operative goals represent what the school is actually trying to do. Operational objectives, on the other hand, are those measurable intentions for which there are agreed-upon criteria for evaluating the extent to which they can be attained.

Although educational goals appear simple to define and measure once they are clearly identified and standards set, caution needs to be exercised in using this approach. The goals approach can be dysfunctional when there is a means end inversion, placing too much emphasis on measurables at the expense of affective goals which are more difficult to measure. Also, goals and objectives when rigidly followed tend to overlook individual differences.

In addition, in many educational documents, goals are ambiguously stated. In such cases, Steers (1977) has suggested that a panel of well informed educators and key representatives of state bodies should deliberate in order to come to a consensus on what the outcomes of schooling should be.

Goals can also be unrealistic or overambitious, particularly when the right mix between resource input and organizational processes is not fully considered. Scriven (1967) therefore maintains that objectives themselves should be evaluated using logical analysis or empirical analysis to determine their worth and viability. Logical analysis concentrates on the cogency of arguments for setting the goals, the consequences of achieving the objectives and the congruency of the objectives with existing higher order values. Empirical analysis suggests that micro-scientific studies should be designed to determine how widespread a value position really is. Information gained from the logical and empirical analysis of programme objectives, compared against specified standards, would verify the worth or lack of worth of a fully described set of policy objectives.

THE SYSTEMATIC APPROACH

The systematic approach to educational effectiveness is a procedure involving step-by-step analysis of components that interact to bring about certain outcomes. Normally it involves a statement and explanation of desired goals/objectives, the activities considered vital for attaining them, establishing criteria and standards for appraising performance and demonstration by the client that they can apply the acquired knowledge and skills both in experimental and actual situations.

Contemporary theoreticians have found this theory to be useful in various ways. First, although most programme planners and implementers often aspire to attaining certain outcomes, in most cases they obtain both desired and undesired as well as unexpected results. The critical variables that interact to bring about the undesired and unintended outcomes might be identified and acted upon if systematic analysis is undertaken. Second, the systematic approach provides the opportunity for identifying promising practices and exploring the collective expertise represented in these segments so that they can be further developed and reinforced. Third, the approach provides an opportunity for studying associations, taxpayers, public officials, administrators, students, teachers, community agencies and other interested parties that have specific responsibility in the delivery of education services. Fourth, it provides for a sustained process of systematic input analysis, examination of projected alternative solutions, establishment of feedback mechanisms and stresses continuous progress and impact. Finally, the systematic approach provides an opportunity for adapting

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theory to real situations; educational practice is continuously reviewed and updated in order to meet the needs of the client.

EMPIRICAL STUDIES

Empirical studies on educational effectiveness reveal that most of the studies were conducted in Western countries and few have attempted to replicate or adapt the key variables and measures so as to meet the conditions of developing countries such as Tanzania (Adams and Ghen 1981; Ndabi 1985; Psacharopoulos and Loxley 1985; Daskin 1979; Heyneman and Loxley 1981). However, these are recent and quite embryonic compared to robust studies such as those of Coleman (1968 and 1975).

Educational production functions

At the heart of public education is the strong belief that schools should have a positive impact on those receiving education. Schools are therefore expected to provide training in basic literacy and computational skills and in subject areas that are regarded as essential for modernization and national development. Investment in education, therefore, is often made on the assumption that the quantity and quality of resources, staff, programmes and facilities that are made available to pupils from national, regional, local and international sources will facilitate the realization of such expectations.

Studies on educational production functions have often been concerned with the question of whether measurable differences in the characteristics of schools precede measurable differences in pupil outcomes. Research studies in this area concentrated on the impact of SES, race, and parallel differentials in staff, curricula and physical facilities. They have shown high correlations among some of these resources but regular correlativity posed difficult problems in analysis and interpretation of data as it is not a simple matter of cause and effect.

Second, there are serious questions regarding documentation of impact. It implies effect, and effect implies cause. A statistical relationship exists between school resources and some pupil performance criteria but does not necessarily imply that specific school resources directly influence pupil performance.

Third, the resources tapped in most studies are selected on an ad hoc and post hoc basis. Stress is placed on quantity or mere

presence over quality, or mode and degree of utilization. These are recognized as proxies for more important process variables that remain unmeasured.

Fourth, it is by no means clear that the variables measured actually tap those resources that make a difference in student outcome, which may be the qualitative rather than the quantitative aspects of the variables in question.

Fifth, in most studies of this kind, the unit of analysis is neither the student nor the classroom but the school or an entire school district. This means that the achievement of individual students is not related to their documented exposure to resources of a given kind within a school, but rather the combined achievement of all students in a school (or district) is associated with gross differences in the aggregate distribution of resources across schools or districts.

Despite pertinent criticisms on these major methodological limitations, to date production-function studies have tried to indicate ways in which expenditures may be paying off. One involves the numbers of teaching and specialized staff available to students. Studies show that the number of specialized staff, class sizes or teacher-pupil ratios have some independent bearing on aggregate achievement. Facilities themselves pay off only if the quality of staff is itself adequate and the resources are used adequately. Studies on selection effects (Spady 1976) show that if students with good school-achievement scores go into specialized college preparatory schools with superior libraries and laboratories, further such achievement may merely reflect the advantages carried over at the entrance point.

Hanushek's (1979) study further showed that neither hours of graduate work nor years of experience are independently related to gains in student achievement. What is important is the recency of teachers' latest educational experience. Involvement in periodically upgrading one's own education rather than collecting a terminal graduate degree or receiving no advanced training at all seems to be one key to effectiveness. Hence, treating teacher experience as a simple linear phenomenon is a conspicuous weakness in this line of inquiry.

The final question was related to whether given expenditure levels had any bearing on student achievement. Ribich (1968) presented an index of nine separate family socio-economic indicators. He isolated the lowest SES quantile of Project TALENT ninth graders who had subsequently completed twelfth grade. His major independent variable was expenditure per pupil within

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districts. He found that in America, for the sample taken as a whole, increased expenditure was definitely associated with higher academic aptitude, up to a level of \$400. Beyond that point, there was little association. There was also a marked increase in student non-academic technical knowledge until expenditure reached the \$500 level; then a similar ceiling was reached. The relationships seem to be positive but non-linear. For the low SES students, at least, there was a definite threshold level beyond which increased expenditure had no visible payoff. Within regions, even the non-linear patterns began to break down, especially in cities of about 250,000 people. Since expenditure reflected salaries and salaries reflected formal teacher qualifications and experience, these figures suggested that the benefits of teacher experience began to taper off too. Furthermore, these patterns attenuated when region and city were accounted for, and they might simply reflect regional and urban expenditure differences. This might mean that even low SES students from metropolitan areas achieved more not only because their communities spent more on school, but also because the out-of-school learning opportunities in those areas were more extensive, complex and stimulating than in smaller towns and in rural areas. These data might also suggest that, beyond a certain point, schools could not effectively utilize all of the available non-human resources. Ribich (1968) argues that mixing students of different SES might benefit lower SES students. This is not due to the abundance of formal school resources available but rather to the higher academic aspirations of their classmates and the more positive learning atmosphere they generated, and to the fact that community environments affect achievement independently of their demographic and social characteristics. The attitude of the community towards education tends to permeate the operation of the school system so that school and community expectations reinforce each other. This attitude, rather than the expenditures that reflect it, might be an important variable in student achievement.

Most of these ambiguities may, however, apply to developed countries only. Heyneman and Loxley (1981) maintain that:

However ambiguous the efficacy of school physical facilities and teachers may appear as a result of some surveys conducted in high income countries, no such ambiguity exists in low-income countries. The proportion of the explained achievement variance due to schools and teachers... is 90 percent in India, 80 percent in Columbia and 81 percent in Thailand and Brazil. This compares with 22 percent in Austria, 26 percent in Scotland, and 27 percent in Sweden (p.21).

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The data suggest that the poorer the country the greater the impact of school and teacher quality on student achievement. In addition, variables that have been proved to explain most of the variance in developed countries might have different effects when applied to developing countries. Therefore, researchers in developing countries need to study a combination of locally obtained information and retest key variables that have been proved to hold elsewhere in building a suitable framework for studying educational production functions in developing countries, including Tanzania.

Hanushek (1979) has also added that educational production functions should include studies of the influence of a child's accumulated capital through interactions with his peers. He maintains that student peer groups create conditions within the classroom or school that affect the teacher's ability to use his own skill and normative resources efficiently. Spady (1976) has therefore suggested future research work based on an examination of actual social processes, including teaching styles; the mechanisms governing rewards and sanctions for academic effort within the school; the structure of both classroom and extra-curricular work; peer relationships; use of longitudinal and experimental designs; observations as a data-gathering mechanism; and more explicit documentation of student exposure to and utilization of both human and material resources. There is also a need to broaden the range of significant output variable measures of cognitive achievement and school aspirations to include affective areas and meaningful employment.

The home environment and school achievement

There have been several distinct approaches to the study of home environment. To a large extent these differences in approach reflect the different emphasis of each social-science discipline (administration, psychology, sociology, economics, political science, etc.) in its formulation of the nature and problems of the home environment as it relates to school achievement.

One school suggests that rather than focusing on the resources potentially available to parents for educating their children, they should make a detailed study of what parents do to facilitate their children's cognitive growth. According to Kilinowski and Sloane (1981), the motivation for developing a methodology concerned with family processes was two-fold:

First, status characteristics accounted for only a small proportion (about 10) of the variation in children's

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educational achievement. There was clearly a great deal of variation in the educational achievement of children within each status level. Secondly, status variables could not give specific clues as to what parents and schools might do to improve the situation for any child (Bloom 1980). It was hoped the environmental process variables would yield such specific information and thereby serve as a basis for intervention programs that were in the interest of both parents and children (p.86).

The implication is that specific processes occurring within the larger network of familiar interactions could be identified as being relevant to the development of particular individual characteristics. The task is to identify and clarify the form, intensity, and duration of each of these sub-environments as they relate to such characteristics as school achievement, the need for achievement and self-esteem.

Dave (1963) started with the idea that specific aspects of the home environment pressed for the academic achievement of the child. On the basis of his theoretical framework and a review of literature on home environment, he identified six process variables which he thought could explain differences in school achievement. Those were:

1. The parental press for achievement, i.e. the parents' aspirations for the child and their interest in, knowledge of, and standards for reward for the child's educational achievement.
2. Language models, i.e. the quality of language used by the parents and taught either directly or indirectly to the child.
3. Academic guidance, i.e. the availability and quality of help provided by the home for school-related tasks.
4. Intellectuality, i.e. the intellectual interests and activities of the family. More specifically, the types of reading done, the nature and extent of conversations about ideas, and the nature of the intellectual models parents provide.
5. Activity in the home, i.e. the degree to which parents stimulate and encourage their children to explore the larger environment.
6. Work habits, i.e. the degree of structure and routine in home management and the emphasis on educational activities over other pleasurable things.

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Each of the six variables was broken down into more specific process characteristics which would be measured along a nine-point scale with data collected in a semi-structured interview with the child's mother. This method was based on the assumption that accurate and reliable information on the many subtle home interactions could not be well tapped by questionnaires or tests as there is no possibility of using probe questions when answers of respondents are not clear. Dave found that correlation between the overall index of the home educational environment and the fourth and fifth grade achievement tests was 0.80. Correlations of the six process variables were highest with tests of word knowledge and reading and lowest with tests of arithmetic, computation and spelling. The results suggest that the home environment has its greatest influence on the child's language development but is less influential on the specific skills taught in school (Bloom 1980).

These findings have been replicated in various studies, such as the International Educational Assessment ones, and Dobson and Swafford (1980) confirm the same for Russia. But the strong relationship between a child's home environment and his achievement in school is discouraging if nothing can be done to alter this pattern for those children who are reared in deprived or ineffective environments.

Attempts to boost the low SES child's chances of success in school by providing educational experiences in a school setting for a few hours a day, a few months a year, sometimes called the "inoculation" approach, have proved largely unsuccessful in overcoming the deficiencies many children have when starting school. The most consistent results have been that the small gains made by experimental groups tended to "wash out" after the intervention was terminated and those who gained and retained the least were those from the most deprived family backgrounds (Bronfenbrenner 1974). For these children, the few hours of instruction did not compensate for the lack of cognitive experiences available to children from more enriched environments. What do seem more effective are the home-based programmes which focus on the educational environment in the home, educational activities in the home, and parental interest and involvement in the child's educational activities. Bronfenbrenner found that "Experimental groups in most home based programs not only made substantial initial gain, but these gains increased and continued to hold up rather well three to four years after intervention had been discontinued" (p.117). If changes have been incorporated into the home as a result of these programmes, the "treatment" is deemed to continue after the programme is terminated. Thus the earlier the home environment is

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improved, the better the chances of effectiveness, although Smith (1968) found that parent intervention can still be effective in later years (sixth grade).

Gordon (1968) has demonstrated significant gains in measures of home environment after the implementation of home-based programmes. Normally the programmes took the form of parent education, home visits, and combinations of home and group experiences (Gilmer *et al.* 1970; Gordon 1972; Bronfenbrenner 1974; Radin 1969, 1972.)

The degree of parental involvement as cited by Kilinowski and Sloane (1981) was repeatedly found to be the crucial factor in the success of home intervention programmes (Schaefer and Aaronson 1972; Levenstein 1970; Karnes 1969). Parental involvement refers to parents' interests, motivation and engagement in providing experiences in the home that are conducive to the child's achievement in school. Herber *et al.* (1972) and Skeels (1966) trained surrogate parents to provide appropriate learning experiences in institutional settings. These results provided further support for the theory that the quality of involvement and interaction with a caring adult is important in improving a child's achievement. These studies also show that parents can be encouraged to change their attitudes so that they can engage in more educationally relevant activities with their children.

Obviously, this is a dream for it suggests that all people should be middle class. Peasants cannot provide that supportive environment, notwithstanding interventions. There has to be some compensatory mechanism for this deficiency.

School climate and school achievement

The most thorough study on this topic was carried out by Brookover *et al.* (1978) who maintain that the school academic climate encompasses a composite of variables that relate to the norms of the social system and the expectations held for various members as perceived by and communicated to members of the group. Brookover *et al.* examined a variety of school-level climate variables and mean school achievement in a random sample of Michigan (USA) elementary schools. Two hypotheses were set. First, they hypothesized that a school's academic norms, expectations and beliefs are not synonymous with the social composition of its student body, and therefore climate is not adequately measured by composition variables. Second, the

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differences in achievement between schools that are normally attributed to composition can be attributed to climate variables.

Two school-composition variables -- mean socio-economic status and ethnic composition -- were used in this study. The outcomes were a result of objective tests in reading and writing administered annually to all fourth-grade students in Michigan public schools.

The dependent variable was the mean achievement of students in the fourth grade in each of the elementary schools as calculated from state school level achievement data obtained from the Michigan Department of Education. Since it was clear that the combination of school-climate variables contributed significantly to the explanation of variance in mean school achievement, the individual contribution of each of the several climate variables to mean achievement was examined. The variables were entered in the order of their partial correlation with mean achievement after leaving out previously entered variables. In all three samples, the students' sense of academic futility clearly contributed more than any of the other climate variables. Student and teacher variables concerned with the present evaluations and expectations which teachers held for the students, and the students' perception of present evaluations and expectations also contributed significantly in the state-wide sample. These three variables explained more than 68 percent of the between-school variance in mean achievement.

Classroom observation in the sampled schools revealed the following characteristics in addition to the school-climate differences previously identified. First, teachers in higher achieving schools spent a larger proportion of class time in instruction due to their greater concern for and commitment to their students' achievement. The commitment was also expressed by other forms of interaction with their students. Second, low SES schools achieving at lower level tended to write off a larger proportion of their student body. Students for whom low achievement ceilings were established were grouped together. Third, those schools with higher achievement were likely to use more instructional activities in which groups of students competed as teams rather than individually. Fourth, there were differences in teacher and student reinforcement practices in higher achieving and lower achieving schools. In higher achieving schools teachers made immediate corrections and provided academic back-up when students failed to give correct responses. Also, positive reinforcement was generally given immediately to students who gave correct answers. However, in lower achieving schools there were numerous instances where students were neither

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positively nor negatively reinforced for their performance. There were also instances of confusion in reinforcement, in which students got the same kind of reinforcement for wrong answers as they got for right answers. These differences could also contribute to differences in achievement between schools.

The implications from these findings in studies of school effectiveness are best summarized by Bloom (1980) who maintains that,

... many of the individual differences in school learning are man-made and accidental rather than fixed in the individual at the time of conception.... What any person in the world can learn, almost all persons can learn if provided with the appropriate prior and current conditions of learning (p.132).

He emphasized that there were three basic constructs about students and their learning capabilities. First, there were good learners and poor learners. Second, there are faster and slower learners, all needing different amounts of time and help. Third, most students become very similar with regard to learning ability, rate of learning and motivation for further learning when provided with favourable learning conditions. One should also add that since it is the teacher who performs a key role in providing such conditions, he needs to be well motivated in order to enhance good performance.

SYNTHESIS OF CRITERIA FOR EFFECTIVENESS

The major problem when one is examining measures of the effectiveness of primary-education is the complexity and pervasiveness of the issues surrounding such measures. Generally, three major factors have been identified as contributing to effective school learning (Brookover *et al.* 1978) These are:

1. The ideology of the school in terms of beliefs and attitudes of the professional staff regarding students' abilities to achieve the objectives and staff norms and standards of excellence.
2. The organizational structure of the school and its emphasis on role definition, expectations and performance and effective leadership; and reward structures and systems that are centred on achievement of students and staff.
3. Instructional practices which are closely associated with teacher efficacy in the actual delivery of instruction by staff, which is in turn related to availability of

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instructional resources and the ideology and organizational aspects of the school mentioned above, all of which operate within a given political economy.

These three clusters of factors and their various components combine in a complex way to produce better schooling outcomes. Thus, in the Tanzanian situation, a comprehensive study, which is an almost impossible task, would be required to pull together diverse skills, research designs and data analyses.

