FACTORS CONTRIBUTING TO DISPARITIES IN SCHOOL CERTIFICATE RESULTS IN ENGLISH: A STUDY OF SOME SELECTED SCHOOLS IN ZAMBIA

BY

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AUTHOR'S DECLARATION

I, the undersigned declare that this dissertation represents my own work; that it has not previously been submitted for a degree at the University of Zambia or at another University and that it does not incorporate any published work or material from another thesis.

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Date: 22nd August 1988

APPROVAL

This dissertation of EVAN MALAMBO MBOZI is approved as fulfilling part of the requirements for the degree of Master of Education by the University of Zambia.

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DEDICATION

TO MY WIFE KABAENDA AND MY CHILDREN CIPO, LUYANDO AND TABO.

ABSTRACT

This study tested the hypothesis that performance in the school certificate English examination is better in grant-aided schools than it is in government schools. The sample consisted of eighteen boarding schools of which sixteen were located in the Southern Province and two were located one each in the Northern and Luapula Provinces. The instrument used to collect data was an interview schedule and the following variables were studied: the age of the school, the size of the school, teacher quality, pupil quality, school resources, location of the school, time spent on teaching English and examination preparation. Data analysis consisted of a simple break-down by percentages as well as crosstabulation procedures. The statistics used were the chi-square to show statistical significance, Cramer's V to show the strength of the relationship between the variables and gamma to show the direction of the relationship.

The overall analysis showed that grant-aided schools performed better than government schools in the school certificate English examinations for the

period under study. The findings also showed that the variables size, distance, age, time spent and examination preparation had significant relationships with the performance of the pupils. These variables could, therefore, be used to show relationships between them and pupil performance.

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TABLE OF CONTENTS

TABLE PAGE

CHAPTER FIVE

CHAPTER SIX

CHAPTER 1

STATEMENT OF THE PROBLEM

School certificate results in English affect students' prospects for further education and for obtaining employment. Failure in an English examination may mean failure to qualify for selection to both Grade 8 and 10 levels. In addition, English is a compulsory requirement for University and college entrance on the basis of success in the School Certificate examination. Because of the importance attached to English as a school subject, it was necessary to carry out an investigation into the conditions under which it is studied.

The Problem

The aim of this study was to find out the extent to which there are disparities in School Certificate examination results in English between government schools and grant-aided schools. It asked the question: Do grant-aided schools produce better results in English in the School Certificate examination than government schools? Specifically, the study sought to find out how far the following factors affect the performance of the pupils at School Certificate level: a) the age of the school, b) the

size of the school, (c) teacher quality, (d) pupil quality, (e) school resources, (f) the location of a school, (g) time spent on teaching English, and (h) the method used to prepare the students for School Certificate Examination in English.

Purpose of Study.

Despite the concern over the years about the deteriorating standards of English in our schools (Molotsi, 1975; Zambia Daily Mail, 1985), and the importance attached to English results, no step has been taken to investigate the causes of such deterioration. The purpose of this study, therefore, was (a) to identify the factors that might contribute to the disparities in results and (b) to see how and where the teaching of English could be improved.

Hypotheses

Arising from the problem above, the following hypotheses were formulated:

H1. Performance in the School Certificate English examination is better in grant-aided schools than it is in government schools.

Ho. There is no difference in performance in School Certificate English Examination between grant-aided schools and government schools.

The hypotheses were tested at 0.05 level of significance.

Assumptions

Arising directly from the hypotheses above, this study assumed that:

(a) grant-aided schools have better teaching equipment, an adequate supply of materials and good staff returns. This is understood to mean that grant-aided schools have better qualified as well as more experienced teachers than government schools. Consequently, performance in grant-aided schools is expected to be better than in government schools.

(b) grant-aided schools have a longer history than government schools so that they have accumulated experience in school organisation as opposed to government schools, most of which were built after independence. Such experience is assumed to improve the results in English and in other subjects than is the case for government schools.

(c) since grant-aided schools are generally smaller

with smaller classes than government schools, they are believed to be more manageable. Because of this it is assumed that the results will be better in grant-aided schools than in government schools.

Implications of the hypotheses

If the alternative hypothesis is rejected and, therefore, the null hypothesis, is accepted, this means that there is no significant difference in performance in the School Certificate English examination between grant-aided schools and government schools. It also implies that performance is, in fact, better in government schools than it is in grant-aided schools.

If the alternative hypothesis is accepted and, therefore, the null hypothesis is rejected, this means that grant-aided schools produce better English results than government schools as assumed. The implication is that government schools are more negatively affected by the factors mentioned in the problem above than are grant-aided schools. If such is found to be the case, the government would have to consider reducing the size of schools, since

there would be no justification for building large schools if it is shown that they contribute to the falling standards in results. Furthermore, the government would have to improve both teacher and pupil quality, the supply of school resources, time spent on teaching English, as well as the methods used to prepare the students for School Certificate Examination in English.

Significance of study

This study was found to be of importance in three areas: (a) it was expected to add knowledge by revealing and highlighting the conditions under which the teaching of English is carried out; (b) it was expected that the results or findings could be used by teachers and others who are interested in improving the teaching of English. (c) the results could be used by the Ministry of General Education and Culture for decision making purposes, and by the Curriculum Development Centre for evaluation and assessment purposes.

Limitations of the study

The study was limited by the fact that only some selected factors that affect disparities in English results at School Certificate level were examined. Furthermore, only eighteen of the boarding schools in the country were chosen. The choice of the factors studied was influenced by the speculations currently prevailing in the society as a whole concerning the differences in academic performance between grant-aided schools and government schools. Ideally, it would have been better to examine all the factors that affect the teaching of English, including for example, school administration, pupil discipline, pupil and teacher absenteeism, at all levels and in all the boarding schools in the country. Nonetheless, the results of this study have relevance for all boarding schools in Zambia.

Definition of terms

For the purpose of this study, the following definitions were used:

Disparities The difference in results produced by Grade 12 students who sit for the same examination in English in grant-aided and government secondary schools. The interest is not in the performance of individual students per se but rather in the comparison of results between the two types of schools.

Grade 12

The final grade of the secondary school system in Zambia after which students move to institutions of higher learning or go into employment.

School Certificate

The examination that all the Grade 12 students sit for at the end of the year between October and December.

Performance

The result that a student gets in the School Certificate examination according to the following scale used by the Examinations Council of Zambia:

%	Grade	Classification
Above 75	1	Distinction
70-74	2	"
65-69	3	Merit
60-64	4	"
55-59	5	Credit
50-54	6	"
40-49	7	Pass
35-39	8	"
Below 35	9	Fail

Age of school

The period of time in years since a school started offering the School Certificate examination. The term "new schools" refers to those schools whose age ranged between 13 and 20 and "old schools" refers to those schools whose age was between 21 and 32.

Size of school

The number of enrolled pupils in secondary schools according to existing scales from the Ministry of General Education and Culture in which the biggest schools are graded 1, (or over 950 pupils) the medium schools are graded 2 (or 600 to 950 pupils) and the smallest schools are graded 3, (or below 600 pupils).

Teacher quality

In this study this phrase is used to mean the professional qualification of a teacher according to whether he is a degree, diploma or certificate holder.

Pupil quality

The pupils' academic achievement in the Grade 9 Leaving Examinations according to whether a pupil got a Division 1, 2 or 3 certificate. It was also used to mean the grade, 1, 2, 3 or 4, that a pupil got in English in the same examination.

School resources

The availability or the non-availability of teaching materials, equipment or a well-stocked library.

Location of school

In which part of the country (urban or rural) district or compound a school is situated, and also how far it is from the provincial headquarters.

Time spent on teaching English.

The official time allocated to the schools by the central administration, as well as official extra curricular time allocated to English as a subject by the school, e.g. homework, tests and preparation, which in this study will simply be called prep.

Organisation of dissertation

Chapter one contains the statement of the problem comprising the problem itself, the purpose of the study, the hypotheses, implications of the hypotheses, assumptions, the significance of the study, limitations and the definition of terms. The background to the problem and the review of related literature is discussed in the second chapter. Chapter three contains the methods used for the collection of data, including sampling procedures, instruments, data collection procedures, control of variables and data analysis. Chapter four contains the presentation of results. Chapter five is the discussion of results and the final chapter is the summary and recommendations.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter is organised under the following sub-headings: background to the problem; educational standards; the examination system; type of school and factors that affect student performance, namely: teacher quality, pupil quality, regional and school resources, time spent on teaching English, location of school and size of school.

Background to the problem

The educational system in Zambia can be viewed from the following four major perspectives which help to put the system in its proper context. These are: the history of education; financing of education; manpower training and the importance of English.

Kelly, Achola, Kaluba, Nilson and Nkwanga (1986) report that:

> historically educational development in Zambia owes a great deal to the Christian Missionaries who established almost all the first primary schools, several of the early secondary schools and a number of teacher training institutions. (Kelly et al, 1986: 145).

The Barotse National School which was established in 1907 was the only institution for Africans under the direct control of the administration of the British South Africa Company. When the Colonial office assumed the administration of the territory in 1924, the Barotse National School became the first Government institution for the education of Africans. It started with only seven pupils, but by 1924 "approximately 600 pupils had been enrolled," (Mwanakatwe 1974:13).

However, a more comprehensive assessment and evaluation of educational opportunities for Africans, according to Mwanakatwe (1974), was made for the first time in the history of Zambia in 1924 through the Phelps-Stokes Commission, which called for increased Government expenditure on education in the form of grants-in-aid to schools run by missionaries.

Since this system of education was mainly under the supervision of missionaries, the Commission urged the Government to appoint a Director of Native Education whose job was "to co-ordinate and unify the various educational activities of missionary societies" (p. 17). Even if the early days of educational development were difficult, a systematic and properly organised pattern of African education began to emerge after 1924.

The first Director of Native Education "inherited in 1925 an inadequate and inefficient school system which had an appalling standard of academic work," (Mwanakatwe, 1974:19). His efforts to build a sound and efficient system of education for Africans paid off when, in September 1939, the first Junior secondary school for African children was opened at Munali with eleven pupils and after that secondary education steadily increased with the opening of other secondary schools in the country, until, by 1963, enrolment had risen to 7,050.