Associated with this complexity of the concept of school effectiveness is the question of what are the criteria for schooling effectiveness in Tanzania and how is the concept of quality education defined there. Acceptable and viable criteria need to be stable and relevant over time and within a defined area, acceptable to the community of educators and related professionals, politicians and the common man. For the purposes of this study, a workshop of educators decided that educational effectiveness should be perceived as a continuum of elements which are not mutually exclusive. These should include performance in the basic skills (3Rs), attitudinal changes, production of economic goods, school cleanliness, cultural activities, school administration, and relations between students, teachers and the community around the school. Ultimately, Beeby (1983), who is one of the earliest champions of the concept of quality of education, suggests that all these should be seen in the context of the ease with which pupils gain access to the education system, remain in it, are pleased with school facilities, courses and the teachers, progress from one grade to another, and finally fit into the wider society when they leave school.

On the other hand, the debate as to whether there can be universally acceptable criteria and standards for educational effectiveness and quality is only academic and rhetorical. There is no society in which it has been accepted that children go to school for seven years and only learn things other than reading, writing and arithmetic. These other things, such as cultural activities, self-reliance and attitudinal changes, are only complementaries. A classical case in point happened in Kenya in May 1985 when a group of teenagers came back from China after two years of acrobatic training. Amidst appreciation of their acrobatic artistry, there was public uproar and appeals that the children should go back to school to get a "proper education" -- to which the Government conceded. These attitudes would apply to every other country in the region. The 3Rs are central.

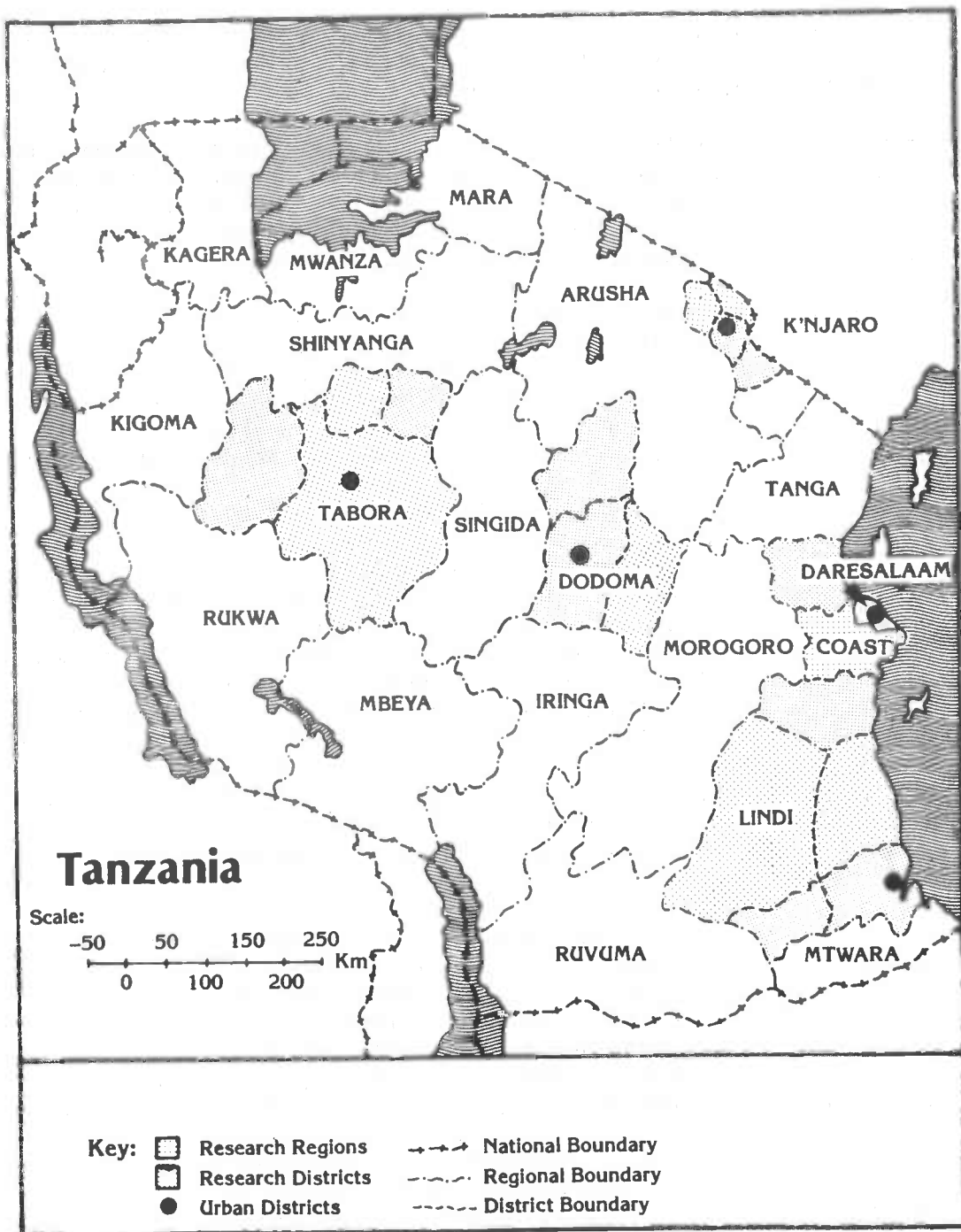


Figure 6. Map showing the research regions and districts.

Chapter 4

RESEARCH METHODS AND SAMPLE CHARACTERISTICS

The survey approach was used to study factors influencing the quality of primary education in Tanzania. This approach was preferred because it enables one to make a search for tentative causal factors by collection and use of both quantitative and qualitative data.

THE PRIMARY-SCHOOL POPULATION

The primary-school population in Tanzania at 31 January 1981, was 3,569,586 enrolled in 9,988 primary schools (Ministry of Education, 1981).

THE STUDY SAMPLE

The study was conducted in five Regions which were deliberately selected to give both lower-, middle- and upper-level characteristics of educational achievement. These regions were Coast, Dodoma, Kilimanjaro, Lindi, and Tabora (see Figure 6).

The study was confined to three Districts in each Region, one urban and two rural. The established legal demarcations for townships, municipalities, cities and rural districts were used as the official boundaries of Districts for this study. In cases where there were more than two rural Districts in one Region, a choice had to take into consideration diversity in terms of ethnic mix, quality of life, level of development and school performance so that all extremes of the continuum were represented. The following criteria were used to select the schools from the 15 Districts in which the study was conducted.

SELECTION OF SCHOOLS

All schools in the chosen Districts were categorized into three sizes: large, medium and small. Large schools were those with an enrolment of 601 or more, medium 350 - 600, and small schools were those with less than 350 pupils.

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Then, in each group, schools were ranked for quality by taking into consideration the following variables. First, for each category of school (large, medium and small), one school of high quality and one of low quality was chosen. A high-quality school was one which ranked first when a composite score for the following factors was obtained using informed judges in the District:

- (a) Largest percentage of pupils selected for public secondary schools in the past 3 - 5 years;
- (b) High production in economic ventures run by the school;
- (c) Good general impression in the following areas:
 - (i) cleanliness of the school surroundings
 - (ii) performance in cultural activities
 - (iii) good school administration
 - (iv) high discipline
 - (v) good school-community relations.

Available records and a five-point scale (5 -- excellent, 4 -- very good, 3 -- good, 2 -- fair, and 1 -- poor) were used to arrive at a decision in points (c) i - v, above. The school at the bottom of each category was taken to represent low-quality schools. The R.E.O. and the D.E.O.s for the selected districts and the primary-school inspectors had to jointly identify the schools.

All selected schools were to have done the Standard Seven Leaving Examination for the past five years, but a minimum of three years was also accepted, especially for the small schools. In addition, there had to be some geographical dispersion in the distribution of the selected schools.

DESIGN AND PROCEDURE

The data-needs model

Figure 1 was used to map out the domain and provide an outline for the study. Research tasks and questions consistent with the conceptual framework were set to guide investigation into the problem. Because of the very purpose and nature of the study, no specific hypotheses were set. Basically it was a training and exploratory study which would form a basis for development of hypotheses. Both the analysis of the data and the field investigations were expected to rekindle research interests and awareness among educators in Tanzania and elsewhere and to

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provide a data-base for decision-making on how to improve the quality of education under the current universalization of primary education.

Data collection involved review of primary- and secondary-school documents. Other procedures for data collection included interviews with key administrators, inventories, checklists for schools and offices, short questionnaires for parents and school leavers, observation schedules for classroom teaching, achievement tests for general and local knowledge and an ability-test battery.

All together twelve measures were developed in the following order:

- (a) Ministry data
- (b) Regional data
- (c) School data
- (d) Student data
- (e) General knowledge test
- (f) Classroom observation
- (g) Students completing Standard Seven
- (h) Students selected for secondary education,
- (i) Mathematics test
- (j) English test
- (k) Verbal test and
- (l) Numerical test.

Apart from these twelve measures, two interview schedules for educational officials were developed.

Pilot testing

The main task during this period was that of validating all instruments and translating some into Swahili. Instruments were pilot tested in one primary school in Dar es Salaam. This was done in order to get first-hand impressions of any difficulties that might arise in the actual study. The two measures (student background data and general knowledge) were administered to one Standard IV and one Standard VI stream. Experience gained during the administration of the two instruments, and subsequent in-depth item analysis, showed that a majority of Standard IV pupils were not literate enough to provide intelligible information. Since background data were vital for predicting performance in the tests, a decision was made to exclude Standard IV pupils from the study sample.

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Standard VI pupils demonstrated higher comprehension of information sought in these measures. This class, which is closest to Standard VII but has not been highly influenced by coaching practices which sometimes affect performance, was found to be most suitable for this study as it would provide a more realistic picture of the quality of primary education in Tanzania.

It was also found after the pilot study that it would be very difficult to ascertain whether the students were providing right responses or not, particularly on items requiring them to name their local leaders and local characteristics. So only ten items requiring knowledge of a more general nature (e.g. the date of independence) were retained alongside the 40 other items from past Standard Seven Leaving Examination papers on general knowledge.

Administration of instruments

The principal researchers, in collaboration with the R.E.O.s and some research assistants, worked as a team in administering the instruments. Education officials asked schools engaged in this study to postpone their mid-term holidays, at least for Standard VI pupils and their teachers, until the study was complete.

Administration of the instruments was preceded by informal training of the principal researchers followed by formal training of the research assistants. Training of the principal researchers was done in committee meetings where issues on conceptualization, design or instrumentation were discussed. The distribution of work was made such that in each Region one principal researcher would join the R.E.O. and use three research assistants assigned the task of collecting school data, administering the tests to pupils, making class observations and gathering data on the treatment of pupils completing Standard VII. Research assistants reported to the R.E.O to collect letters of introduction before proceeding to the schools. Each research assistant was assigned two schools in which he/she was to collect data.

Data analysis

The analysis included tabulation and computation of averages for most of the quantitative data obtained from close-ended items in Measure I-IV and VI-VIII. Qualitative information from the open-ended items of the same measures, as well as interviews, was subjected to content analysis in order to extract relevant data

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that would help describe some of the basic factors and variables that influence the quality of primary education in Tanzania, and provide explication of some quantitative data. More vigorous analyses, such as analysis of variance and regression analysis, were done by computer in Germany.

It is now common practice that studies of school effectiveness employing a large number of correlated predictor variables, are grouped, or blocked, as a preliminary step to make the data easier to analyse and the results easier to interpret.

Therefore variables were first categorized in terms of their conceptual similarity, e.g. home factors formed one group while school factors formed another. The predictor variables in the study were organized into four groups. Variables describing the pupil (sex, year of beginning school, pre-school experience, Region of birth, occupational preference, expected occupation, and training preference -- first and second choice) were assigned to the pupil-characteristics block. The location of the school (urban or rural), quality (high or low) and school size (large, medium or small) were placed under the school-characteristics block. Variables relating to the pupil's family (living with parents -- mother, father or both; number of wives; family structure; educational level of the father, mother, brother and sister; occupation of the family; and type of assets owned by family members) were assigned to the family block. A composite of individual and classroom blocks was created to accommodate variables that relate partly to individuals and partly to school practices, such as distance from school, eating before going to school, reasons for attending school, subject preferences, general assessment of teachers and proposals for further education.

In the first stage, a series of regression analyses was run by including only variables assigned to a certain block as regressor variables. By following this procedure, variables within a given block would not affect the inclusion or exclusion of variables in other blocks. Five "key" dependent variables were selected for the regression. These represent the five standardized ability tests administered to Standard VI students.

Each selected dependent variable was regressed separately in a step-wise fashion on the variables in each block. To be retained within a block, a regressor variable had to be a significant predictor (at the 0.05 level) of any of the "key" variables.

In the second stage of screening, a single set of predictor variables for each dependent variable was selected. Then step-

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wise regression was run on all predictor variables that were retained from the first stage of analysis regardless of block. All predictor variables of specific dependent variables were eliminated if they did not contribute significantly to the prediction of that dependent variable. So at this stage a unique set of predictor variables was associated with each dependent variable to estimate shares of variance attributable to each block.

After this initial analysis and ranking of schools by subjects and totals, the schools were dichotomized into high, middle, and low performing groups on the composite score. Then the question was asked, why are some schools performing well and some not so well? The data were re-analysed to delineate the characteristics distinguishing the top ten and bottom ten schools. Follow-up visits to the top ten and bottom ten schools were made in order to do micro-analyses and probe into the reasons for the given situation. The results of both levels of analysis are presented in Chapter 5.

SAMPLE CHARACTERISTICS

Tables 7-17 give sample characteristics. The enrolment by sex is evenly distributed indicating that universalization of primary education is not bypassing the female group. The majority of subjects were born in 1966 (Table 8), giving a modal age of 15 years with a range of 13 (problems of reported, unverified age data notwithstanding). Some children reported having started schooling in 1970, suggesting that they had repeated five times in their school lives.

Surprisingly, the number of subjects with pre-primary education was quite high with 1,310 children (38.8 percent) reporting having had some sort of formal pre-school education. Thus only 1,667 (49.1 percent) said they had never attended pre-school and 417 (12.3 percent) did not indicate either way. The proportion of omits and spoilt cases was significantly high, suggesting that even at Standard VI level, understanding of questionnaires and speed of completing them may be very low. Only 63.6 percent of the children were at school in their home Regions, suggesting that there is great mobility across Districts and Regions. The children walk up to 10 kilometres to get to school, and the majority of them live with both their parents in monogamous families. The majority of the pupils ate nothing from morning until their return home in the afternoon.

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Table 7. Distribution of students by sex

	Male	Female	Missing information
No.	1,658	1,576	161
%	49	46	5

Table 8. Distribution of students by age

Year of birth															Missing information
	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	
No.	1	14	31	72	154	375	528	759	612	299	69	8	4	1	464
%	0.0	0.4	0.9	2.2	4.5	11.0	15.6	22.4	18.0	8.8	2.0	0.2	0.1	0.0	13.7

Table 9. Distribution of students by year of beginning school

Year of beginning								Missing information
	1970	1971	1972	1973	1974	1975	1976	
No.	2	2	19	11	85	214	2,639	423
%	0.1	0.1	0.6	0.3	2.5	6.3	77.7	12.5

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Table 10. Distribution of subjects by Region of birth

Region	No. of subjects	Percentage
Arusha	15	0.4
Coast	279	8.2
Dar es Salaam	170	5.2
Dodoma	575	16.9
Iringa	29	0.9
Kagera	22	0.6
Kigoma	32	0.9
Kilimanjaro	573	16.9
Lindi	482	14.2
Mara	33	1.0
Mbeya	32	0.9
Morogoro	48	1.4
Mtwara	84	2.5
Mwanza	45	1.3
Rukwa	15	0.4
Ruvuma	24	0.7
Shinyanga	23	0.7
Singida	30	0.9
Tabora	353	10.4
Tanga	59	1.7
Outside Tanzania mainland	38	1.4
Not indicated	404	11.9

Table 11. Distance of home from school (km)

	0	1	2	3	4	5	6	7	8	9	10	11	12	Missing data
No.	656	1,365	467	166	70	74	23	6	22	6	24	16	12	488
%	19.3	40.2	13.8	4.9	2.1	2.2	0.7	0.2	0.6	0.6	0.7	0.5	0.4	14.4

Table 12. Number of subjects living with parents

	None of the parents	Father only	Mother only	Both	Missing data
No.	104	261	411	2,000	619
%	3.1	7.7	12.1	58.9	18.2

Table 13. Number of wives in the family

	None	1	2	3	4	5	6	8	Missing information
No.	40	2,053	492	131	56	13	2	2	606
%	1.2	60.5	14.5	3.9	1.6	0.4	0.1	0.1	17.8

Table 14. Number of subjects having breakfast

Nothing	Tea	Tea and bread	Porridge	Fruits	Others	Missing information
960	No. 547	718	471	40	259	400
28.3	% 16.1	21.1	13.9	1.2	7.6	11.8

Table 15 gives the family structure of the subjects. The majority of the pupils had either one older brother or sister and one younger brother or sister, suggesting that their families were relatively small. The reported educational levels of key family members indicate systematic bias in favour of male members for access to education and especially higher education. Fathers and brothers have greater access to university education than mothers and sisters. Likewise, fewer male members of the family are without work, more of them are in commerce and more of the female members find themselves in menial jobs such as farming, cattle grazing, and surprisingly, fish-mongering.

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Table 15 Family structure

Member	Size									Missing information
	0	1	2	3	4	5	6	7	8	
Older brothers	318 (9.4)	775 (22.8)	573 (16.9)	334 (9.8)	146 (4.3)	67 (2.0)	78 (2.3)	3 (0.1)		1,101 (32.4)
Older sisters	339 (10.0)	678 (20.0)	609 (17.9)	322 (9.5)	131 (4.0)	60 (1.8)	56 (1.6)	4 (0.1)		1,190 (35.1)
Younger brothers	277 (8.2)	685 (20.2)	638 (18.8)	373 (11.0)	162 (4.8)	64 (1.9)	61 (1.8)	1 (0.0)		1,134 (33.4)
Younger sisters	409 (12.0)	657 (19.4)	410 (12.1)	305 (9.0)	136 (4.0)	45 (1.3)	24 (0.7)	2 (0.1)	1 (0.0)	1,406 (41.4)
Married brothers	531 (15.6)	489 (14.4)	252 (7.4)	111 (3.5)	35 (1.0)	14 (0.4)	13 (0.4)	3 (0.1)	1 (0.0)	1,946 (57.3)
Married sisters	504 (14.8)	522 (16.3)	261 (7.7)	100 (2.9)	44 (1.3)	12 (0.4)	9 (0.3)	-	-	1,913 (56.3)

Note: Percentages in brackets

Table 16 Educational level of family members

Member	No formal education	Primary	Secondary	University	Missing information
Father	181 (5.3)	1,488 (43.8)	343 (10.1)	130 (3.8)	1,253 (36.9)
Mother	222 (6.5)	2,165 (37.3)	208 (6.1)	32 (0.9)	1,668 (49.1)
Brother	187 (5.5)	1,162 (34.2)	436 (12.6)	86 (2.5)	1,524 (44.9)
Sister	212 (6.2)	144 (32.8)	376 (11.1)	40 (1.2)	1,655 (48.7)

Note: Percentages in brackets

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Table 17. Occupations of family members

Member	Spoilt	No work	Farmer	Herdsman	Fisherman	Commerce	Government employee	Did not attempt
Father	101 (3.0)	136 (4.0)	1,520 (44.8)	30 (0.9)	44 (1.3)	521 (15.3)	363 (10.7)	680 (20.0)
Mother	97 (2.9)	242 (7.1)	1,892 (55.7)	42 (1.2)	63 (1.9)	219 (6.5)	98 (2.9)	742 (21.9)
Brother	192 (5.7)	184 (5.4)	572 (16.8)	18 (0.5)	43 (1.8)	391 (11.5)	357 (10.5)	1,638 (48.2)
Sister	475 (5.2)	249 (7.3)	784 (23.1)	20 (0.6)	28 (0.8)	261 (7.7)	246 (7.2)	1,632 (48.1)

Note: Percentages in brackets.

Chapter 5

FINDINGS AND DISCUSSION

This chapter is based on both documentary analyses and field data and provides a description of the factors and variables affecting the quality of primary education in Tanzania.

TANZANIAN POLICY-FORMULATION STYLE

The policy-formulation style in Tanzania has been described as militant revolutionary. The call from ex-President Mwalimu Julius Nyerere was "to run while others walk". This style applied to all spheres of life, such as social, political, economic and educational policy matters. Most major policy pronouncements in Tanzania were associated with Mwalimu, who was supposed to be the source of wisdom and the one who gave the policy drive, blessings and legitimacy. It did not matter who initiated and moved the policy to the centre, the credit always went to Mwalimu -- and, hopefully, the blame too.

Characteristically, the policy seemed to come from above, shrouded by secrecy, even if it was a social policy deserving of public debate. The announcement of a policy came to the public with a great deal of political pressure and public drama that did not allow for debate and opposition. Included in the fanfare were orchestrated processions, acceptance and allegiance speeches and repeated radio recitations without any elaboration or correct interpretations. In this kind of situation, the implementers (technocrats), understandably in a state of high anxiety, examined the policies with fear as they might have been "swept away by the revolution" if seen not to be overtly supportive. Since delays in implementing the policy direction may have been construed as opposition to it, haphazard implementation characterized many policies.

Hyden (1979) observed that in Tanzania there is a deliberate refusal to use rational analyses of the adequacy of existing resource potential as a precondition for making policy. He said that in Tanzania, "policy decision is made under dramatic conditions to produce a sense of rapid advance". Under these

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circumstances, the quality of the policy and the implementation strategies tend to suffer due to resource limitations and a high level of anxiety, including fears of losing one's job (hence the rush). The regularity and pattern of change in key personnel of concerned ministries underscore the reality of this fear when an innovation is being implemented.

The pronouncements of the policies Education for Self-Reliance and the Musoma Resolutions are clear cases in point. In the case of the former, the policy was preceded by a very important national policy decision to go "socialist" as stipulated in The Arusha Declaration (Nyerere, 1967a). As a corollary of this political move, Education for Self Reliance (Nyerere 1967b) was announced as a political direction. The statement was a publication of the President and was attributed to him personally. It was a combination of Maoism and Deweyism, emphasizing classroom learning and practical application of classroom ideas in performing menial jobs at school in order to enhance affiliation with the peasantry. The President then spent many months traveling all over the country politicizing and sometimes intimidating educators and teachers to accept the new educational philosophy. This is vividly reflected in his speeches (Omari 1980). Instead of time being spent on analysing the technical aspects of the policy statement so as to give it technical legitimacy, political platitudes and cliches took precedence.

Immediately after the policy pronouncement, a meeting of all senior educators was convened to deliberate on the new policy thrusts and their implications. During that meeting speeches by the political elite (Kawawa 1967) made it clear that there was no room for debate. The task was that of implementing the policy.

As a result of all the rush and political pressure, the policy statement was reduced to a simple equation: Education for Self-Reliance = Shamba and manual work.

Ndunguru (1976), a senior educator, laments this state of affairs, pointing out that the important aspects of the Education for Self-Reliance Policy, which are the creation of stable cognitive and affective pillars through solid instructional strategies, were completely neglected. This misinterpretation of the policy still prevails, as can be seen from Table 18 summarizing current educational officials' and teachers' views of the meaning of Education for Self-Reliance (ESR).

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Table 18. Educational officials' and teachers' interpretations of ESR

Educational officials	Experience	Interpretation by teachers	Frequency
Practising modern agriculture, livestock, poultry keeping and beekeeping	29	Farming, shamba work, gardening, animal husbandry, poultry keeping and beekeeping	389
Petty business -- selling firewood, charcoal, running a shop or a canteen	14	Petty business -- running a canteen, school shop, selling cakes, buns, soft drinks, firewood, charcoal, sand, fishing and running a milling machine	164
Establishment of small-scale industries, engagement in various crafts and carpentry	16	Carving and handicrafts, shoe-making and repairing, carpentry, brick-making, masonry, woodwork and welding	144
Domestic science, cookery, embroidery and dressmaking	11	Handicrafts, dressing, art, hair-dressing, drama, music, singing troupes, pottery, tie and dye	105
Cleaning school surroundings	10	Dressmaking, weaving, needlework, sewing, embroidery and cookery	99

Another with a high frequency of mention was small-scale manufacturing (envelopes and booklet binding (17))

As a result of this misinterpretation, schools have created rudimentary farms, and indeed they were ordered by anxious officials to make sure that each pupil had two hectares -- which, if really implemented would require more land than the entire area of Tanzania. Yet no primary school meets 25 percent of the cost of its upkeep through ESR activities. On average, each pupil produces goods and services worth TSh 6 (US\$ 0.35) per annum (calculated from 1980 - 1982 figures and given in the Budget Speech by the Minister of Education). Since this is all that results after a full year's toil in the scorching tropical sun, it is more practical to ask parents to pay the TSh 6, save the pupils from such drudgery and allow them to spend their time more usefully on other school activities. So long as output is so little and there is no useful learning associated with manual work when it is done using primitive and conventional ways, these activities will always remain meaningless to pupils, hence the need for coercion and corporal punishment to ensure that they are carried out.

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Currently primary-school instruction has remained rudimentary and authoritarian. The school farms are dilapidated and observers have the courage to proclaim "End of Education for Self Reliance in Tanzania" (King 1984). King was concerned, however, with the aspect of schools producing goods to meet some of their upkeep costs.

Amazingly, 20 years after the enunciation of the policy, educators and policy-makers are still lamenting the lack of proper interpretation of ESR.

In future instead of relying on intensive dramatization, processions and an unconsidered plunge into implementation of new educational policy, systematic education, re-interpretation and critical analysis might lead to implementation strategies with more far reaching effects.

The Musoma Resolutions of 1974 were similarly conceived, introduced and implemented. The policy statement was made after a marathon meeting of the TANU National Executive Committee (whose agenda was confidential) in the small town of Musoma, which is also the home of the ex-President. The policy statement directed that the University should admit only those workers and peasants who had one year of military training and two years of work experience after their senior secondary education. It also directed that primary education should be universalized in three years and that all formal examination (ambush type) should be abolished and continuous assessments instituted. Again the pronouncements were accompanied by drama and political fanfare and pressure to the extent that there was hardly any planning for the manner of implementing the resolutions. The technocrats had to act quickly, otherwise they would be branded reactionaries and risk their jobs.

Universal Primary Education (UPE) which is a component of the Musoma Resolutions, was implemented with a great deal of drama but without due consideration of quality. As a result, classes were started under trees or in the open air (Omari *et al.* 1983), class size almost doubled and there was accelerated enrolment without corresponding increases in the production of teachers, equipment, and learning materials.

The policy, as most concerned educators and informed community members have lamented, resulted in universal mediocrity. This assertion is well supported by data on pupils' performance in the tests, especially mathematics and English.

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Visits to schools during the survey also revealed that a majority of classrooms were without desks and as a result pupils were using either their laps or someone else's back to write on, a practice that had an adverse effect on the quality of pupils' work, especially handwriting. Nyerere (1985) lamented this pathetic situation saying children went to schools carrying their own stools.* In other schools pupils sat on mud or cement blocks and in buildings whose walls were made of wood and mud which in turn provided a very unfavourable climate for learning. Indeed many buildings were on the verge of collapse.

Successful implementation of educational policies requires a stable team of competent and committed bureaucrats to be in positions of power. In the next section we present information and data on the stability of staff in positions of power.

CHANGES IN KEY POSITIONS IN THE MINISTRY OF EDUCATION

Table 19 gives an indication of the regularity of staff turnover in key positions in the Ministry of Education (Figure 7). It is incredible that there should be such frequent changes in key positions in a Ministry in a one-party state. For instance, the average number of years that a Minister has stayed in the Ministry is 2.9 years; the average stay for the chief technocrats (Principal Secretary and the Commissioner) are 2.4 and 2.9 years respectively. The periods for the directors of primary education, secondary education and the Institute of Education are 3.3, 3.3 and 3.6 respectively. Given that these are the most relevant positions for implementation of any educational innovation, one wonders if any of them had time to think or implement any of the innovations which the country has fumbled with over the last two decades. Oddly enough, most of the changes occurred during major political or administrative events such as elections (which are at five-year intervals), the Arusha Declaration (1967), and administrative decentralization (1972).

Babu (1984), who had become a popular Union Minister for Economic Planning but later lost favour after experiencing disillusionment with the way things were going, gave some reflections on these oscillations in one-party state administration when he said:

*Daily Nation 6 May 1985.

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...the one-party rule has ended in becoming one person rule (everywhere) with all the horrors that this entails. The person in power, as he or she vegetates at the commanding heights of authority, step by step surrounds him or herself with a crowd of harmless, often compromised mediocrities whose allegiance is exclusively and personally to him or her and not to the people as a whole. Like the ancient monarchs before them, they create their own court jesters and errand-boys. To break the monotony and boredom of the stagnant economy, the ruler would indulge in shuffling and reshuffling of his Ministers (very often unnecessarily) and the practice has become so scandalous by its rapidity that it has led to some serious leadership inadequacies. It is a known fact, for instance, that no Minister can be effective as a political head of the department without mastering its essential details, and that takes at least 18 months (if he is exceptionally sharp, that is).

Amidst the drama and the anxieties surrounding the introduction and implementation of innovations, only a few people survive the political pressure. Indeed, for Tanzania, most ministers, except Solomon Eliufoo, have remained errand boys who gave room to Mwalimu to be the chief spokesman on educational matters. Education for Self-Reliance and the Musoma Resolutions are classic cases in point.

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Table 19. Changes of key desk officers in the Ministry of National Education, 1961 - 1984

Major events	Year	U N E D T D S I I T T N N U																					
		M	D	P	C	P	T	S	P	A	I	H	C	M	C	C	A	E	L	E	I	T	
		E	M	S	M	E	E	E	D	E	S	E	E	P	O	D	E	S	S	C	V	S	
Independence	1961	*	-	*	*	*	*	*	-	-	*	*	-	-	*	-			-	-	*	-	
	1962		-		*				-	-			-	-		-			-	-		-	
	1963	*	-	*					-	-		*	-	-			*		-	-		*	
All REO's and DEO's Africanized	1964		-	*		*			-	-			-	-		*		*	-	-	*		
General Elections I	1965		-					*	-	-	*		-	-					-	-			
	1966		-						-	-			-	-					-	-			
Arusha Declaration (Education for Self-Reliance)	1967		-		*	*	*		*	-			-	-					*	-			
Nationalization of Secondary Schools	1968	*	-	*	*			*	-				-	-		*			-		*		
Education Act No. 50	1969		-						-	*			-	-					-				
General Elections II	1970		-	*	*	*	*		*	*			-	-				*		*	*		
Adult Education Policy	1971		-				*			*	*		-	-		*					*		
Decentralization Policy	1972	*	-	*	*	*		*		*	*		-	-		*						*	
Mackenzie Report on Education II Changes of REO's	1973		*			*		*		*	-	*	-	*			*						
Musoma Directive on Education	1974							*		-		-			*								
General Elections III	1975	*		*						-		-			*	*							
	1976		*							-		-			*		*						

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Table 19 (contd.)

Major events	Year	U N D E S I T T N U																									
		M	D	P	C	D	D	D	D	C	D	T	D	S	I	I	T	T	N	N	U						
		E	M	S	M	E	E	E	P	E	S	E	E	P	O	D	E	S	S	C	U	S					
Universal Primary Education	1977	*		*							-		*				*				*						
Education Act No. 251	1978				*		*	*		*	*	*	*			*				*							
Consolidation of Education (KUE)	1979					*	*			*			*											*			
General Elections IV	1980	*																						*			
Presidential Commission on Education/ National Economic Survival Programme	1981		*							*					*												
	1982		*											*													
	1983	*																									
	1984			*																							
General Elections V	1985				*																						
	1986					*		*																			
	1987	*		*	*																						

Key

ME = Minister of Education; DM = Deputy Minister of Education; PS = Principal Secretary of Education; CM = Commissioner of Education; DPE = Director of Primary Education; DTE = Director of Teachers Education; DSE = Director of Secondary Education; SPD = Sectoral Planning Director; DAE = Director of Adult Education; CIS = Chief Inspector of Schools; DHE = Director of Higher Education; DTCE = Director of Technical Education; DMP = Director of Management Planning; UNESCO = United Nations Educational, Scientific and Cultural Organization; ICD = Institute of Curriculum Development; IAE = Institute of Adult Education; TES = Tanzania Elimu Supplies; TLS = Tanzania Library Service; NEC = National Examination Council of Tanzania; UNIV = University; UTS = Unified Teaching Service.

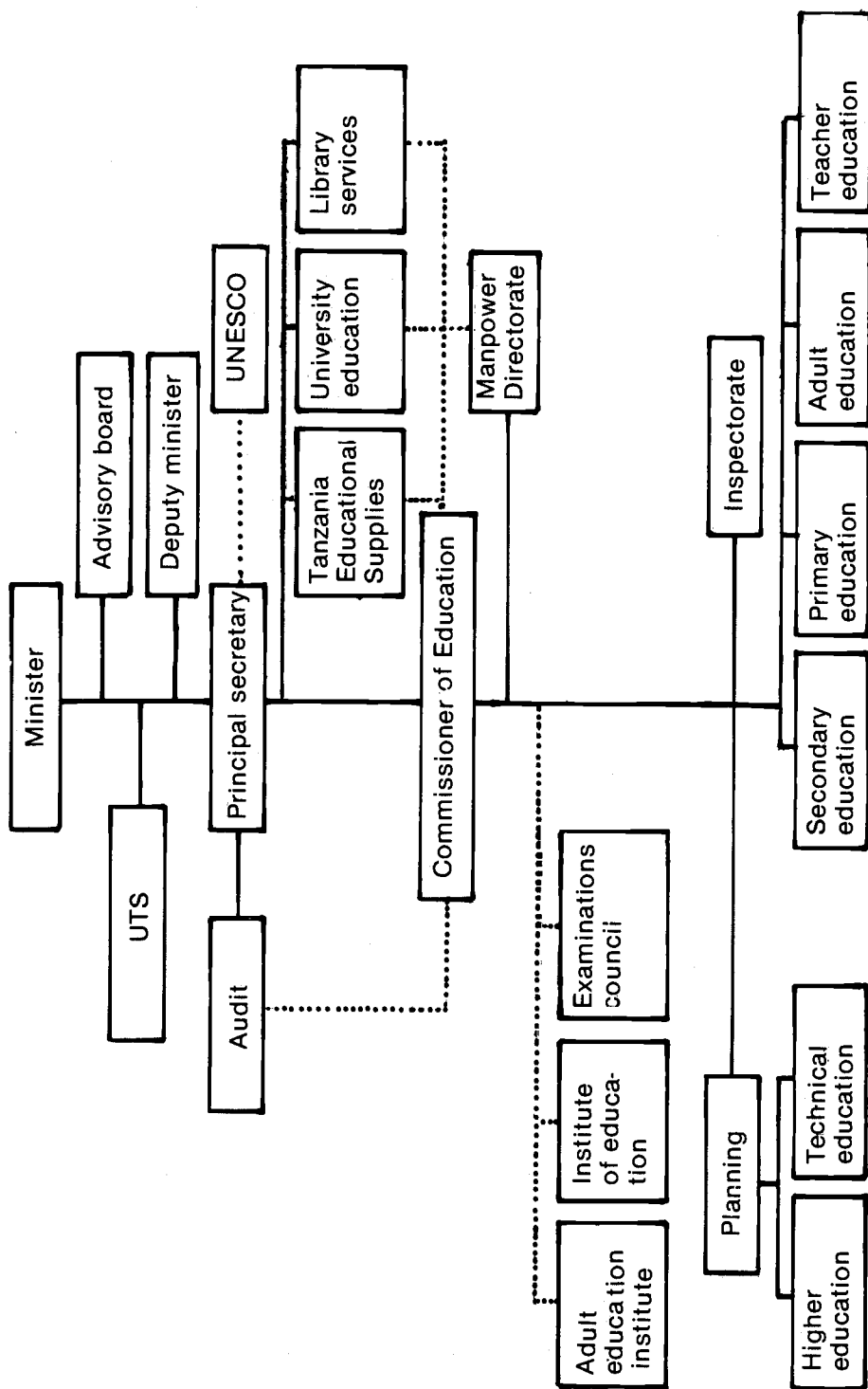


Figure 7. The structure of the Ministry of Education

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The history of permanent secretaries of the Ministry carries some pointers. Several of them "were non-educators who themselves created harmless jesters and errandboys. Temu (1985), one of Tanzania's most seasoned economists and one-time presidential economic advisor, reflecting on public-sector employment needs and practices, captured this phenomenon when he said:

One fairly common weakness among African public institutions is that their top executives are seldom technically qualified in the fields of their institution's specialization. Permanent secretaries, commissioners or director generals of sectoral ministries, to say nothing of Ministers themselves, are appointed or shifted around with little regard to their technical qualifications, almost as if any senior position in the public service was interchangeable with another. The problem is essentially political and not availability of qualified people. It is a question of political rewards and patronage (p. 7).