Mwanakatwe (1974) reports that the education of Africans in Northern Rhodesia was not the major priority of the colonial Government because education for Africans was regarded as a favour and secondly, it was not intended that Africans would take up white collar jobs in direct competition with Europeans. However, technical and vocational training was encouraged for Africans. At the same time the colonial Government paid attention to European education to attract settlers as well as to provide education to poor whites. It was believed that advanced academic education for Africans would inevitably pose a threat to the interests of the white settlers, especially those who had not received adequate education.

At independence there was general clamour for more education for Africans. The public aspiration for wanting their children to receive education was also the aspiration of the new Government. The major problem was lack of manpower since there were very few educated Zambians. The major task of the Government was the integration of the education system. All the old schools that used to be for whites, Indians or coloureds only, were open to all the other races. Many new primary and secondary schools were also opened to all races and fees in fee-paying schools were regulated to allow Zambian children to attend those schools as Mwanakatwe (1974) explains:

> these fees had to be fixed at a level sufficiently high to make a significant contribution to the cost of certain superior services provided in fee-paying schools. At the same time, the level of these fees had to be reasonable so that practically any African parent in paid employment could afford them if he decided to send his child to a fee-paying school. (Mwanakatwe, 1974:40).

A major break-through, however, was not achieved until in 1966 when the Education Act was passed by parliament. By this Act, all education in the country became the responsibility of the Government through the Ministry of Education. The Minister of Education was given

power to control government, grant-aided as well as private schools. This is still the arrangement at present.

Education in Zambia is financed in four major ways. The first of these is public revenue at central or local government levels. According to Kelly et al (1986), between 1975 and 1984, an average of 12.5% of total government spending has been on education. This figure is higher than for the health sector which received 3.25% of the GDP in 1982 and only 2.59% in 1983. The system itself expanded rapidly. This led to a deterioration in the quality of the system which is manifested by excessively large classes, lack of teaching materials, inadequately furnished class-rooms, badly maintained buildings and a generally demoralised teaching staff. Such a situation falls far short of the expectations of the Third National Development Plan (TNDP) whose objectives are to improve the quality of education and services, as well as to improve teacher education and professional development.

The second source of income for the education system is the private sector. This includes gifts and donations from different organisations and payments made by parents through the Parent-Teachers Associations. Parents also contribute significantly to the education of their children by buying school uniform, meeting transport costs as well as buying stationery items. In addition, they pay part of boarding fees as well as school fees.

The grant-aided system forms part of the private sector. At the moment there is heavier involvement of religious agencies at secondary level than at primary level. Kelly et al (1986) report that religious agencies own and manage 37 of the 190 non-private secondary schools in the country, and four of the ten primary teacher training colleges.

In addition to the grant-aided system, private schools make available educational facilities which government is not able to provide. "In financial terms they are relieving government of the cost which otherwise it would have to bear, of every pupil on their enrolment," (Kelly, p. 149).

The third source of educational funding is through school generated revenies. It is expected that the schools themselves should engage in production activities to raise money for themselves.

Finally, foreign aid is also a great source of education funding in Zambia. This is done through foreign agencies like the World Bank, the Swedish International Development Authority (SIDA), the Norwegian Aid for Development (NORAD), the British Council, ODA, All these foreign countries and agencies further the development of education in Zambia.

The training of teachers in Zambia is the responsibility of the government. There are at the moment ten pre-service primary Teachers' Colleges with at least one in each region except Lusaka. There are six institutions which produce teachers for secondary schools. These are the University of Zambia, Nkrumah Teachers' College, the Copperbelt Secondary College, Natural Resources Development College, the Evelyn Hone College of Applied Arts and Commerce and the Luanshya Technical and Vocational Teachers' College.

According to the Third National Development Plan (1966) and Kelly et al (1986) the number of teachers

required at the end of the Plan in 1983 was 24,700 for the primary sector and 4,027 for the secondary sector. Enrolment in Primary and Secondary colleges was projected at 4,950 and 2,639 respectively. The projected output for the whole period, 1979-1983 was 8,270 for the primary sector. The actual output was 8,365. At secondary level the University of Zambia was expected to produce 969 teachers, but it produced only 816, leaving a shorfall of 153 or 15.8%. The other institutions were expected to produce 2,350 teachers, but they only managed 2,049, leaving a shortfall of 301 teachers or 12.8% of the expected output. The total output from all the secondary teachers' training institutions was expected to be 3319, but the actual output was only 2,865 with a difference of 434 teachers or 13.1%.

It is projected by Kelly et al (1986) that by the year 2000 Zambia will need over 50,000 primary school teachers at an estimated cost of about K50 million, and that over 8,000 secondary school teachers will be required at an estimated cost of over K100 million. At the moment there is a general shortage

of teachers in secondary schools and the wastage rate, i.e. the rate at which teachers leave teaching in preference to other jobs, is rising quite fast.

Finally, the importance of English in Zambia cannot be over-emphasized. Historically, during the colonial period, the teaching of English was discouraged by the early missionaries (Rotberg, 1965). Their fear was that "training in the English language would immediately divert Africans from the paths of religion". (Rotberg, 1965:109). They also feared that the teaching of English in rural schools would encourage their students to seek employment in towns. As a result, even if the demand from the Africans to learn English was high, the missionaries remained unsympathetic and the pupils remained ignorant of English.