The short- and long-term consequences are not only damaging in that a relevant education has not been developed, but also horrifying in that a mass of illiterate students unprepared for life are now leaving school each year. This has led the President's Office to commission the Department of Education at the University of Dar es Salaam to undertake a study on what to do with school leavers - a problem competent educational bureaucrats would have thought about since the declaration of UPE in 1974. A look at resource commitment in primary education might also shed light on quality.

FINANCING EDUCATION IN TANZANIA

While financial resources do not constitute a necessary and sufficient variable for determination of educational quality, it is self-evident that it is a necessary element in any package. Table 20 gives the development budget for total Government expenditure and for the Ministry of Education. The estimates for all ministries was Sh 171.2 million in 1962/63 and rose to Sh 6,302.4 million in 1980/81.

As can be seen from the table the total Government budget increased by 549 percent since 1971/72 (index: 649). At the same time, the educational budget grew by 314 percent (index: 414). In other words, the planned expansion of education has been slower than the average for all other sectors put together.

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Table 20. Total Government and Ministry of Education development budget, 1962/63 - 1980/81 (TSh millions)

Year	Government	Ministry	Change Total Govt. (1971/72 : 100)	Change Min. of Education (1971/72 : 100)
1962/63	171.2	15.1 (8.82%)	--	--
1963/64	275.6	19.6 (7.11%)	--	--
1964/65	222.0	37.7 (16.90%)	--	--
1965/66	258.0	31.5 (12.01%)	--	--
1966/67	319.0	28.9 (9.05%)	--	--
1967/68	373.0	20.7 (15.54%)	--	--
1968/69	515.0	8.1 (1.57%)	--	--
1969/70	758.0	50.0 (6.59%)	--	--
1970/71	1,004.9	77.4 (7.70%)	--	--
1971/72	971.0	59.3 (6.10%)	100	100
1972/73	1,295.9	60.3 (4.65%)	133	102
1973/74	1,972.5	66.8 (3.38%)	203	113
1974/75	2,839.7	68.0 (2.39%)	292	115
1975/76	3,113.9	151.0 (4.84%)	321	255
1976/77	3,742.6	245.1 (6.54%)	385	413
1977/78	4,591.4	220.8 (4.80%)	473	372
1978/79	5,888.2	259.4 (4.40%)	606	437
1979/80	6,971.5	310.0 (4.44%)	718	523
1980/81	6,302.4	245.3 (3.89%)	649	414
Total	41,585.0	1,975.0 (4.75%)		

If the Ministry of Education is compared with the Government as a whole it can be seen that its share of total development estimates was approximately 8 percent during the first three years after independence. However, the budget for education decreased gradually to 2.4 percent in 1974/75 and thereafter education's share of the budget has been about the 5 percent level.

The downward trend in the Ministry of Education's development budget from 1972/73 can be explained by the decentralization of primary education under which funds were transferred to the Regions through the Prime Minister's office. However, under this policy development projects were supposed to be undertaken through self-help schemes.

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It is interesting to note that 25 percent of the total population of Tanzania were in school by 1980/81. The impact of the universalization of primary education is noticeable in the 1977/78/79 transition. It is self-evident that both recurrent and capital expenditures are concentrated at the higher levels of education, as reflected in the total capital expenditure and unit costs for the given enrolments, and this is in turn a reflection of the current values which suggest that primary school children can go to school under trees while university students are housed in luxury skyscrapers. The unit costs for recurrent expenditure are in the same pattern of 1:640 (Nyerere 1980).

The percentage of the Regional budget spent on education in the Regions of the study is given in Table 21. It reveals that some Regions such as Kilimanjaro are consistently spending a higher proportion of their resources on education. This is likely to be reflected in the quality of education as will be seen when examining cut-off points for secondary-school entry later.

Data in Table 22 show that despite its commitment to provide mass education to eligible children Tanzania was not one of the countries that allocated a large portion of its gross national product to education. Hence the Government might claim to be attempting to achieve more, but by limiting the required increase in resources to education it is in effect lowering the quality.

Before analysing school performance, a review of syllabi that primary-school pupils had been exposed to prior to independence and up to 1985 might shed light on the things they were expected to learn and upon which assessment of school performance is based.

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Table 21. Percentage and actual Regional budget spent on primary education

Region	Year	Total P/E budget	Recurrent	Development
Kilimanjaro	1972/73	16,630,200	15,900,200 95.6%	730,000 4.4%
	1973/74	16,949,650	15,000,650 94.4%	950,000 5.6%
	1974/75	4,619,300	2,219,300 48.9%	2,400,000 51.9%
	1975/76	21,751,000	19,467,000 89.5%	2,284,000 10.5%
	1976/77	31,959,500	29,754,500 93.1%	2,205,000 6.9%
	1977/78	48,007,300	45,392,300 94.6%	2,615,000 5.4%
	1978/79	36,943,600	32,991,600 89.3%	3,952,000 10.7%
	1979/80	60,400,100	54,288,100 89.9%	6,112,000 10.1%
	1980/81	66,821,500	60,527,500 90.6%	6,294,000 9.4%
Dodoma	1972/73	1,571,340	606,340 33.6%	965,000 61.4%
	1973/74	12,727,400	11,904,400 93.5%	823,000 6.5%
	1974/75	15,167,700	12,019,700 79.2%	3,148,000 20.8%
	1975/76	16,927,500	13,927,500 83.3%	3,000,000 17.7%
	1976/77	23,717,400	20,247,400 85.4%	3,470,000 14.6%
	1977/78	35,022,000	31,331,000 89.5%	3,691,000 10.5%
	1978/79	24,956,200	21,126,200 84.7%	3,830,000 15.3%
	1979/80	47,541,500	43,615,500 91.7%	3,926,000 8.3%
	1980/81	50,997,800	47,247,800 92.6%	3,750,000 7.4%
Lindi	1972/73	5,629,500	5,087,000 90.4%	542,500 9.6%
	1973/74	7,871,400	6,323,400 80.3%	1,548,000 19.7%
	1974/75	3,194,000	1,710,000 53.5%	1,480,500 46.5%
	1975/76	11,305,300	9,451,300 83.6%	1,854,000 16.4%

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	1976/77	11,912,290	11,222,290	690,000
			94.2%	5.8%
	1977/78	19,857,600	16,986,500	2,871,000
			85.5%	14.5%
	1978/79	18,464,310	15,814,310	2,650,000
			85.6%	14.4%
	1979/80	27,403,600	23,917,600	3,486,000
			87.3%	12.7%
	1980/81	28,584,200	26,657,200	1,927,000
			93.3%	6.7%
Tabora	1972/73	7,474,360	6,829,360	647,000
			91.3%	8.7%
	1973/74	9,315,500	8,070,500	1,245,000
			86.6%	13.4%
	1974/75	11,548,200	10,123,200	1,425,000
			87.7%	12.3%
	1975/76	13,220,500	11,914,500	1,306,000
			90.1%	8.9%
	1976/77	14,251,500	13,230,500	1,021,000
			92.8%	7.2%
	1977/78	24,240,900	22,510,900	1,730,000
			92.9%	7.1%
Coast	1978/79	17,429,000	17,209,000	220,000
			98.7%	1.3%
	1979/80	33,175,200	31,397,200	1,778,000
			94.6%	5.4%
	1980/81	33,298,245	30,605,200	2,693,000
			91.9%	8.1%
	1972/73	5,429,600	4,582,100	847,500
			84.4%	15.6%
	1973/74	8,293,400	6,583,400	1,710,000
			79.4%	20.6%
	1974/75	8,889,600	6,699,600	2,190,000
			75.4%	24.6%
	1975/76	10,012,600	8,158,600	1,854,000
			81.5%	18.5%
	1976/77	13,493,400	10,883,400	2,610,000
			80.7%	19.3%
	1977/78	20,866,000	18,164,000	2,702,000
			87.1%	12.9%
	1978/79	17,975,000	14,402,000	3,573,000
			80.1%	19.9%
	1979/80	37,208,100	30,499,100	6,709,000
			82.0%	18.0%
	1980/81	39,218,000	33,000,000	6,218,000
			84.1%	15.9%

Source: Estimates of public expenditure Consolidated Fund Service Section I and Supply Votes (Ministerial) (Section II) for the year from 1 July to 30 June.

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Table 22. Public expenditure on education in some African countries

Country	Year	TOTAL EDUCATIONAL EXPENDITURE		Country	Year	TOTAL EDUCATIONAL EXPENDITURE	
		As % of Gross National Product	As % of total Government expenditure			As % of Gross National Product	As % of total Government expenditure
Algeria	1970	7.8	31.6	Kenya	1970	5.0	17.6
	1975	--	--		1975	6.3	19.4
	1980	8.2	24.3		1980	6.5	18.1
Botswana	1970	5.2	12.3	Lesotho	1970	3.0	--
	1975	7.2	13.9		1975	--	--
	1979*	7.7	11.7		1982*	5.7	--
Cameroon	1970	3.5	19.6	Liberia	1970	2.5	9.5
	1975	4.0	21.3		1975	2.4	11.6
	1980	3.4	20.3		1980	6.3	24.3
Central African Republic	1970	--	--	Libyan Arab Jamahiriya	1970	4.6	17.4
	1975	5.0	20.1		1975	6.7	14.5
	1980	3.6	19.9		1980	3.7	--
Congo	1970	5.9	23.7	Malawi	1970	4.6	13.2
	1975	8.1	18.2		1975	2.5	6.6
	1980	6.8	23.6		1979*	2.6	12.9
Egypt	1970	4.8	15.8	Mauritius	1970	3.7	11.5
	1975	5.0	--		1975	4.2	9.6
	1979*	4.0	--		1980	5.3	11.6
Ethiopia	1970	2.8	19.4	Morocco	1970	3.6	16.8
	1974*	3.3	13.4		1975	4.8	14.3
	1980	2.9	9.3		1980	6.1	18.5
Gabon	1970	3.1	16.2	Niger	1970	2.0	17.7
	1975	2.1	--		1975	3.8	18.7
	1980	3.0	--		1980	4.3	22.9
Gambia	1970	2.3	10.8	Nigeria	1970	--	--
	1975	3.3	--		1976*	4.2	16.5
	1980	3.3	--		1979*	3.9	16.2

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Table 22 (contd.)

TOTAL EDUCATIONAL EXPENDITURE				TOTAL EDUCATIONAL EXPENDITURE			
Country	Year	As % of	As % of	Country	Year	As % of	As % of
		Gross National Product	total Government expenditure			Gross National Product	total Government expenditure
Ghana	1970	4.3	19.6	Rwanda	1970	2.3	26.6
	1975	5.9	21.5		1975	2.3	25.3
	1980	1.8	- -		1980	2.7	21.6
Ivory Coast	1970	4.9	19.3	Senegal	1970	3.8	21.3
	1975	5.7	19.0		1975	- -	- -
	1979*	7.6	29.8		1980	- -	- -
	1975	3.8	18.7				
	1980	4.3	22.9				
Seychelles	1970	4.6	11.5	Tunisia	1970	6.9	23.2
	1975	4.8	9.5		1975	5.1	16.4
	1980	7.0	14.4		1980	5.2	16.4
Sierra Leone	1970	3.2	17.5	Uganda	1970	3.9	17.8
	1975	3.4	- -		1975	2.5	17.0
	1980	3.9	- -		1980	0.6	11.3
Somalia	1970	1.0	7.6	United Republic of Tanzania	1970	4.5	16.0
	1975	2.0	12.5		1975	5.4	17.8
	1980	1.8	8.7		1979*	5.9	10.7
Sudan	1970	3.9	12.6	Upper Volta	1970	- -	- -
	1974*	5.5	14.8		1975	- -	- -
	1980	4.7	9.1		1980	2.8	19.8
Swaziland	1970	4.3	17.3	Zambia	1970	4.7	10.9
	1974*	5.5	- -		1975	6.7	11.9
	1981*	5.2	14.1		1980	4.6	7.6
Togo	1970	2.2	19.0	Zimbabwe	1970	3.4	- -
	1975	3.5	15.1		1975	3.6	- -
	1980	6.2	19.4		1980	6.4	13.7

Source: UNESCO Statistical Yearbook (1984).

*Figures of years closest to 1975 or 1980 were recorded to allow comparative analysis of the data.

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CHANGES IN THE CONTENT OF PRIMARY EDUCATION CURRICULA

In order to see educational interventions in Tanzania in their proper historical perspective, content analysis was performed for middle- and upper-primary school syllabi. The analysis is organized under four major themes -- general outlook of the primary education syllabi 1955-1984; aims and content of syllabi over the 30 years, content analysis indicating areas of emphasis and changes in thrust over the years, and some discussion.

Overview of primary-school syllabi

The pre-independence organization of education in African schools was such that there were three cycles each of which was designed to be both complete in itself and to be linked with the one above it. This structure put emphasis on giving a balanced course of education which would enable school leavers to play an efficient role in the development of the country--using both their hands and their brains. At the same time, each stage or cycle was to form a sound basis for proceeding to the next tier or to professional and vocational courses which were available after the second and third stages. The three stages were termed primary, middle and secondary.

Middle-school education covered four years and was offered to pupils who had successfully completed the four-year primary-school course. The form and bias of the courses at any particular school were towards the needs and the life of the people in the area in which the school was situated. In agricultural areas, for instance, the bias of the school was to be agricultural, in pastoral areas more towards animal husbandry, while in urban areas more commercial and/or industrial courses were given. In all girl's schools there was a bias towards homecraft.

These biases were all to be of a practical nature and were based on the theoretical knowledge gained in class. For instance, knowledge of general principles of chemistry and biology was to be related to practical agriculture and animal husbandry while knowledge of some basic principles in physics and mathematics was to be related to elementary building and handcraft activities.

Middle-school education was meant to mould pupils' character. It was succinctly stated in a 1959 middle-school syllabus that in the activities and project work of the middle-school programme every opportunity had to be given for group work and for leadership initiative. Hence the emphasis on such groups as Boy Scouts, Girl Guides, young farmers and on moral and religious

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instruction. The call for development of co-operative behaviour in ESR in 1967 was, in many ways, a continuation of the same spirit.

However, practical work had to be well planned so that each part of it was of value in the lessons it contained. It was clearly stated that every care had to be taken to ensure that it did not become sheer drudgery with no purpose in view. Hence practical work in primary schools was designed to be a "core" of instruction and not a chore.

Immediately after independence, practical agriculture and animal husbandry were abolished in middle schools for political and sentimental reasons, in spite of the fact that the country relies on agriculture as the basis for development. Other content, except in civics, remained unchanged until 1968 when radical changes were effected following the Arusha and Education for Self-Reliance declarations of 1967.

The primary school syllabi have taken many forms since independence up to 1983. Such changes have included the following:

1. Switching to a seven-year system of education and removing the eighth year which was designed to enable pupils to know how they could use theoretical knowledge gained in the classroom to solve practical problems in their daily lives and make them more useful and intelligent citizens (Education Circular No. 1 of 1966, ref. no. EDG.C2/6/5 of 9 August 1966). This was a very unfortunate move since ESR places emphasis on the same notion of merging theory and practice or preparation for life in rural or urban areas.
2. Changes in the aims of primary education following the introduction of the new policy of Socialism and Education for Self-Reliance:
 - (a) To ensure permanent functional literacy in the national language;
 - (b) To develop an inquiring mind;
 - (c) To encourage the social goals of living together and building the nation (Education Circular letter ref. no. EDTT.SI/16/69 of 22 October 1968).
3. Switching from English to Swahili as a medium of instruction in all grant-aided primary schools effective November 1969 (Education Circular No. 2 of 1967, ref. no. EDG C2/6/64 of 12 May 1967). This change also had far-reaching effects on the

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quality of spoken and written English, which was and is still the medium of instruction at secondary and tertiary levels. Students now lack the language foundation that primary education used to establish.

4. Directing all schools in Tanzania to be revolutionary schools, e.g. to initiate ESR projects, to teach military marches, to participate in processions during national festivals or when receiving state visitors, to chant revolutionary songs full of the word "comrade" or *ndugu* and to engage in cultural activities such as mass displays and traditional dances (Education Circular letter ref. no. EDP P1/124 of 15 January 1969). Moshi (1981) has observed that the repercussions of these changes have been extremely damaging to the educational system and society in general since over 40 percent of school days are "lost" in this way.
5. Making primary schools centres of adult education in response to the President's appeal to make 1970 Adult Education Year in an attempt to wipe out illiteracy by 1975 (Education Circular No. 5 of 1970, ref. no. EDG C2/6/11/5 of 17 August 1970). Hence teachers were assigned the dual roles of teaching both children and adults. The inclusion of adult education as one of the primary-school subjects (three periods), its importance notwithstanding, did bite into the time and concentration devoted to the formal primary-school activities. This affected teachers' morale.
6. Removal of the two-tier primary-education school system by converting each school into a full seven-year primary school between November 1970 and November 1972 (Education Circular No. 6 of 1970, ref. no. EDP P2/2/56 of 5 September 1970). Popular as this move might have been, it did, however, pose a serious problem. Even poor students were allowed, or pushed, through seven years of schooling without any testing of their academic competence hence the problem of illiterate primary-school leavers.

Although there have been general complaints from the public in Tanzania that primary school syllabi change too frequently, the fact is that only three major curricula changes have been effected over a 30-year period (1955 - 1984). These were in 1959, 1969 and 1983. However, when these periods of syllabus change are coupled with the six other major policy changes cited in the preceding section which also resulted in revision of teaching and learning materials and mobilization of staff, then such concerns might be justified. The following is a brief synopsis of major changes in the various subject areas.

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Swahili

The teaching of Swahili during the colonial era emphasized mastery of grammar that was to be gained through practice in speaking, writing and reading good Swahili. Since Swahili was not the medium of instruction until 1969, it was realized that such an objective could only be realized if all teachers at all times took care to see that Swahili was used correctly (Ministry of Education 1960a, p.52). However, after the Arusha Declaration and introduction of the Education for Self-Reliance policy, Swahili was made the medium of instruction in all primary schools in order to strengthen its use as a national language. The emphasis was on correct usage in all subjects and other activities except the teaching of English. There was a significant change in the teaching materials as more books written by Tanzanians emphasized local themes rather than the Arabic-influenced cultures of Mwinyi Upate and Alfulela Ulela which were popular school novels of the fifties.

Arithmetic and practical geometry

The objective for teaching this subject in the period 1955-1969 was to equip school leavers with a knowledge of arithmetic and geometry sufficient for their needs in their daily lives. In order to realize these aims, pupils were engaged daily in elementary practical tasks and mental quizzes. At the start of Standard V, eight weeks was allocated to bridging the gaps in the pupils' levels as they came from different schools and had been taught by different teachers. It was also emphasized in Ministry of Education (1960a, p.53-55) that at least five minutes should be devoted to mental quiz work in each lesson. Teachers had to ensure that corrections were done before new work was started.

The 1969 arithmetic syllabi however lacked all the practical tasks which were the core of the 1955 - 1963 syllabi for teaching agriculture. The rapid expansion of primary education was not matched with an equal investment in practical activities as schools abandoned them in favour of more elitist classroom-based instruction. One question of interest is whether most of the practical activities could still be effectively implemented given the large class and school sizes. The 1969 syllabus was based on new methods of teaching mathematics brought about by new discoveries and inventions, hence New Mathematics which emphasized inquisitive approaches to the learning of mathematics (Ministry of Education, Arithmetic Syllabus, 1969). Emphasis was on learning "new mathematics" and the use of the "set language", which inadvertently resulted in cramming and building of empty

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verbal pillars. The emphasis on mental arithmetic, knowledge of multiplication tables, bridging gaps in the varying background of pupils and the insistence on pupils making corrections before they began new work were downplayed in the 1969 and 1983 syllabi and in the Teachers' Guides. It is not surprising that New Mathematics is being abandoned in favour of Traditional Mathematics.

English

Before 1969 English was taught as a subject in Standards V - VIII and was used as a medium of instruction in other subjects from Standards VII - VIII. Excellence in the use of the English language was stressed and only those teachers who were good enough or qualified to teach it were allowed. Careful lesson preparation, careful correction of all written work in English and use of English for communication inside and outside the school were emphasized. The Middle School Handbook (Dept. of Education 1960b, pp.49-50) stipulates that "a teacher whose English is not good enough, or who is not qualified to teach English, must not be allowed to teach in English."

The 1969 English language syllabus was intended to enable primary-school leavers to gain permanent literacy in English and an ability to acquire information available in English. English was to be taught from Standard III. Fewer periods were allocated to the teaching of English in primary schools. The issue of the quality of English teachers and active use of English in and outside schools was neglected. The decision as to when to start teaching English (Standard I or Standard III) was not based on any theoretical and empirical considerations but rather on political and practical ones.

General science

The general science syllabi from 1955 to 1964 were aimed at teaching the basics of biology, agriculture and health science and associating these with every-day life. Thus the syllabus was closely tailored to agriculture, man and his environment and how he could use such knowledge to overcome some basic impediments to his progress.

The 1964 syllabus showed some departure from the preceding one as emphasis was placed on life and living. Some practical elements of agriculture were eliminated in favour of elitist science.

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In 1969 another version of the general science syllabus emphasizing the discovery method was introduced. The main thrust was the pupil's active participation in learning, an approach which had appeared to be popular in America and Russia following scientific advancements (Brunner 1960) whose feasibility, suitability and workability had not been tested for primary-school children in new situations such as Tanzania. The problem then was whether learning concerns in the USA were relevant to Tanzania.

In 1983 the primary-school syllabus was changed again and emphasis was placed on encouraging pupils to be inquisitive, to use a problem-solving approach to analysis, to gain confidence in whatever they did, and to instil a sense of co-operation while doing their work. Apparently the content was too dense and at a level above that of most primary-school children, particularly on topics such as the solar system, electricity and machines. The syllabus was still more oriented towards urban machines than rural agriculture.

The science syllabus has undergone more changes (4) than other subjects (2). Hence there is need for a stable science education policy in Tanzania on which future programmes can be based. It should not change with personalities.

General knowledge

The teaching of general knowledge (1955-1969) was meant to enable students to understand human beings and their relationship with their environment through integrated teaching of geography, history and civics. The deductive, as contrasted with the inductive, approach was to be used so that pupils could learn things related to their immediate environment before moving on to themes and topics of the outer world.

A unique feature of the 1955 and 1959 general knowledge syllabi is that they allowed for a composite course for Standard VIII entitled Citizenship and Community Development for Standard VIII which was aimed at linking the integrated teaching of geography, history and civics to their daily lives in order to help them to become useful and intelligent citizens. This objective was to be realized by engaging the pupils in meaningful community activities through expeditions, discussions and projects. Other changes in the general knowledge syllabi included:

1. Teaching of the three subjects separately since 1963 and replacement of civics with current affairs (1964-1969);

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thereafter the introduction of political education in the place of current affairs (1969 to date).

2. Abolishing the teaching of the citizenship and community development course following the change from an eight-year to a seven-year system of primary education (1966).
3. More emphasis on knowing the geography and the history of Tanzania, East Africa, Africa and developing countries and not the United Kingdom and the Commonwealth (1969 to-date).
4. Emphasis on the teaching of the history of decolonization and liberation struggles (since 1969).
5. Political education was meant to teach the political justification of policy choices such as socialism and the one-party system rather than being a balanced educative syllabus.

Agriculture

The formal agricultural and animal husbandry syllabus (1955-1959) was regarded as the "heart" of boys' middle-school education except in urban and technical middle schools. The content was intended to equip the school leaver with practical skills which would enable him to serve as a model farmer in his locality. Practical agriculture imparted ways of farming, tending of forests and animal husbandry. Students were expected to know the economics of farming by keeping school farm records and accounts, understanding the value of cultivating vegetables by school gardening and to appreciate the use of manure. The subject was taught by qualified staff and other teachers were only allowed to cultivate private plots if they could set a good example by practising the best agricultural methods.

In 1963 formal classroom teaching of agriculture was replaced by gardening as an extra-curricula activity taught in order to provide an attractive environment for the school, encourage tree planting and grow some fruit, vegetables and crops that could be used by the students. No formal agricultural syllabus was introduced into the schools either in 1969, following the introduction of Education for Self-Reliance, nor in 1975 following the Party's Musoma Resolutions which urged the merging of theory and practice in schools. An agricultural syllabus was reintroduced in 1983, almost 22 years after independence, despite the political platitudes about the importance of agriculture and learning by doing. In fact it is German expatriates at TIRDEP in

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Tanga who took the lead in this regard by introducing farming in the rural integrated project in Lushoto, Tanga.

Handiwork

The teaching of handiwork in middle school from 1955 to 1963 was meant to educate and train pupils in spatial conception, accurate measurements, manual dexterity and an appreciation of design and symmetry. It was also meant to inculcate pride in craftsmanship and appreciation of good craft work. It imparted basic skills that co-ordinate the hand, the eye and brain. Practical calculations, geometry, and the scientific principles of observation and accuracy were also applied.

Like agriculture, handiwork was de-emphasized after independence in most primary schools. The subject was taught in formal technical schools only.

Art and music

In 1970 a new art and music syllabus was introduced into primary schools to enable pupils to advance their artistic and technical potential, to develop an inquiring mind to foster the spirit of co-operation and make pupils realize its importance at work places, to realize the importance of taking care of property and maintaining a clean and pleasant environment, and to enable the pupils to be inquisitive, confident and desirous of self-advancement beyond the level reached at school. However, its current status as one of the non-examined subjects in primary schools makes it very difficult to draw the attention and interest of students. Furthermore, it seems that there is an assumption that any teacher, particularly the academically poor ones, can teach art. It is thus taken as a joke in primary schools.

Homecraft or domestic science

The aim of teaching homecraft or domestic science in middle schools from 1955 to 1969 was to improve the standard of living and health of people in the country. Homecraft embraced components of housewifery, cookery and laundry. The specific objectives of housewifery were threefold: to see that the pupils appreciated cleanliness as the basis of health, to ensure that they got an idea of finish and standard and that they obtained

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such a degree of skill and household knowledge that they would make useful members of a family and community.

In cookery, an attempt was made to link the teaching with some simple rules of nutrition in order to alleviate the problem of malnutrition. The laundry component was meant to enable pupils to wash their own clothes properly, remove stains, provide practical skills in ironing clothes and to undertake each task with care. Like the teaching of agriculture in middle schools, the teaching of domestic science in Standards VII and VIII was as a combined course. The aim was to relate the preliminary work done in Standards V and VI to the girls' home conditions, at the same time adding new knowledge and skills for running their own homes and instilling a sincere desire to help their communities.

The domestic science syllabus is the only one at primary-school level that has not undergone radical changes since 1955. Only a few content areas were added to the 1966 and 1975 versions while the aims remained the same. The new content areas included material on customs, traditions, guidance to working married and unmarried youth, family life and care for children and the aged. However, the subject does not seem to be highly esteemed by girls or boys and is not separately examined at the end of primary education. Furthermore, there are few if any specialized teachers of domestic science in primary schools.

Physical education, religious studies and adult education

These are subjects whose content has not undergone much change. They are most vulnerable to a lack of seriousness in their teaching as they are neither formally taught nor examined.

Conclusion

From the foregoing analyses and discussions, one can make the following general observations about the primary-school curricula over the past three decades:

1. There has been unnecessary tinkering with the syllabi even when there was no empirical evidence to warrant changes, especially in agriculture, handiwork and general science.
2. Strategic subjects which were supposed to equip pupils with the knowledge and skills required as part of preparation for life (e.g. agriculture and handiwork) were abolished after independence for political and sentimental reasons. The price

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involved in reintroducing them is great and the gap already created by a lack of such skills over two decades may take a long time to bridge.

3. Curricular changes have not often been matched by timely preparation of teacher's guides, textbooks, charts and other materials needed to support implementation.
4. In-service training of teachers to implement the changes has been slow, sometimes unpredictable and is not comprehensive.
5. Most syllabi emphasize acquisition of knowledge *per se* without matching it to a consideration of the functional aspect of preparation for life which affects the lives of over 95 percent of primary-school leavers who are not selected for further education.
6. There is no evidence that ESR, which is supposed to guide the provision of education in Tanzania, is considered in classroom teaching. In classrooms cognitive skills are emphasized.

Analysis of school performance

Table 23 gives a ranking of school performance by Region and subject. Characteristically, the schools from urban areas (Dar es Salaam) and more developed Regions (Kilimanjaro) occupy the higher brackets of the performance scale. Thus, in all tests, Dar es Salaam had five schools in the top ten and Kilimanjaro had three, while Lindi and Tabora had one each and Dodoma had none. Table 24 reveals the low levels of performance in English, mathematics, language and numerical skills where about 75 percent performed below 15 points out of 50.

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Table 23. School ranking per Region in each subject and overall

Region	Subject	Top									Total
		10	20	30	40	50	60	70	80	90	
Dar es Salaam Coast	General knowledge	2	2	3	2	2	2	2	1	2	18
	Mathematics	3	2	1	3	2	1	2	2	2	18
	English	4	1	2	1	2	1	2	2	3	18
	Language	4	2	2	0	2	3	3	1	1	18
	Numerical	3	4	2	3	1	0	1	2	2	18
	All subjects	5	3	2	0	1	2	2	1	2	18
Dodoma	General knowledge	0	0	0	3	3	1	4	4	3	18
	Mathematics	0	0	2	1	2	3	3	3	4	18
	English	1	1	2	3	0	1	2	3	5	18
	Language	-	-	-	-	-	-	-	-	-	-
	Numerical	1	0	1	1	3	3	4	2	3	18
	All subjects	0	0	1	3	2	3	3	2	4	18
Kilimanjaro	General knowledge	3	2	2	3	3	3	1	1	0	18
	Mathematics	0	4	3	1	2	4	2	1	1	18
	English	1	5	2	3	2	4	0	0	1	18
	Language	3	3	4	2	1	1	0	3	1	18
	Numerical	2	2	2	2	3	2	1	3	1	18
	All subjects	3	2	2	1	4	2	2	2	0	18
Lindi	General knowledge	1	3	0	1	3	3	2	2	2	17
	Mathematics	3	0	2	2	3	1	0	3	3	17
	English	4	1	0	1	2	2	5	2	0	17
	Language	2	0	1	3	3	3	2	3	0	17
	Numerical	2	1	3	1	2	4	1	1	2	17
	All subjects	1	2	1	1	3	3	2	2	3	17
Tabora	General knowledge	4	4	4	1	1	1	0	1	2	18
	Mathematics	4	4	2	3	1	0	3	1	0	18
	English	0	2	4	2	3	4	0	3	0	18
	Language	0	5	2	1	2	3	1	2	2	18
	Numerical	2	3	2	2	1	1	4	2	1	18
	All subjects	1	3	4	4	0	0	2	3	1	18

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Table 24. Distribution of students' performance in all tests

Class intervals	General knowledge			English			Mathematics			Language			Numerical		
	N	%	Cum. %	N	%	Cum. %	N	%	Cum. %	N	%	Cum. %	N	%	Cum. %
0	8	0.20	-	17	0.50	-	496	14.63	-	33	0.97	-	307	9.04	-
1 - 5	34	7.00	1.20	422	12.42	12.42	1,879	55.34	55.34	251	7.69	7.68	1,358	40.00	40.00
6 - 10	145	4.27	5.47	1,338	39.41	51.83	658	19.38	74.92	379	11.16	18.85	894	26.04	66.04
11 - 15	334	9.84	15.31	730	21.53	73.46	253	7.46	82.18	690	20.32	39.17	456	13.43	79.47
16 - 20	515	15.17	30.48	194	5.71	79.17	97	2.86	85.04	716	21.09	60.26	298	8.78	88.25
21 - 25	667	19.65	50.13	92	2.71	81.88	49	1.44	86.48	508	14.96	75.40	51	1.50	89.75
26 - 30	635	18.70	68.83	83	2.44	84.32	46	1.36	87.84	341	10.04	85.44	-	-	-
31 - 35	439	12.93	81.76	74	2.17	86.49	39	1.11	88.95	177	5.21	90.65	-	-	-
36 - 40	261	7.69	89.45	72	2.12	88.61	22	0.65	89.60	67	1.97	92.62	-	-	-
41 - 45	99	2.92	92.37	29	0.85	89.46	7	0.21	89.81	10	0.29	92.91	-	-	-
46 - 50	20	0.59	92.96	0	0.00	89.46	-	-	-	1	0.03	92.94	-	-	-
Missing cases	238	7.00	100.00	361	10.93	100.39	345	10.16	99.97	245	7.22	100.00	338	9.26	99.91
Mean	24.55	(49)		11.78	(45)		6.08	(43)		17.68	(46)		7.28	(25)	
Standard deviation	8.00	0.16		8.14	0.5		7.23	0.13		8.58	0.15		5.64	0.10	

Figures in brackets represent possible correct items in each test.

One concern in this study was how to explain the differences between high- and low-quality schools. The schools were allocated to low- and high-quality groups by taking the top ten and bottom ten schools in each subject. Micro-analyses were carried on the original data for these schools and then we returned to the schools for additional data relating to quality of key variables such as teachers, supplies and teaching styles.

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These additional data confirmed the superior performance of urban schools which seems to be attributable to the fact that urban schools consistently get more academically qualified teachers (Grade A). Most of these teachers are married to senior officials in the cities and tend to stay in the same school for much longer periods of time (over five years) than do rural school teachers. Urban schools were also consistently better provided with learning materials such as equipment and books and were inspected more frequently than rural schools.

Overall performance was poorest in Dodoma schools. Interview data revealed two factors which may partly account for this. Truancy and lack of parents' drive for the education of their children were serious there. Truancy was mainly caused by pupils' preoccupation with herding of cattle in the rural areas or engagement in petty business, especially for Dodoma urban schools. Parents attached more importance to the amount of their children's time spent on herding cattle. They argued that after seven years of education "the burden" of caring for the children still fell back on them since the children had gained no skill other than chanting political songs. They felt that the system had given them half-schooled children who could neither herd cattle nor be employed in the formal sector. In urban areas, pupils engaged themselves in petty business in order to supplement family incomes. Female pupils who engaged in petty business sometimes ended up getting married or pregnant and ultimately dropped out of school.

Correlation between school and individual variables and performance measures

The relationship between school variables, individual variables and performance measures was analysed. The school variables included quality, location and school size. The schools were pre-categorized as high (H) and low (L) quality depending on academic performance and ratings on self-reliance and cultural activities as judged by informed educators in that District.

Location of school was categorized as rural (R) or urban (U). The size of school was put as large (L), medium (M) or small (S) according to the number of pupils. Large schools were those with a pupil population of over 601, while medium-sized schools had a pupil population of between 351 and 600, and small schools were those with an overall pupil population of less than 350.

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The individual variables were age, year of beginning school, Region of birth and pre-school experience. For the performance measures, the scores in verbal reasoning, numerical reasoning, general knowledge, mathematics and English were included. The results are presented in Table 25.

Table 25. The relationship between school variables, individual variables and performance

Variables	Performance measures				
	Verbal reasoning	Numerical reasoning	General knowledge	Mathematics score	English score
<u>School variables</u>					
School quality (H-L)	0.19	0.07	0.18	0.21	0.20
School location (R-U)	-0.26	-0.02	-0.17	-0.22	-0.19
School size (L-M-S)	0.02	0.09	-0.04	0.07	0.03
<u>Individual variables</u>					
Sex (M-F)	-0.14	-0.14	-0.16	-0.10	-0.10
Age	-0.17	-0.14	-0.20	-0.12	-0.09
Year of beginning school	-0.18	-0.13	-0.18	-0.12	-0.12
Pre-school experience	-0.13	-0.11	-0.14	-0.07	-0.09

The results reveal that there is a positive association between school quality and performance measures suggesting that the higher the school quality the better the scores, which also confirms that the criteria used for the pre-categorization of schools were valid. There is a negative relationship between school location and performance measures, again confirming earlier results that the performance of rural primary schools was worse than that of urban schools.