However, in 1965, the Zambian government decided to make English the medium of instruction at all levels of education. Mwanakatwe (1974), Ohannessian (1978), and Africa (1980) give the following reasons for the introduction of English as a medium of instruction:

a) the standard of spoken and written English of primary school pupils would improve;

b) school children would be helped to develop a more flexible command of English structures and vocabulary adequate for their needs; c) learning English at upper primary level and at secondary level would be facilitated; d) an improvement in the general educational development of pupils would be expected because they would be introduced to a much wider range of relevant local reading materials, e.g. newspapers, magazines, comics and books, which are more easily available in English than in any other language; e) English is used as a language of wider communication in Africa i.e. it is used to encourage intercourse with neighbouring and distant countries in the spheres of trade, learning and culture.

The implication of the reasons mentioned above is that "English is perceived as being associated with higher education, good jobs and examinations" (Africa, 1980:278). It plays such a big role in society that educators and employers demand that a candidate must have a good pass in English in order for him or her to get a job or to be registered in an institution of learning. In view of this it was imperative that an investigation should be made into the conditions under which English was studied.

There was a higher concentration of expatriate staff in grant-aided schools than in Government Schools, (See table 5). Because of this it was assumed that academic standards in grant-aided schools were better than in Government schools. This presupposed that the results in these schools in the School Certificate examination in English were better than those in Government schools. It seemed, however, that this had remained an assumption. No systematic study had been done on School Certificate English examinations to determine the factors that affect the results. This study attempted to find out whether the above assumption was true.

Educational standards

Much has been said about the educational standards in this country. Both Molotsi (1975) and Musokotwane (1984) say that performance of the pupils over the last few years in the School Certificate examination has steadily improved.

Announcing the School Certificate examination results for 1988 Musokotwane said that over 7000 Grade 12 secondary school students who sat for the examination had qualified for School Certificate.

However, according to the Daily Mail (1985) Members of Parliament "deplored the poor quality of education in Zambia and criticised the falling standards of teachers who they said lacked motivation", (Daily Mail, 1985:1). Some of the MPs went as far as saying that some Grade 12 pupils were unable to write a letter in English and that Zambia as a developing country should not allow her educational standards to sink.

The examination system

The sinking educational standards may have something to do with the system of evaluation and assessment. Evaluation according to the Educational Reform document (1977:7)" is a process by which it is determined whether the educational system is achieving its objectives".

Examinations are used as an evaluation instrument for teachers, students and institutions; as a tool for guidance; as an incentive; for maintenance of the quality of programmes, for selection and placement, and for certification.

It should be mentioned here that examinations in Zambia are nationalised. This means that both government and grant-aided schools sit for the same examina-

tions. Singer and Jolly (1980) argue that the way in which those who succeed in their examinations are trained, is by learning to qualify rather than by learning to understand what has been taught or by developing the initiative and inner resourcefulness which would be useful to them in tackling problems in their locality. It has not yet been proved that this kind of learning actually takes place in government or in grant-aided schools. However, Sharma (1975:1) says that examinations have a backwash effect on educational practice in schools. He says:

> Attention is solely directed towards pupils' achievement in the cognitive domain and others like the affective areas are neglected. Even in the cognitive domain, instead of the exams testing what has been taught, schools end up teaching what is to be tested (emphasis mine). (Sharma, 1975:1).

Type of School

One place where drilling and even rote learning can easily occur as a way of making students pass the examinations is in a boarding school. Recent statistics (Kelly et al. 1986) show that there are 234 secondary schools in Zambia. Of these 153 are government, 37 are grant-aided and 44 are private. The proportion of boarders is 46% of the total number

of enrolled pupils at secondary school. The enrolment for government and grant-aided schools shows that there is approximately the same number of boarding as day pupils in government schools, and that 85% of the pupils in grant-aided schools are boarders. It can safely be concluded from these statistics that grant-aided schools are more likely to be boarding schools than is the case for government schools. According to research done (Maabwe 1987: 108) boarding schools "have been shown to significantly improve the academic achievement of students in developing countries", for the following reasons: a) since students reside on campus and do not have to walk long distances to school, this gives them more time to study and to do their homework; b) the students have good study facilities, e.g. well-lit and well-equipped study rooms, compared with day scholers, some of whom come from homes where there is no electricity. Such homes may also be overcrowded and noisy, thereby making studying virtually impossible. Furthermore, most day scholars are expected to do house chores like the rest of the family and this reduces their study time; c) there is less influence from home in boarding schools, therefore, there is continuation of socialisation; d) students in boarding schools have access to reading

materials through the provision of libraries on the premises. In addition, students have access to the teachers who also often reside on school premises; and e) to a lesser extent, the bringing together of students from different ethnic backgrounds helps them to learn a foreign language which in most less developed countries is the sole medium of instruction. In Zambian boarding schools, students are expected to use English for communication amongst themselves, and this is supposed to improve their proficiency in the language.

The conditions under which English is studied are expected to differ between grant-aided and government schools. It is not expected that simply because only boarding schools are chosen student performance in English will be the same. This study suggests that there will be a difference in performance within the same school type between grant-aided and government schools.