Incidentally, the larger the school the better the performance in verbal reasoning, numerical reasoning, mathematics and English, but not general knowledge. Boys performed consistently better than girls. Also younger pupils seem to perform better than older one. This finding supports earlier ones of Chinapah (1983). Consistent with previous findings, pre-school experience has a positive association with performance measures.

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Analysis of variance and regression for individual and performance variables

The variables included were sex, age of beginning school, Region of birth, pre-school experience, training preference and occupational preference. Table 26 gives the F-values for different dependent and independent variables. It seems that:

1. Performance in general knowledge and mathematics slightly depended on the age of the pupils, significant at the 0.05 level.
2. Apparently sex does not significantly affect performance in any of the tests.
3. Year of beginning school seems to be significantly related to the language score but not to the other performance measures.
4. Pre-school experience shows a significant variation on language score, general knowledge, and mathematics score.

In the training preference analyses, it seems that those who preferred training in medicine had a high language score only, while those choosing teaching and secondary education had significantly higher language, general knowledge and mathematics scores compared to those not choosing those subjects. Agricultural training had similar results.

In the occupation preference analyses, those who preferred medicine performed significantly better in all the performance measures while choice of teaching as an occupation indicated high language, numerical and general-knowledge scores only. Students who choose clerical work and air-traffic occupations seemed to score highly on language, numerical, general knowledge and English while those who preferred to be in the legal professions had significantly better performance in language and general knowledge.

Analysis of variance and regression analyses for school and performance variables

The variables included the quality, location and size of the school. These were the independent variables while the same performance measures were the dependent variables. Table 27 gives the results of those analyses, which indicate that the regression coefficients for language score against quality and location are significant at the .01 level of significance. General-knowledge, mathematics and English scores show the same pattern as that of language score for the quality and location of school. Only the numerical score has shown a low significance level for size of

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school and a significant value for quality of school, suggesting that performance in that control measure was relatively independent of traditional assessment of school quality.

Table 26. Regression analysis on individual variables and performance measures

	F and B values for dependent variables									
	Language score		Numerical score		General knowledge		Mathematics score		English score	
	F	B	F	B	F	B	F	B	F	B
Sex	6.548	-0.255	13.306	-0.242	9.726	-0.317	5.810	-0.209	7.815	0.275
Age	1.894	-0.296	1.002	-0.014	9.474	-0.068	5.181	-0.042	1.855	0.029
Year of beginning school	16.301*	-0.137	0.445	-0.042	2.063	-0.139	8.855	0.086	6.367	-0.085
Region of birth	23.322**	0.044	15.738	-0.089	16.372	-0.140	4.881	-0.181	2.427	-0.146
Pre-school experience	6.342*	-0.238	3.887	0.012	15.435**	0.037	17.978**	0.034	0.917	0.009
<u>Training preference</u>										
Medicine	8.850*	-0.173	0.908	0.037	2.342	0.091	-	-	1.875	0.078
Teaching	12.806**	0.242	21.245	0.208	50.418**	0.492	10.415**	0.184	8.644*	0.194
Secondary education	35.557**	-0.415	39.839	0.292	44.549**	-0.475	14.405**	-0.234	7.123	-0.181
Technical education	0.711	-0.058	0.432	0.300	3.423	-0.131	-	-	-	-
Agricultural training	5.707*	0.145	2.126	0.059	4.490*	0.133	7.823*	0.144	1.673	0.077
Job training	1.782	-0.145	0.227	0.021	0.504	0.051	-	-	0.667	-0.053
<u>Occupational preference</u>										
Magistrate	6.123*	0.158	2.140*	0.062	12.680**	0.233	1.111	0.058	0.384	0.038
Manager	0.152	-0.025	1.808	-0.051	0.160	-	-	-	2.699	-0.102
Teacher	10.031	0.198	7.845*	0.119	14.181**	0.245	-	-	1.930	0.085
Clerk	5.464*	0.141	12.403**	0.143	9.377**	0.191	1.263	0.079	5.101*	0.135
Labourer	6.602*	0.216	33.712**	0.314	17.131**	0.359	7.022**	0.146	3.145	0.147
Doctor	49.744**	-0.415	39.687**	-0.250	23.506**	-0.295	26.621**	0.265	15.585**	-0.233
Businessman	0.384	-0.044	-	-	1.487	0.091	23.862**	-0.250	1.151	0.078
Farmer	-	-	2.320	0.062	0.114	0.092	-	-	2.490	0.090
Driver	4.007*	0.122	4.789*	0.089	1.451	0.078	1.623	0.067	7.577**	0.165
Soldier	-	-	0.971	-0.041	5.582*	-0.150	0.239	0.027	-	-
Pilot	16.059**	0.256	10.072**	-0.136	19.108**	-0.288	1.272	-0.061	8.553**	-0.188
Seaman	0.494	-0.050	0.153	-0.019	0.780	-0.065	5.482	-0.130	0.795	-0.066
Technician	-	-	-	-	-	-	0.694	-0.052	1.353	0.135

** Significant at 5% and 1%

* Significant at 1%

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Table 27. Analysis of variance results

	F and B values									
	Language score		Numerical score		General knowledge		Mathematics score		English score	
	F	B	F	B	F	B	F	B	F	B
Quality	138.676**	3.408	17.702	0.834	115.822**	3.338	148.442**	3.951	131.953**	3.279
Location	251.371**	-4.787	169.998**	-2.690	103.569**	-3.284	164.807**	3.284	126.945**	-3.346
Size	-	-	20.793*	0.571	13.923	-0.731	8.094	0.450	0.181	0.077

** Significant at 1% and 5%

* Significant at 5% only

SCHOOL STAFFING AND RESOURCE CONSIDERATIONS

Table 28 examines the distribution of teachers by rural-urban and school-quality variables. The dominance of female staff in urban schools is noticeable (78.7 percent) as compared to the rural situation (52.7 percent). It also seems that rural schools receive a significantly higher proportion of lower grade teachers than urban areas.

Regarding the distribution of teachers in the high- and low-quality schools, it seems that fears by the general public that a high proportion of female teachers in primary schools may lower the quality of instruction cannot be substantiated. High-quality schools in this study have a high proportion of female teachers the majority of whom are married. In addition, high-quality schools have significantly more secondary-school-qualified teachers (41.8 percent) than low-quality schools (17.4 percent). There were also more teachers with high professional status — Education Officer Grade II D and above — in high-quality schools (19.0 percent) than in low-quality schools (3.7 percent). The duration of teaching experience per se was not a good indicator of excellence. Table 29 gives figures of teacher shortages by Region.

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Table 28. Teacher quality by school location and quality

Variable		Urban	Rural	Total	High quality	Low quality	Total
Sex	Male	26 (21.3)	44 (47.3)	80 (30.5)	41 (25.9)	44 (40.4)	85 (31.8)
	Female	133 (78.7)	49 (52.7)	182 (69.5)	117 (74.1)	65 (59.6)	182 (68.2)
	Total	169 (100)	93 (100)	262 (100)	158 (100)	109 (100)	267 (100)
Marital status	Single	74 (37.2)	30 (30.6)	104 (35.0)	33 (20.9)	41 (37.6)	74 (27.7)
	Married	125 (62.8)	68 (69.4)	193 (65.0)	125 (79.1)	68 (62.4)	193 (72.3)
Academic qualifications	Primary education	99 (58.2)	83 (87.4)	182 (68.7)	92 (58.2)	90 (82.6)	182 (68.2)
	Secondary education	71 (41.8)	12 (12.6)	83 (31.3)	66 (41.8)	19 (17.4)	85 (31.8)
Professional qualifications	Grade C	75 (46.0)	76 (77.6)	151 (57.9)	83 (48.1)	76 (69.7)	159 (59.6)
	Grade B	25 (15.3)	9 (9.2)	34 (13.0)	20 (12.7)	14 (12.8)	34 (12.7)
	Grade A	63 (38.7)	13 (13.3)	76 (29.1)	55 (34.8)	19 (17.4)	74 (27.7)
Ed. off.	Grade IIIC	6 (3.6)	9 (9.5)	15 (6.0)	2 (1.3)	13 (12.0)	15 (5.6)
	IIIB	71 (42.8)	56 (58.9)	127 (50.6)	72 (45.6)	57 (52.8)	129 (48.5)
	IIIA	65 (39.2)	23 (24.2)	88 (35.1)	54 (34.2)	34 (31.5)	88 (33.1)
	IID	3 (1.8)	0 (0.0)	3 (1.3)	3 (1.9)	0 (0.0)	3 (1.1)
	IIC	17 (10.2)	7 (7.4)	14 (5.6)	23 (14.6)	4 (3.7)	27 (10.2)
	IIB	4 (2.4)	0 (0.0)	4 (2.5)	4 (2.5)	0 (0.0)	4 (1.5)
Years of teaching experience	9 years or less	115 (54.8)	71 (70.3)	186 (68.6)	103 (65.2)	83 (76.1)	186 (69.7)
	10 - 21 years	42 (20.0)	20 (19.8)	62 (22.9)	40 (25.3)	19 (17.4)	59 (22.1)
	22 years or more	13 (6.2)	10 (9.9)	23 (8.5)	15 (9.5)	7 (6.4)	22 (8.2)

Note: Numbers in parentheses are percentages.

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Table 29. Shortage of teachers*

Region	Shortage of teachers			Teacher/ student ratio	Teachers as per number of streams		
	Grade A/B	Grade C	Total		Requirements	Present	Shortage
Dodoma	1,871	177	2,048	1:50	$\frac{4555}{7} \times 8 = 5,206$	3,805	1,401
K'injaro	2,707	402	3,109	1:53	$\frac{5842}{7} \times 8 = 6,677$	4,493	2,106
Lindi	420	535	955	1:50	$\frac{2512}{7} \times 8 = 2,879$	2,370	500
Coast	316	222	538	1:45	$\frac{2880}{7} \times 8 = 3,291$	2,352	339
Tabora	710	225	935	1:42	$\frac{3412}{7} \times 8 = 3,901$	3,196	705
Total	6,024	1,561	7,585	1:48	21,954	16,216	5,738

* The shortage could be a reflection of non-availability of trained teachers or of a lack of funds for paying them in the given Region.

Overall data show that the academic and professional qualifications of the teacher had an influence on performance. Hence, the need for a greater number of better trained teachers in primary schools.

The findings tend to support earlier ones (Saha 1983, p. 79) that "In general, the more rigorous and multivariate studies supported the notion that the better trained teachers produce better results". In addition, cumulative findings strongly support the notion that better trained teachers do make a difference in more advanced grades and especially for more difficult subjects.

One question that requires further research is the optimal level of formal education required for a person to make a good primary-school teacher.

Availability of teaching materials

In a follow-up questionnaire to teachers on the availability of teachers' guides and textbooks for the current syllabuses (Tables 30 and 31), slightly more low-quality schools reported having no teachers' guides and textbooks, which may, in part, explain the low-quality status of these schools. Urban schools also had differential access to the teachers' guides in their favour but not textbooks.

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Table 30. Availability of teachers' guides

Class	I		II		III		IV		V		VI		VII		Total	
Subject	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ
Swahili	2.9	1.7	2.9	2.7	2.2	1.7	4.3	0.9	1.6	0.1	1.4	1	1.3	0.9	2.4	1.4
Maths	2.6	1.1	2	2.1	3.2	2.1	2.1	1.1	1.8	0.7	1	1.1	1.1	0.9	2.6	1.3
English	-	-	-	-	0	0	.04	0.3	0.8	0.1	1	1.3	1	2.1	0.8	0.5
History	-	-	-	-	-	-	-	-	0.3	0	0.3	0	0.3	0.7	0.3	0.2
Geography	-	-	-	-	0.6	0.6	0	0	0.1	0	0.1	0	0	0	0.2	0.1
Science	-	-	-	-	0.8	0.7	1.1	0.4	1.2	.07	1.2	0.4	1.3	1	1.1	0.6
Siasa	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0
Domestic science	1.7	0.1	1.7	0.1	1.9	0.4	0	0.3	0	0	0	0	0	0	1.8	0.2

Data in Table 30 represent the average number of teachers' guides available in high- and low-quality schools. They show that, on average, high-quality schools were better supplied with teachers' guides than low-quality schools. The data, however, fall short of providing an optimal ratio of teachers to a guide. Even if such ratios were available, one would still wish to know how many streams a teacher taught. A ratio of say 1:1 would have different implications as compared to a school with the same ratio, streams and sessions but taught by two teachers.

In addition, apart from opinions gathered from teachers in this study, existing empirical evidence has not yet established which of the two -- teachers' guide or textbook availability -- has more impact on student performance. Hence, further research in this area is needed. The positive impact of textbooks has, however, been demonstrated (Hyneman 1981).

Close analysis of data in Table 31 shows that, on average, there were more textbooks in high-quality than in low-quality schools. Data also show that there was very little in subjects like history, geography, science, Siasa and domestic science. Thus low-quality schools seem to be systematically disadvantaged in both textbooks and teachers' guides.

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Table 31. Availability of textbooks

Class	I		II		III		IV		V		VI		VII		Total	
Subject	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ	HQ	LQ
Swahili	1:1.7*	1:0.3	1:1.6	1:0.5	1:0.5	1:1.1	1:0.4	1:0.4	1:0.2	1:0.6	1:0.3	1:0.6	1:0.6	1:0.3	1:0.8	1:0.5
Maths	1:1.5	1:0.8	1:1.7	1:0.6	1:0.7	1:0.7	1:0.8	1:0.6	1:0.5	1:0.5	1:0.5	1:0.4	1:0.3	1:0.4	1:0.8	1:0.8
English	-	-	-	-	1:0.5	1:0.4	1:0.4	1:0.7	1:0.4	1:0.8	1:0.1	1:0.06	1:0.2	1:0.3	1:0.3	1:0.4
History	-	-	-	-	-	-	-	-	1:0.6	1:0.2	1:0.2	1:0.3	1:0.3	1:0.3	1:0.4	1:0.2
Geography	-	-	-	-	0	0	1:0.2	1:0.1	1:0.2	1:0.08	1:0.04	1:0.3	1:0.3	1:0.3	1:0.1	1:0.1
Science	-	-	-	-	1:0.1	1:0.03	1:0.01	0	1:0.2	0	1:0.2	0	1:0.2	1:1.01	1:0.1	1:0.01
Siasa	-	-	-	-	0	0	0	0	1:0	1:0.1	1:0.02	1:0.05	1:0.1	1:0.03	1:0.05	1:0.04
Domestic science	1:0.5	1:0.1	1:0.4	1:0.2	1:0.1	1:0.03	0	1:0.03	0	1:0.04	0	1:0.04	1:0.04	0	1:0.1	1:0.1

* Ratio is pupil:textbook.

Given a choice between a teachers' guide or a textbook (Table 32) most teachers indicated that they would prefer to have a teachers' guide. First a guide contains instruction on how to teach new content. Secondly, it provides answers to problems that some teachers might find difficult to work out on their own, especially the UPE group of teachers. Finally, it contains more illustrations than a textbook. Yet the Tanzania Publishing House (TPH) preferred to produce textbooks faster than teachers' guides because of the greater profit margin.

In school systems all over the world textbooks are vital tools of teaching and learning. They are even more critically important in developing countries such as Tanzania where teachers and pupils often have limited or no access to other written materials at home.

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Table 32. Teachers' views on availability of teachers' guides and textbooks for current syllabus

Variable		High quality	Low quality	Total	Urban	Rural	Total
Teachers' guide							
	Yes	38 (35.2)	26 (24.1)	64 (29.5)	37 (34.3)	29 (26.9)	66 (30.6)
	No	70 (64.8)	82 (75.9)	152 (70.4)	71 (65.7)	79 (73.1)	150 (69.4)
	Total	108 (100)	108 (100)	216 (100)	108 (100)	108 (100)	216 (100)
Textbooks							
	Yes	43 (39.8)	27 (25.0)	70 (32.4)	35 (32.4)	36 (33.3)	71 (32.9)
	No	65 (60.2)	81 (75.0)	146 (67.6)	73 (67.6)	72 (66.6)	145 (67.1)
	Total	108 (100)	108 (100)	216 (100)	108 (100)	108 (100)	216 (100)

Note: Numbers in parentheses are percentages.

Heyneman, Farrel and Sepulveda (1978, pp. 1-2) contend that:

Books have the capacity to deliver massive amounts of new information to the most remote locations.... If the content is not understood, books can be studied again and again; if quickly understood, individuals can read ahead. Ideally books can be delivered to all children equally, urban, rural, rich and poor alike.

These authors add that:

...compared to other commonly measured characteristics such as teacher training, class size, teacher salaries, boarding facilities, grade repetition, etc., the availability of textbooks appears so consistently associated with higher achievement levels that as an instrument for affecting learning they represent a reasonable choice (p.3).

The significance of having reading materials in primary schools cannot be over-emphasized. Pupils cannot be expected to be literate where there is virtually nothing to read, as reflected in this study. Ndabi (1985), using a large sample of primary schools in Tanzania, confirmed this strong relationship between textbook availability and performance in the primary-school leaving examination. In this study, while the variations are not pronounced (characteristically there was very little to be shared), high-quality school teachers and pupils seem to have an edge in accessibility to key resources for instruction. The practical subjects such as agriculture, handicraft, technical training, health science, and arts and crafts suffered most in

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deprivation of learning resources. Hence, the Ministry of Education and the Institute of Education are duty bound to ensure that enough textbooks are produced and used in schools.

SCHOOL CLIMATE

The major attributes on school climate that were considered in this study were overall school working atmosphere, the relationship between various groups in the school, and linkages with parents and the surrounding community. Notions of co-operation, participation and reciprocity received most attention. The following sections contain detailed findings on these attributes.

Data in this study showed that, apart from having adequate and well qualified teachers, as well as teaching materials, the third most important factor which either accounted for good performance or affected the quality of education in general was good school climate. Eicholtz (1984, page 22) maintains that "positive school climate results in high motivation in students and staff. It is the catalyst that makes people willing to do more to help the institution and to reach their goal." He adds that positive school climate "results in the commitment of everyone in the institution to be a winner and to produce winners." "It results from team effort, involving the certificated and classified staff members, students, parents, district staff and supportive school board."

One consideration in the analysis of determinants of instructional quality and effectiveness was the quality of the headteacher of the school (Table 33). Except for educational level and training qualifications, where the differences are not that pronounced, headteachers of high-quality schools are much older, predominantly male, more experienced both as teachers and heads, enjoy higher professional status and tend to stay in the same school longer. This was also confirmed by Ndabi (1985) who found that both experience and duration of headship were positively related to pupil performance. As a probable artefact such schools are also inspected more often.

In an attempt to delineate the leadership behaviour associated with high student achievement, teachers in each of the top and bottom ten schools were asked to rate their headteachers, in confidence, along several lines related to leadership styles (Table 34). No significant difference in leadership style between high- and low-quality schools seemed to emerge. It seems that either the headteachers do not differ significantly or there was

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a rating artefact in the form of fear and acquiescence in case the headteachers came to know how they were rated by specific individual teachers.

Table 33. Qualities of headteachers

Variable	High-quality schools	Low-quality schools	
Age	42.3	36.6	
Sex	1 : 0.33	1 : 1	Ratio for male : female
Educational level	1:0.55/0.11/0.33	1:0.66/0.11/0.22	STD 12/10/8
Training	1:0.55/0.11/0.33	1:0.66/0.11/0.22	Grade A/B/C
Experience as a teacher	20.1	11.4	
Experience as a headteacher	9.33	7.42	
Current status	MS 3	MS 2	
Duration of stay at the school	2.9	1.9	

Teachers in both high- and low-quality schools, however, felt that leadership styles that enhance academic achievement included the push to ensure student's books were marked, a balance in the use of time for academic and other activities, a striving to improve the quality of students through coaching after school and during holidays, and prompt acquisition of school facilities.

Headteachers' views on how to achieve better academic results clearly emphasized the use of past examination papers, more exercises and homework, coaching and availability of more time for academic activities. Shortages of teaching materials and qualified teachers were held to be the culprits in poor quality education.

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Table 34. Rating of leadership style of the headteachers by other teachers

Variable	High quality N = 103				Low quality N = 50			
	Very good	Good	Fair	Poor	Very good	Good	Fair	Poor
I. The way he handles teachers' matters								
1. Personal problems	12(11.7)	38(36.9)	49(39.9)	4 (3.9)	9(18.0)	23(46.0)	15(30.0)	3 (6.0)
2. Medical problems	7 (6.8)	50(48.0)	34(33.0)	12(11.7)	7(14.0)	19(38.0)	19(38.0)	5(10.0)
3. Family problems	4 (3.9)	42(40.8)	53(51.5)	4 (3.9)	10(20.0)	20(40.0)	17(34.0)	3 (6.0)
4. Housing problems	5 (4.9)	27(26.2)	55(53.4)	16(15.5)	2 (4.0)	17(34.0)	24(48.0)	7(14.0)
5. General problems	6 (5.8)	41(39.8)	49(47.1)	7 (6.8)	3 (6.0)	24(48.0)	22(44.0)	1 (2.0)
II. Handling of pupils' matters								
1. Personal problems	10 (9.7)	44(42.7)	45(43.7)	4 (3.9)	2 (4.0)	29(58.0)	18(36.0)	1 (2.0)
2. Medical problems	10 (9.7)	44(42.7)	49(47.6)	0 (0.0)	7(14.0)	26(52.0)	15(30.0)	4 (8.0)
3. Disciplinary problems	12(11.7)	44(42.7)	39(37.9)	8 (7.8)	5(10.0)	21(42.0)	21(42.0)	3 (6.0)
4. General problems	7 (6.8)	41(39.8)	46(44.7)	9 (8.7)	2 (4.0)	26(52.0)	20(40.0)	2 (4.0)
III. Degree of academic push to ensure:								
1. Teachers engage themselves in meaningful teaching and learning	8 (7.8)	44(42.7)	51(49.5)	0 (0.0)	7(14.0)	23(46.0)	20(40.0)	0 (0.0)
2. Continuous history of success	5 (4.9)	36(35.0)	56(54.4)	6 (5.8)	4 (8.0)	26(52.0)	19(38.0)	1.(2.0)
3. Lesson plan and notes are frequently inspected	13(12.6)	49(47.6)	38(36.9)	3 (2.9)	10(20.0)	25(50.0)	14(28.0)	1 (2.0)
4. Student's copybooks are marked	13(12.6)	49(47.6)	38(36.9)	3 (2.9)	10(20.0)	25(50.0)	14(28.0)	1 (2.0)
5. Students make corrections for wrong answers	46(44.7)	45(43.7)	11(10.7)	1 (1.0)	21(42.0)	26(52.0)	2 (4.0)	1 (2.0)
6. Balance in the use of time for academic and other activities	40(38.8)	50(48.5)	9 (8.7)	4(3.9)	23(46.0)	22(44.0)	5(10.0)	0 (0.0)
7. Strive to improve the quality of students through coaching after school and during holidays	43(41.7)	47(45.6)	8 (7.5)	5 (4.9)	25(50.0)	15(30.0)	7(14.0)	3 (6.0)
8. Prompt acquisition of teaching/learning materials	35(34.0)	51(49.5)	11(10.7)	6 (5.8)	16(32.0)	27(54.0)	6(12.0)	1 (2.0)
9. School has adequate facilities	48(46.6)	31(30.1)	13(12.6)	11(10.4)	17(34.0)	19(38.0)	12(24.0)	2 (4.0)

Note: Numbers in parentheses are percentages.

No significant difference between leadership style and student performance between high and low quality schools.

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Data in Tables 35 and 36 also show that headteachers were aware of the accepted pedagogical methods that need to be used by teachers to help slow learners catch up with the pace of instruction, fast learners forge ahead while sustaining their interest in learning, and pupils with special problems to catch up. Future research should focus more on whether or not some of these practices were more frequently used in high-quality than low-quality schools, and should monitor the effect they have on performance, if any.

Table 35. Headteachers' views on quality of education and factors affecting performance

Factors affecting the quality of education in general	F	Factors accounting for good performance	F	Factors accounting for poor performance	F
Shortage of teaching materials, e.g. books, textbooks, copybooks	18	Having hard-working teachers	8	Lack of qualified and experienced teachers	4
Lack of adequate and well qualified teachers (most are UPE cohort)	18	Sustaining good cooperation among teachers	5	Shortage of teach- ing and learning materials	3
Teachers' lack of motivation	8	Having adequate teaching and learn- ing materials	4	Wastage of much time in salary collection and looking for essen- tial commodities	4
Lack of staff quarters on/near school	8	Relating teaching to real life situations	4	Little assistance from parents	2
Parents' ignorance about the importance of education leading to poor attendance	7	Encouraging coaching in the evenings, weekends-- Saturdays and during holidays	3	Lack of transport facilities leading the teachers to come late	2
<u>Other strong reasons included:</u> poor economic back- ground of pupils (6), frequent changes of syllabi (4), and urban ecology leading to hooliganism (4)		Other key factors included: good school discipline (2), frequent inspection (2), and good teaching with pupils motivated to learn (2)			
		Other factors included: inadequate inspectorate services (1), poor attendance (1), and female teachers concentrating on their affairs			

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Table 36. Headteachers' views on methods used to enhance performance

Practices used to get students selected for sec. education	F	Help slow learners catch up with the pace of instruction	F	Help fast learners forge ahead while sustaining their interest in learning	F	Pupils with special problems to catch up	F
Give students past examination questions to work on	4	Provide individual tutorials, guidance and extra lessons	24	Give them extra work and harder exercises	21	Poor students should be allowed to repeat	2
Provide more exercises and homework for students to work on	4	Group them with faster learners and assign the fast learners	9	Provide them with supplementary books to read	7	Students with auditory problems should be seated in front row	2
Special coaching just before examination day	3	Give a lot of simple exercises, and use simple and clear teaching aids	7	Allow them to read and discuss following topics on their own	3	Stammering -- teachers and other students should tolerate them	1
Exempt from Halaiki and similar social activities	3	Carry out regular revision	3	Group them and assign the task of helping slow learners	3	Involve parents	1
Coaching, particularly during holidays	2	Carry out revision	3	Reward them	3		

Follow-up questionnaires also sought teachers' views on how headteachers could be more involved to ensure success. The most frequently mentioned reasons are presented in Table 37 in order of rank. Co-operation among teachers, discipline and hard work seem to feature consistently.

Data also showed that there is a cordial relationship between pupils and their teachers in the majority of schools, although again this could be an artefact.

Chinapah (1983, page 163) emphasizes the significance of maintaining good relationships for it is "among the 17 key home and school predictors of scholastic performance in the national school system and in all school sectors". Hence, educational benefits measured by scholastic performance are maximized only in supportive environments.

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Table 37. Ways of involving the headteacher more in order to ensure success

Ways of involvement	F
1. Maintain co-operation with other teachers and parents	57
2. Seek and accept advice from fellow teachers	17
3. Maintain good discipline among pupils and the school in general	15
4. Make regular inspection of teachers' performance and monitor pupils' progress	13
5. Maintain good leadership style and help in solving teachers' problems	13
6. Struggle to get enough materials required for academic and non-academic activities at the school	10
7. Should be strict on the performance of teachers and practice fairness in allocating duties to teachers	9
8. Motivate teachers and pupils to perform their duties well	7
9. Should make follow-up of resolutions passed by various committees	7
10. Be exempted from teaching duties and adult education	6
11. Should be well acquainted with school affairs	6
12. Work hard and search for enough competent teachers	6
13. Should be involved in actual teaching in order to know contemporary problems of the classroom	5
14. Maintain friendly relations with staff and pupils	3
15. Seek advice from various experts -- agriculture	3
16. Arrange for staff members to attend various seminars	3
17. Make frequent consultations with government and party leaders on various matters	3
18. Hold staff meetings from time to time	1

The consistent pattern shown by the effects of pupil-teacher interactions on the cognitive development of primary-school pupils, therefore, calls for a determined effort to improve the internal life in the classroom as it has the most significant influence on scholastic performance of pupils. When teachers were asked for proposals to improve school performance, the factors mentioned most frequently included improved classroom teaching, improved classroom discussion, hard work by teachers and availability of books (Table 38).

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Table 38. Proposals for educational modification

Proposals	Spoilt informa- tion	Strongly Disagree	Disagree	Doubtful	Agree	Strongly Agree	Missing information
Increase books	80 (2.4)	158 (4.7)	145 (4.3)	151 (4.4)	666 (19.6)	1753 (51.6)	442 (13.0)
More copybooks	61 (1.6)	189 (5.6)	210 (6.2)	219 (6.5)	709 (20.9)	1536 (45.2)	471 (13.8)
More homework	62 (1.8)	284 (8.4)	337 (9.9)	393 (11.6)	661 (19.5)	1100 (32.4)	558 (16.4)
Transfer teachers	42 (1.2)	652 (19.2)	592 (17.4)	383 (11.3)	453 (13.3)	667 (19.6)	606 (17.8)
Change teachers	42 (1.2)	862 (25.4)	553 (16.3)	278 (8.2)	359 (10.6)	772 (21.3)	579 (17.1)
Improve class teaching	46 (1.4)	142 (4.2)	103 (3.0)	132 (3.9)	551 (16.2)	1965 (57.9)	456 (13.4)
Better teacher-student relationship	43 (1.3)	182 (5.4)	172 (5.1)	243 (7.2)	700 (20.6)	1568 (46.2)	487 (14.3)
More pensions	33 (1.0)	276 (8.1)	302 (8.9)	339 (10.0)	630 (18.6)	1253 (36.9)	562 (16.6)
Provide lunch	36 (1.1)	369 (10.9)	286 (8.4)	288 (8.5)	557 (16.4)	1302 (38.4)	575 (16.9)
More practical work	32 (0.9)	156 (4.6)	131 (3.9)	222 (6.5)	712 (21.0)	1616 (47.6)	526 (15.5)
Improve class discussions	35 (1.0)	104 (3.1)	99 (2.9)	177 (5.2)	603 (17.8)	1832 (54.0)	545 (16.1)
More teacher effort	29 (0.9)	125 (3.7)	112 (3.3)	160 (4.7)	614 (18.1)	1823 (53.7)	532 (15.7)
Less play time	29 (0.9)	393 (11.6)	453 (13.3)	340 (10.0)	605 (17.0)	937 (27.6)	638 (18.8)
Less processions	14 (0.4)	441 (13.0)	448 (13.2)	399 (11.8)	515 (15.2)	820 (24.2)	756 (22.3)
Other	32 (0.9)	140 (4.1)	76 (2.2)	74 (2.2)	105 (3.1)	532 (15.7)	2436 (71.8)

These findings tend to confirm the emerging views that it is the classroom process that matters more than the mere presence of quality teachers, materials and equipment. In short, the good qualities of the teacher must be effectively used along with the right materials in order to bring about desired outcomes.

Although school lunches were not among priority proposals for educational modification, it is important to note, however, that about 54.8 percent of students feel that providing lunch would improve performance. Kurrien (1983) maintains that a small investment in school lunches has an appreciable impact on both the attendance and performance of students from disadvantaged backgrounds. Indeed, it is difficult to imagine a hungry child concentrating on what is being taught, regardless of the quality of teaching. Hence, programmes aimed at enabling students to get a meal at school, however simple, might have a tremendous impact on making pupils more attentive and ready to learn.

When children were asked informally to give their reasons for attending school (Table 39) their responses indicated that, despite consistent talk by Party and Governmental leaders to the effect that the major goal of primary education was to prepare

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primary-school pupils for life in rural areas, their main objective was to know how to read and write, to be selected for secondary education and then to become good citizens. Other reasons were secondary to these three. Hence one can argue that a change of attitude towards rural life will only occur when social, economic and material conditions, along with the expectations of parents and pupils, have changed. Currently it is higher education that guarantees bread and butter in Tanzania, and children are very much aware of this fact.

Table 39. Reasons for attending school

Reason	Spoilt informa- tion	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	Did not attempt
Be a good citizen	80 (2.4)	226 (6.7)	124 (3.7)	121 (3.6)	458 (13.5)	1797 (52.9)	589 (17.3)
Read and write	59 (1.7)	115 (3.4)	68 (2.0)	77 (2.3)	568 (16.7)	1909 (56.2)	599 (17.6)
Higher education	55 (1.6)	131 (3.9)	105 (3.1)	176 (5.2)	496 (14.6)	1938 (54.1)	594 (17.5)
Employment	47 (1.4)	246 (7.2)	233 (6.9)	357 (10.5)	547 (16.1)	1287 (37.9)	678 (20.0)
Skill training	51 (1.5)	183 (5.4)	153 (4.5)	284 (8.4)	568 (16.7)	1421 (41.9)	734 (21.6)
Farmer or good worker	35 (1.1)	110 (3.2)	170 (5.0)	182 (5.4)	569 (16.8)	1535 (45.2)	794 (23.4)
Preparation for life	35 (0.7)	148 (4.4)	94 (2.8)	145 (4.3)	446 (13.1)	1699 (50.0)	838 (24.7)

The teachers in both high- and low-quality schools were asked to rate their schools in respect of 15 variables ranging from attitudinal changes to agricultural production (Table 40). The two categories of schools differed appreciably in 8 of the 15 variables. It seems that teachers in academically low-quality schools consistently felt that their schools were better in shaping attitudes for rural functioning, were low in discipline but better in shaping attitudes towards manual work, involvement in community activities, production for self-reliance, level of activity, and leadership qualities of pupils. While these results could be artefacts, that is, a good excuse for poor performance in academic matters, it is interesting to note that academically poor schools evaluate themselves high in education-for-self-reliance-related activities as compared to the way the high-quality schools view themselves.

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Table 40. Teachers' rating of overall school quality

Variable	High quality (N=105)			Low quality (N=55)		
	Very good	Average	Poor	Very good	Average	Poor
Pupils' attainment of basic attitudes and values for functioning and survival in predominantly rural ecology	32 (30.5)	47 (44.8)	26 (24.8)	19 (34.5)	21 (38.2)	15 (27.3)
Parents' rating of the school's excellence in terms of preparation of pupils for rural life not selection for secondary education	27 (25.7)	25 (23.8)	52 (49.5)	15 (27.3)	18 (32.7)	22 (40.0)
Pupils' performance in cultural activities	44 (41.9)	36 (34.3)	25 (23.8)	24 (43.6)	17 (30.9)	14 (25.5)
Overall school discipline	47 (44.8)	52 (49.5)	7 (6.7)	13 (23.6)	36 (65.5)	6 (10.9)
School-community relationship	38 (36.2)	47 (44.8)	20 (19.0)	20 (36.4)	23 (41.8)	12 (21.8)
General cleanliness	50 (47.6)	38 (36.2)	17 (16.2)	26 (47.3)	20 (36.4)	9 (16.4)
Pupils attitude towards hard and manual work	20 (19.0)	47 (44.8)	28 (26.7)	22 (40.0)	24 (43.6)	9 (16.4)
Schools' involvement in community ESR activities	29 (27.6)	57 (54.8)	19 (18.1)	24 (43.6)	20 (36.4)	11 (20.0)
Community involvement in schools ESR activities	26 (24.8)	53 (50.5)	24 (22.9)	13 (23.6)	4 (7.3)	38 (69.1)
Effort to engage in productive activities for school self-sufficiency	32 (30.5)	54 (51.4)	19 (18.1)	26 (47.3)	25 (45.5)	4 (7.3)
Respect for adults	35 (33.3)	64 (61.0)	6 (5.7)	17 (30.9)	26 (47.3)	12 (21.8)
General level of activity in school	18 (17.1)	44 (41.9)	43 (41.0)	22 (40.0)	32 (58.2)	1 (1.8)
Academic performance overall	38 (36.2)	60 (57.1)	7 (6.7)	19 (34.5)	21 (38.2)	5 (9.1)
Leadership qualities provided	46 (43.8)	49 (46.7)	10 (9.5)	34 (61.8)	15 (27.3)	6 (10.9)
Production of agricultural products	23 (21.9)	29 (27.6)	53 (50.5)	24 (43.6)	24 (43.6)	7 (12.7)

Note: Numbers in parentheses are percentages.