Factors that affect performance

There are many factors that influence academic achievement in secondary schools whether they are government or grant-aided. The first one, according to Molotsi (1975:6-10) is the quality of the teacher. He writes:

> Many of our secondary school teachers have no professional training and others though academically qualified in their respective subjects have a poor command of English sometimes coupled with unintelligible accent. This is a serious handicap and has an adverse effect on the standard of English in our schools and consequently on our results in School Certificate. (Molotsi, 1975:6-10).

It must be noted that Molotsi only gives a general view of the situation for all the schools in all the subjects. When it comes to particular types of schools and particular subjects the situation may be different. In English, for example, it could be true that an expatriate who is also a native speaker of English may not experience "a poor command of English" or the "unintelligible accent" mentioned by Molotsi. What is expected is that students who are taught by such teachers should of necessity perform better in English than those taught by teachers whose native language is not English. If it is found, therefore, that grant-aided schools have more native speakers of English than government schools, it may also follow that the results in English in grant-aided schools should be better than those in government schools. However, according to Saha (1983) it seems that in developed countries teacher quality has been called into question as far as making a significant positive

contribution to the academic performance is concerned. The research done in developed countries (Coleman, 1966; Jencks 1972; Bowles and Gintis, 1976: Gunthrie, 1970; Rosenshine, 1971; and Averch et al 1974) seems to indicate that there is no direct relationship between teacher quality and student performance.

The case, however, is not the same in less developed countries where, according to Saha (1983: 76) "the cumulative evidence indicates that better trained and more experienced teachers produce higher academic achievements in students". This means that teacher variables are important factors in explaining variance in student achievement in less developed countries. The implication is that in these countries, including Zambia (Kelly et al 1986) selection and training of teachers are important means of improving the performance in learning. There is no statistical evidence at the moment to show that government schools employ better qualified teachers than grant-aided schools or vice-versa. This study will seek to do that for English.

Theisen, Achola and Boakari (1983) also give some of the key determinants of achievement in formal schooling. They say that family background, i.e.

parental education, occupation, income, possessions, and the influence and expectations of family members affect pupils performance. However, according to research done in less developed countries (Murphree, 1973; Heyneman, 1976; Kaabwe, 1987) the socio-economic status of the student had little effect on the student's academic achievement. The evidence showed that students from illiterate homes had higher achievement scores than those from more privileged families. Instead, certain selected variables e.g. teacher quality, textbooks and other equipment had a positive effect on student performance. If this is the case it can be expected that students whose schools possess such facilities are expected to do better at the Grade 9 examinations than those who do not have them. It follows from this argument that such schools will enroll into Grade 10 students of better quality than those schools that lack the necessary resources. There is evidence to indicate that there is a high correlation between the performance at Grade 9 examination and that at School Certificate on the same subjects, (Sharma, 1975).

Thirdly, according to Theisen et al (1983); Kaabwe (1987), regional as well as school resources may also define inequalities in sectorial levels of academic

achievement. The richer the region of a country the greater the financial capacity to support more and perhaps better educational resources for teachers and students. Such a region is likely to have physically superior schools, large stock-piles of educationally relevant texts and related materials as well as better trained or better qualified teachers.

Research indicates that learning is severely hampered by an undersupply of basic textbooks and physical plants. "Put simply, students who do not have their own texts to study and take home do not do as well as those who do have them", (Theisen et al, 1983:59). On the other hand the availability of books appears to be the most consistent school factor in predicting academic achievement (World Bank, 1978; Schiefelbein and Farrell, 1974, 1978). The differentiation in the availability of materials between government and grant-aided schools has a direct bearing on the child's will and ability to achieve. In other words a child who is willing to study and has the ability to do so may be hampered by the fact that there may not be adequate teaching resources to enable him or her to achieve what he intends in school. In such a case the pressure that the pupil may experience from the culture or the subculture of

the ethnic community to which he belongs, the pupil's social class or stratum, his family and his peer group must be seen in the light of the availability or non-availability of the teaching materials at the school the pupil attends. This study will seek to find out how far the pupils' will and ability to study is affected by the availability or otherwise of the learning resources in the two types of schools in question.

Another factor advanced by Theisen, Achola and Boakari (1983) is the variations in contact hours within schools. Even if the central educational authorities may prescribe time to be spent on a particular subject, as is the case in Zambia, this time often bears little relationship to what actually goes on in the classroom. One type of school, government or grant-aided, may, for example, prescribe more time for a particular subject like English, outside official time. Such allocation may differ from school to school or even within the same school type. Sometimes such time may be affected by events not related to school work, as when somebody important visits a school; or when there is a function involving the entire school In such cases teachers normally look for extra time to try and cover up for lost time.

Another factor that affects achievement at the regional level is distance from the education office which may decrease adherence to Ministry guidelines as well as teacher expectations for the students' long-range educational achievement and attainment. "It is conceivable that in some situations such freedom from bureaucratically prescribed strictures may have positive results", (Theisen et al, 1983:58). Even if urban areas provide an environment conducive to the acquisition of modern value orientations which have been shown to influence academic achievement it has been shown that the farther away one is from the influence of modern institutions the higher the level of achievement, that is to say, rural students generally perform better in examinations than urban children, (Heyneman, 1980; Kaabwe, 1987).