The findings pose an interesting question on whether quality of primary education, which is meant to prepare over 95 percent of school leavers for life in rural or urban centres, should be judged basically on academic criteria or on all components of

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ESR, which include, in addition to preparation for rural life, mastery of the basic skills of literacy and numeracy. For the Tanzanian situation a composite examination of all facets is necessary, but nothing can be a substitute for attainment of basic literacy.

SCHOOL INSPECTION

Data in Tables 41 and 42 show that, overall, 37.7 percent of schools were neither inspected nor visited in 1980. Regularity of visits and inspection was highest in Kilimanjaro (74.1 percent) and lowest in Dodoma (53.9 percent). Coast had the second highest number of visits and inspections, which could be explained by easy accessibility of schools in both Dar es Salaam and Kilimanjaro. Regions which had the highest number of schools visited and inspected also had better overall performance. Likewise the high-quality schools were inspected more often than low-quality schools.

Table 41. School inspection, 1980

Region	No. of schools	Major inspection	Follow-up inspection	Special inspection	Visits	Total visits and inspections	% visited
Dodoma	473	123	---	9	123	255	53.9
Kilimanjaro	684	231	---	5	217	507	74.1
Lindi	318	92	4	44	49	189	59.4
Coast	389	79	5	2	168	254	65.3
Tabora	469	100	7	19	132	259	55.2
Total	2,333	625	16	79	743	1,463	62.3

Table 42. Frequency of school inspection, 1977 - 1981

Variable	High quality (N=45)	Low quality (N=45)	Urban (N=45)	Rural (N=45)
General inspection	41 (91.1)	23 (51.1)	43 (95.6)	21 (46.7)
Follow-up inspection	16 (35.6)	9 (20.0)	14 (31.1)	11 (24.4)
Other forms of inspection	3 (6.7)	6 (13.3)	3 (6.7)	6 (13.3)

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Table 42 shows that high-quality schools were more frequently inspected than low-quality schools. Urban schools were also more frequently visited because of ease of access than rural schools. About 1/3 of schools were not visited at all in a full year.

Frequent school inspection and teacher supervision is important in order to facilitate the professional growth of the teachers, primarily by giving the teacher feedback about classroom interactions and helping the teacher make use of that feedback in order to make teaching more effective. Glatthorn (1984) adds that frequent school inspection is important in order to identify different growth needs and learning styles of teachers, and identify teachers who need to benefit from in-service programmes.

Given the amount of doubt that has been cast on UPE teachers, frequent supervisory visits, which are preceded and followed by a discussion session, can also provide the opportunity for systematic improvement of such teachers.

PRIMARY SEVEN LEAVING EXAMINATIONS AS AN INDICATOR OF QUALITY VARIATION

Table 43 gives the highest scores obtained and the cut off-points for selected students in 1979, 1980 and 1981 for the study Regions by sex and location. The data are not complete.

In addition, the figures should be taken as indicators since they do not cover the whole range of performance in all the Regions. It is apparent however, that:

- (a) For Dar es Salaam, the cut-off point for girls was consistently lower than that of boys over the three years. Similarly, the highest scorer among those selected was a boy, except in 1979 when a girl outshone the boys. It is ironical to imagine a pupil scoring 56 points out of 200 going to school in the same class with one who scored 177.6 points. The preselection practice seems to have some weakness.
- (b) In the Coast Region girls seem to do fairly well as compared to boys and among those selected there is not much variation both between and within sex as one finds in Dar es Salaam.
- (c) Similarly, in Bodoma the variations are not as pronounced as in Dar es Salaam but girls seem to enter secondary education with comparatively low marks.
- (d) For Kilimanjaro, the cut-off points are consistently high and girls outshone boys in both 1980 and 1981.

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- (e) Lindi seems to have high entry points, although the cut-off points are low and girls seem to be worse off.
- (f) Tabora seems to be doing consistently well and one of the best performances came from there in 1980. The cut-off points are also good and sex variations are not very pronounced.

Table 43. Highest and cut-off points for selected students, 1979 - 1981

	1979				1980				1981			
	Boys		Girls		Boys		Girls		Boys		Girls	
	H/S	COP	H/S	COP	H/S	COP	H/S	COP	H/S	COP	H/S	COP
Dar es Salaam	169	108	173	75	189	138	174	114	177.6	128.8	164.8	56
Coast	173.5	110.5	169	125	157	94	160.7	99	173.6	105.6	173.6	115.2
Dodoma	177	126	172	98	186.7	127.7	185.7	92.7	167.2	103.7	160	88.8
Kilimanjaro	196	142	187	124	172	118	176	108	167.2	119.2	168.8	107.2
Lindi	198	101	193	78	181	118	151	90	172.8	110.4	150.4	75.5
Tabora	180	140.7	174	144.6	185	129	186	111	177	138.4	180.8	115.2

*Marks for the Year 1981 were out of 250 so were converted to a grade of 200 for consistency sake.

The rationale for introducing differential cut-off points (COP) was to correct inequalities of access to secondary education. In the process of implementing this policy, however, some mediocre cases have been enrolled into secondary schools, a factor that has tended to increase inequalities of outcomes. Hence the Ministry of Education decided to reintroduce examinations at Standards IV and X intended to weed out students who cannot cope with regular classroom learning.

Whereas it is not intended to give the impression that one is opposed to equity policies, it is, however, maintained that compensatory education coupled with disproportional allocation of resources and inputs, in favour of less privileged regions, would have more far reaching effects than reliance on quotas. There is no evidence whatsoever to show that the quota system has helped backward Regions to catch up at higher levels, e.g. in diploma and degree-granting institutions. Indeed, there is evidence to suggest that the institution of private secondary schools negates the very essence of the equity policy and that the ethnic representations in higher and tertiary institutions has not been changed by the quota system.

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GENERAL RECOMMENDATIONS

1. The policy formulation and implementation process in Tanzania involves unnecessary haste which does not allow adequate time for reflection and rational decision-making. Existing expertise is seldom used. It is quite evident that Tanzania is already endowed with a number of qualified people who can assist both the Party and Government in making more rational educational policies. These people need to be consulted and involved throughout the process of policy formulation and implementation. It seems that undue secrecy in the policy-making process shelters ignorance and blocks objective challenges which would allow better alternatives to be articulated. The introduction of Education for Self-Reliance, Universal Primary Education, and University for Workers ideas are cases in point. All three have faced very serious reversals or setbacks after a great deal of damage had been done to the quality of education.
2. Subjective appointments to key positions and frequent staff turnover impinge on quality maintenance and create insecurity among key bureaucrats. It is suggested that there is a need to have search committees in each Ministry comprised of reputable officials who use objective criteria to select outstanding men and women for key positions in educational management in the country. Once selected they need to be encouraged and supported to stay on the job for a fixed tenure unless proved incompetent by the committee.

A minimum period of five years in office -- to match with the term of an elected government -- would be desirable. The incumbent could reapply after the five years and would receive equal consideration with new applicants.

It seems that a precedent has been created in Tanzania for not posting a person back to teaching positions, once he has been appointed to an administratively senior position, even if maintaining the same salary. This stance has to be abandoned by starting to build a system that ensures that circulation of staff is possible and welcome.
3. Curricula for primary schools in Tanzania ought to be re-examined. More serious thought ought to be directed at the function of primary education in Tanzania. Is it meant to prepare pupils for secondary education or for life? Or both? If primary education is to cater adequately for the needs of the 5 percent who are selected for secondary education, as well as the 95 per cent who are not selected, primary-school

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curriculum satisfactory for both ought to be developed. It ought to emphasize mastery of the 3Rs. It must also emphasize development of right attitudes, values and expectations among staff, parents and pupils as well as the community at large. It must also emphasize the need for schools to be self-reliant by meeting some of the upkeep costs through engagement in meaningful, educationally related, productive projects. Schools should also strive to serve as educational resource centres for the community through exemplary projects or by providing advice and resource inputs that are within their capability. Environmental education, which ought to be provided, should emphasize understanding of rural and urban problems — organized environment, dirty water and surroundings, poor housing, wanton destruction of forests in search for firewood and charcoal, poor farming habits, poor feeding habits and family planning. Opportunities for learning while students practise, and being able to practise what they learn, also need to be made available. Although only a few candidates are selected for secondary education, the system should allow the best ones to be selected.

Other critical factors which require reflection are how many disciplines need to be taught? What is the most appropriate level for introducing them? How can they be reconciled with the needs of society and those of the learners in the areas in which they live (Kurrien 1983). A close study of middle-school practical subject syllabi for 1955-1961 might provide an excellent insight into how to prepare pupils for life as well as urge practical subjects in teaching theoretical notions and vice versa (Ministry of Education, 1960a).

4. Capital expenditure on primary education in Tanzania has been very low. The learning environment in some schools is so poor that it cannot be conducive to effective learning. Despite frequent outcries about poor economic conditions, it is useful to question how the country manages to build multi-million-shilling stadia and large party buildings in some Regions while children are educated in ramshackle windowless and doorless buildings, sitting on the floor, using each other's backs as desks to write on and having no books to read. Where do our priorities lie?

One might also wish to know whether available resources are efficiently used. Has the Government fully mobilized resources for this level of education — provision of free labour by parents, reliance on more local expertise (making burnt blocks in order to improve the quality of buildings) and encouraging private institutions and local authorities to

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build and own schools? Area commissioners, development directors and education officers can definitely do more on this aspect of mobilizing local resources.

5. The study findings also showed that there was disparity in performance between urban and rural schools which was caused by urban schools being favoured in the distribution of high-quality teachers and better access to teaching and learning materials. Bonuses and fringe benefits that might attract more high-quality teachers into rural schools should be encouraged. The Ministry of Education should, whenever possible, curtail transfers of single, better educated, high-status teachers to urban areas in order to help reduce the imbalance.

It should be realized that, whereas schools can undertake the training, they cannot also be expected to provide motivation as well as all other support systems required to enhance learning and to ensure that pupils function as useful members of society on completing school. Parental stimulation, encouragement and reinforcement, appreciation of better performance as well as monetary and material support, are required. These factors were noted to affect performance substantially in Dar es Salaam and Kilimanjaro as compared to Dodoma. Hence the Party and Government need to co-operate with educators in combating problems of absenteeism -- whatever reasons are provided -- truancy, early pregnancies or negative attitudes towards school.

It should be realized that the mere acquisition of functional knowledge and skills is not enough to produce a self-reliant individual. Support in providing tools required for implementing what is learnt at school, community acceptance and support of one's activities and a ready market for produce are necessary if training efforts are to bear fruit. Hence, co-operation among various strategic ministries is essential.

6. Performance was found to be poorest in mathematics and English. A follow-up survey revealed that teachers of these subjects were ill-prepared and seldom insisted on pupils making corrections of sums that they had done incorrectly. Some were doubtful about the accuracy of what they taught, and on many occasions taught erroneous content or distorted facts. Thus, one cannot expect pupils to learn the correct content given such a situation. Therefore a teacher whose English is not good enough, or who is not qualified to teach English, must not be allowed to teach in English. It does not

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seem that this applies and efforts should be made to produce quality teachers for the educational system. The assumption that every teacher can teach all subjects in primary schools with confidence is not only erroneous but is often based on the premise that they did exceptionally well in all subjects at Standard VII or Form IV level, which is not self-evident.

It is therefore recommended that the Ministry of Education should endeavour to train specialized teachers in four broad areas: language(s), science (to include mathematics, agricultural and general science), general knowledge (to integrate geography, history, siyasa (politics) and current affairs), and environmental and technical education (to include health science, homecraft, handicraft and art). Current teaching staff should be helped to identify which of the four categories they are most concerned with, and those who are needy should be assisted through in-service programmes to gain required skills to enable them to function effectively in the chosen categories. Alternatively, they ought to be assisted to look for other jobs, and where necessary, some need to be retired in the interest of quality education for children in Tanzania.

7. The study findings also revealed that gender bias, age, pre-school experience, occupational preferences and location of school affected pupil performance. Hence, support for equality of opportunities between sexes and realization of the fact that women are equal achievers (Chinapa 1983) can help correct imbalances in this area. Pre-school programmes for children should be encouraged. Early beginning of school -- at age 6-7 -- should be the goal.
8. The study findings show that the current Standard Seven Leaving Examination does not test for one's preparation for life. It might be necessary to set examinations for all subjects taught -- Swahili, English, science and hygiene, general knowledge (geography, history, siyasa and current affairs), agriculture, homecraft/handicraft -- subjects which also form a core around which biases are organized at secondary-school level. Conducting studies aimed at finding out primary-school leavers' problems, as directed by The President's office in 1984, may be a waste as it is well known that neither content nor the examination system are geared to preparing pupils for life. On the other hand, the problems of primary-school leavers are well known as they are common to the peasantry in the whole country. They include finding a job, continuing with productive education and finding meaning in rural life.

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FRAMEWORK FOR MONITORING SCHOOL QUALITY IN TANZANIA

A. Global-level analyses

- i. Explicitness of policies and coherence of strategies for implementing them
- ii. (a) Quality and stability of key bureaucrats, technocrats
(b) Competitiveness of posts, recruitment procedure, motivation, retention, transfer and turnover-rate
- iii. Financial and material commitment
- iv. Curricula - soundness in terms of relevance and balance
- v. Home background

B. School-level analyses

i. Home-school interaction

- (a) Student's home study activities -- reading, listening, actual study
- (b) Hours of homework
- (c) Involvement of parents and others in the house study routine
- (d) Encouragement/reinforcement of good performance
- (e) Parental aspirations for the educational attainment of their children
- (f) Parents' ambitions for the child
- (g) Frequency of parent-teacher conferences

ii. Quality of the physical plant

- (a) Adequate classrooms
- (b) Safe buildings which are conducive for teaching and learning at all times
- (c) Adequate desks, chairs, tables and cupboards
- (d) Cleanliness -- classrooms, workshops/offices/staff quarters (if any), washroom, school compound
- (e) Optimal and educative use of space

iii. Administration

- (a) Favourable working climate
- (b) Cohesiveness between administration/staff/students/community
- (c) Sound plans, well organized
- (d) Co-operation
- (e) Involvement
- (f) Free-flowing communication
- (g) High leadership qualities espoused
- (h) Regular and fair evaluation of staff
- (i) Adequate teaching-learning materials

iv. Teachers

- (a) Well-trained, competent, regular in-service courses
- (b) Motivated to teach well
- (c) Satisfied - salary (amount and timely pay), housing, posting, nature of work, terms of service
- (d) Appropriate attitudes and values for training pupils for further education and for life

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Figure 8 (contd)

- (e) Hard-working, punctual, prepared,, spends time on corrections, uses a variety of methods and teaching aids
- (f) Good character -- well disciplined
- v. Adequate teaching/learning materials
 - (a) Teachers' guides/charts/chalk
 - (b) Textbooks/copybooks, pens, pencils, rulers
 - (c) Other essential apparatus and equipment
- vi. Pupil performance
 - (a) Strive and expect to be literate and numerate
 - (b) High interest and enjoyment in all subjects
 - (c) Like school, regular attendance, desire to succeed in all school activities
 - (d) Cleanliness - body, clothes, mental health
 - (e) Good character (highly disciplined)
 - (f) Value further education
 - (g) Positive attitude towards living and working in one's community if not selected for secondary education
 - (h) Pre-school experience
- vii. Performance in school projects
 - (a) Application of knowledge and skills gained in class-room
 - (b) Serve as a core of instruction
 - (c) Development of co-operation and leadership initiative
 - (d) Use of local inputs (animal compost/manure, materials, skills)
 - (e) Ability to serve as a model in the locality
- viii. Performance in extra-curricula activities
 - (a) Awards gained in sports, games, clubs and associations
 - (b) Amount of preparation involved
 - (c) Amount of skills used
- ix. Success in preparing students for life
 - (a) Accepted attitudes and values
 - (b) Knowledge and skills
 - (c) Materials and equipment to start life
 - (d) Enabling the community to accept him as a non-failure and assign him a useful role
- x. School-community relationship
 - (a) Co-operation expressed in joint activities
 - (b) Cohesiveness -- in solving disciplinary, attendance or resource problems
 - (c) Learning from each other's experience
- xi. School as a resource centre
 - (a) Advice to the community
 - (b) Supply of inputs within their capability

Figure 8. Framework for monitoring school quality in Tanzania

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9. The goals of primary education in Tanzania are diffuse. They need to be explicitly redefined in order to reflect the major areas of emphasis proposed and summarized in Figure 8.
10. The theoretical model. The study was initiated with several purposes in mind, one of which was extensive review of the literature and empirical evidence so as to identify factors affecting the quality of primary education in general. Figure 1 summarizes these attributes. Review of the literature, empirical studies and the current study identified some of the key attributes which need special attention in future studies on the quality of education. The derived framework (Figure 8) constitutes a useful tool that school administrators and inspectors should constantly use to monitor excellence.
11. This study was conceived as an exploratory survey of variables and factors which affect the quality of primary education in Tanzania. It started with an open model that tried to cover all the possible variables and factors involved in the education process. Obviously this was over-ambitious. Indeed it seems as if one could say everything affects the quality of primary education in Tanzania. However, this study aimed at generating tentative hypotheses, hints and directions for future investigations. It seems that the following areas need further probing so as to arrive at a conclusion regarding factors and variables affecting the quality of primary education in Tanzania:
 - (a) The policy-formulation approach which is sometimes hurried, secret and of a top-down nature.
 - (b) A matching of policy directives with resource availability and deployment.
 - (c) Mobility of key persons in the policy-implementation hierarchy.
 - (d) The quality of heads of schools.
 - (e) Staffing matters and work loads of teachers.
 - (f) The availability for key learning and teaching materials.
 - (g) The overall learning process and climate at home and in schools versus democratization.
 - (h) The quality of pupils as they progress from one grade to another.
 - (i) The quality of the learning environment.
 - (j) The effects of class-size and private tuition on student learning.
 - (k) Provision of luncheons/milk/porridge.

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