Finally, it is traditionally believed by teachers that the size of a school and of a class has an effect upon the learning of students. Larger classes, it is held, have problems of discipline and lack of personal attention to individual students. However, research done in this area, (Marklund, 1962; Husen, 1967; Schiefelbein and Farrell, 1978) indicates that

"there is a slight overall tendency for children in larger classes to do better on the national test than do children in small classes" (Shiefelbein and Farrell, 1978:26). If this is the case, then it follows that students in government schools with supposedly large sizes are expected to do better than students in grant-aided schools whose sizes are smaller. No evidence exists in Zambia at the moment to indicate that larger schools perform better than smaller schools. The present study seeks to do that for English.

In conclusion, the factors that are mentioned above concern general pupil performance. There is no doubt, however, that they do affect performance in English as well. It is the purpose of this study to determine the extent to which these factors affect performance in English.

CHAPTER 3

METHODOLOGY

This chapter discusses the following topics: the population or sample, instruments used to collect data, data collection, control of variables, data analysis and results.

Population

The target population was heads of English departments of the selected schools, who were subjected to an interview schedule. Heads of schools and careers masters of the same schools were also involved. They acted as additional sources of data. The accessible population was eighteen boarding secondary schools. Sixteen of these were chosen from the Southern Province. The Southern Province was chosen for this study because of its large concentration of both government and grant-aided boarding schools. All but two of the boarding schools in the Southern Province were studied. Of the two, one was found to be a private school while the other one did not have a history that went as far back as 1982 in School Certificate examinations. The two girls' boarding schools selected from

the other provinces helped to moderate the study because it was discovered that there was no girls' government boarding school in the Southern Province. There were altogether ten grant-aided schools. Within these, three were boys' schools, four were girls' schools and three were co-education schools. There were eight government schools of which four were boys' schools, two were girls' schools and two were co-education schools, (See Appendix B).

Instruments

This study employed a structured interview schedule designed in such a way as to take into account all the factors mentioned in the problem. The instrument was also constructed so that actual statistical data in figures could be collected, (See Appendix A).

There were two types of schools in this study, school type 1 refers to government schools and school type 2 refers to grant-aided schools. There were altogether eight independent variables. Below is a discussion of the independent variables and their categories.

a) Location

This variable had only one category, namely, distance. It was recorded in kilometres to show

how far each school was from the provincial headquarters.

b) Size

This variable had two categories: school total and class total. In this study school total means the total number of pupils enrolled in 1988 in each of the schools studied and class total refers to the total number of pupils enrolled in each of the Grade 12 classes of the selected schools. For both categories actual figures were recorded for analysis.

c) Age

The actual number of years of the selected schools was recorded for analysis for both school types.

d) Teacher quality

Under this variable there were five categories. These were expatriate teachers, Zambian teachers, degree holders, diploma holders and certificate holders. To obtain actual teacher quality this variable was computed by percentages. The total number of teachers was divided by the total number of each one of the categories within the variable. The outcome of this computation was then cross-tabulated with the variable performance.

e) Pupil quality

This variable had two categories: the grades of the pupils in English and the divisions the pupils got in all the subjects at Grade 9 level. In both cases the categories were coded either grade 1, 2, 3 or 4, or division 1, 2, 3, or 4. The pupils in code 1 were regarded as having scored the highest in the examination and those in code 4 as having scored the lowest. However, in terms of loading, the numerically low value of code 1 was correlated with the high values in performance and the numerically high value of code 4 was correlated with the low values in performance. Codes 2 and 3 fell in between.

f) Time spent

This variable had four categories. These were the number of periods allocated to English per week, preparation (commonly known as prep.), homework and tests. For the purpose of analysis the actual periods allocated to teaching English per week as well as the hours set aside for English prep., and homework were recorded. The frequency of tests given per term in English was also recorded.

g) Examinations

Two categories made up this variable. The first one was concerned with when the preparation started. This category was labelled 1, 2 or 3 depending on whether schools started preparing the candidates in Grade 11 or at the beginning of Grade 12 or in the third term in Grade 12 respectively. The second category concerned the way in which the candidates were prepared. It was also labelled 1, 2 or 3 depending on whether schools used past examination papers, special exercises or interclass quizzes respectively. However, in terms of loading, the numerically low value of 1 was correlated with the high values in performance, while the numerically high value of 3 was correlated with the low value in performance. The middle value of 2 remained as it was.

h) School resources

This variable had eight categories. These were: textbooks for structure, composition, intensive reading, extensive reading and summary and note-making. The actual figures were recorded. The rest of the categories - past examination papers, English on the air, teachers' reference books, other, library, television and radio were coded 1,

2 or 3 according to whether the heads of departments thought the situation in these categories was very satisfactory, satisfactory or not satisfactory.

The performance of the schools was measured by the dependent variable which was the results of the School Certificate from 1982 to 1986. These were recorded according to the classifications distinction (1, 2), Merit (3, 4), credit (5, 6), pass (7, 8) and fail (9).

Data Collection

The data were collected during the months of February and March, 1988. The researcher travelled personally to the selected schools. He personally recorded the responses onto the questionnaire, physically counted the books on the shelves of the English departmental storerooms and recorded the School Certificate results.

Control of Variables

In order to reduce the difference in school characteristics only boarding schools were chosen. Most of these were chosen from one province to avoid differences brought about by the selection and administration systems. In order to standardise the responses, only heads of English departments

were subjected to the questionnaire.

Data Analysis

The analysis of the data consisted of a simple breakdown by the use of the mean, the standard deviation and percentages. In addition, cross-tabulation procedures were used due to the categorical nature of the variables. All the independent variables and their categories mentioned above were cross-tabulated by the use of a computer with the dependent variable, performance, to show the extent of the relationships. The data were measured at nominal level and so the chi-square was used to test statistical significance. Cramer's V was also used as a measure of association to indicate how strongly the variables were related to one another. Gamma was used to show the direction of the relationship.

CHAPTER 4

PRESENTATION OF RESULTS

The total number of pupils who sat for the examinations in government schools between 1982-86 was 4644, as opposed to 3739 for grant-aided schools. There was a difference of 905 pupils.

A simple break-down of school certificate results for the period 1982-1986 showed that grant-aided schools produced 66 grade 1 results (or 1.7%) as opposed to only 33 (0.7%) for government schools. In contrast, grant-aided schools produced fewer grade 9 results, (244 or 6.5%) as opposed to 520 or 11.2% for government schools. Whereas there was a steady decrease in the number of pupils who got poor grades in grant-aided schools, there was a steady increase in the number of pupils who got poor results in government schools as Table 1 and fig 1 show.

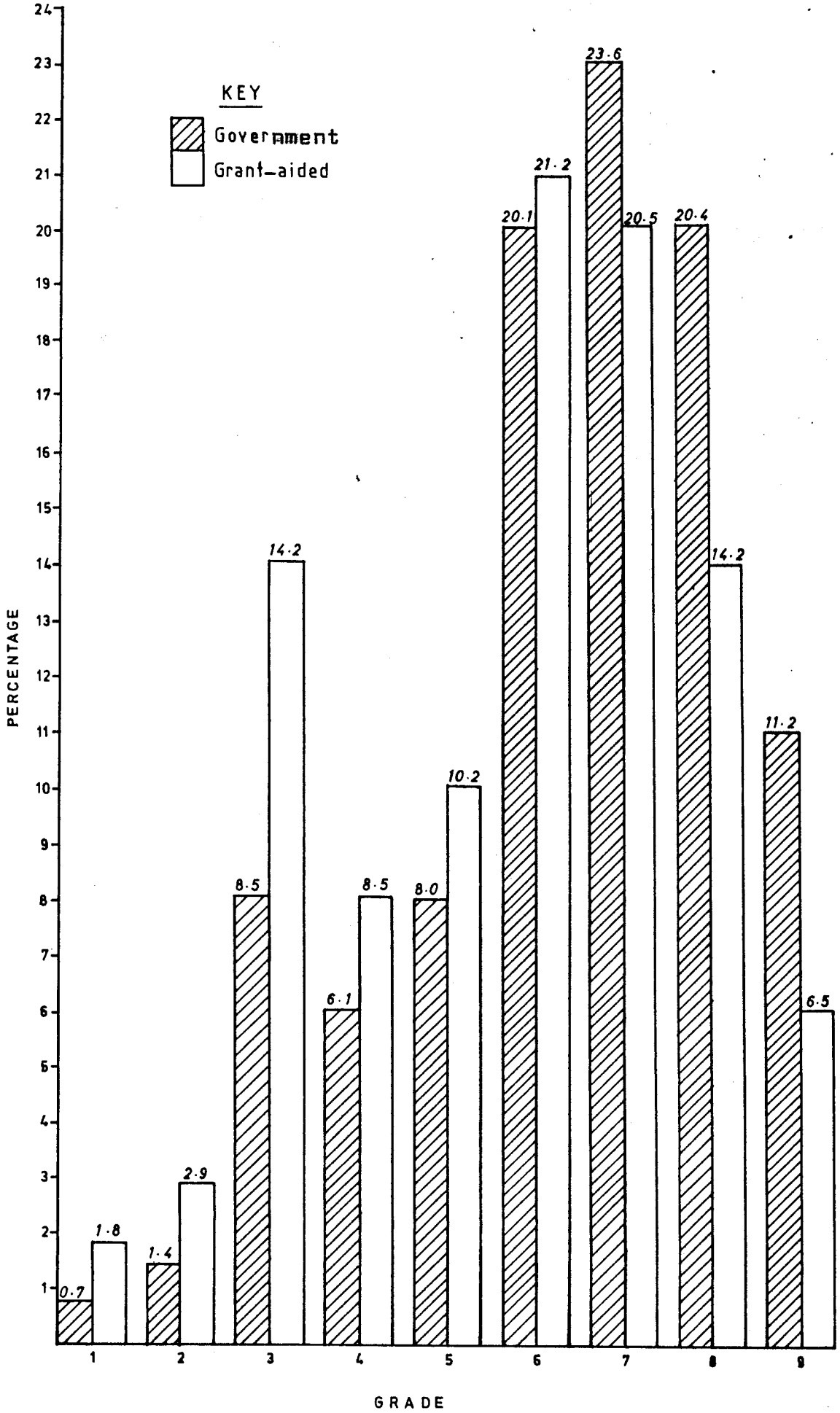
The overall sample mean of 6.1 approximated to a grade 6 result. The standard deviation of the whole sample was 1.9. Government schools had a mean score of 6.9, approximating to a weaker grade 7 result.

Table 1

Performance of pupils by grade in grant-aided and government schools - 1982-1986.

Whole Sample		Government			Grant-aided		
Grade	No.	Grade	No.	%	Grade	No.	%
1	99	1	33	0.7	1	66	1.8
2	172	2	65	1.4	2	109	2.9
3	925	3	393	8.5	3	532	14.2
4	601	4	283	6.1	4	318	8.5
5	756	5	373	8.0	5	383	10.2
6	1726	6	935	20.1	6	791	21.2
7	1863	7	1098	23.6	7	765	20.5
8	1477	8	946	20.4	8	531	14.2
9	764	9	520	11.2	9	244	6.5
Mean = 6.1		Mean = 6.9			Mean = 5.7		
Standard Deviation = 1.9		Standard Deviation = 1.0			Standard Deviation = 1.9		

Fig.1: PERFORMANCE OF PUPILS IN GRANT-AIDED AND GOVERNMENT SCHOOLS, 1982—1986



Grant-aided schools had a mean of 5.7, approximating to a grade 6 result and was superior to that for the whole sample and that for government schools. The standard deviation of 1.0 for government schools was below that for the whole sample while the standard deviation of 1.9 for grant-aided schools was the same as that for the whole sample.

Comparing the results within each school type revealed that boys' schools had a superior mean to girls' and co-education schools. It also revealed that grant-aided boys', girls' and co-education schools had a higher mean than the corresponding government schools. Within government schools the mean for boys' schools was 5.8 and the standard deviation was 2.5. Girls' schools had a mean of 6.9 and a standard deviation of 2.9. Co-education schools had a mean score of 6.7 and a standard deviation of 3.0. The mean for the sample in government schools was 7.0 and the standard deviation was 1.0.

Within grant-aided schools the boys' mean was 5.4 and the standard deviation was 4.0. The girls' schools had a mean of 5.8 with a standard deviation of 4.0 and the co-education schools recorded a mean

of 6.1 and a standard deviation of 3.6. The sample mean for grant-aided schools was 5.7 and the standard deviation was 1.9. The information discussed above is presented in Table 2 below.

The outcome of the crosstabulations is presented below according to each variable. All the independent variables discussed below were each crosstabulated with the dependent variable performance.

Factors influencing pupil performance

Distance

The mean for this variable was 174.5 for government schools as opposed to 224.5 for the whole sample. The standard deviation was 96.8 while that for the whole sample was 80.0. The chi-square was 105.0 and with probability at 0.48, it was not significant at the 0.05 level of significance. Cramer's V was 0.724 showing a strong association between the two variables. A gamma of 0.044 showed that there was a weak positive relationship between the two variables. This meant that the low values of the variable distance correlated positively with the high values of performance. For grant-aided schools the mean and standard deviation was 244.5 and 102.9 respectively, the mean being higher than that for government schools. At 0.05 level of

significance, the chi-square was 124.1 and with a probability of 0.05, it was not significant. Cramar's V of 0.704 showed a strong relationship between the variables. The gamma of -0.402 indicated that the high values of the variable distance correlated negatively with the high values of performance.

Size

The mean for all the schools in grade 1 in both school types in this variable was 7.3 and the standard deviation was 3.2, while the mean and standard deviation for grade 2 schools was 6.1 and 3.6 respectively. The mean for grade three schools was 5.7 and the standard deviation was 2.0. Grade 3 schools recorded the best mean followed by Grade 2 schools. Grade 1 schools had the lowest mean. The chi-square for government schools, at 0.05 level of significance was 21.5 and with a probability of 0.42 it was not significant. Cramer's V was 0.733 and it showed that there was a strong relationship between size and performance. Gamma was -0.033 indicating that high measures of size were negatively correlated with low student scores. The chi-square for grant-aided schools measured at 0.05 level was 47.2. It was not significant with the probability at 0.20. A relati-

vely strong Cramer's V at 0.687 showed the existence of a relationship. A moderate gamma of 0.418 meant that the high measures of size in grant-aided schools were positively correlated with the high measures of student performance. Table 3 shows the break-down for the variable size.

Analysing for each school type according to categories school total and class total showed that government schools had a higher mean of 1024.5 and a standard deviation of 198.4 for school total as opposed to the mean of 739.5 and a standard deviation of 172.0 for grant-aided schools. The chi-square for government schools for this category was 126.3. At 0.05 level of significance and with the probability at 0.47 it was not significant. Cramer's V was 0.725 and it indicated a strong association between the category school total and pupil performance. The gamma of -0.044 meant that there was a weak negative correlation between the large numbers of pupils in these schools and the low scores by the pupils. A large chi-square of 206.6 for grant-aided schools under school total was significant at 0.05 level of significance. The probability was 0.007. An indication that a strong relationship existed between the two variables was shown by

Table 2. Mean and standard deviation in government and grant-aided boys', girls' and co-education schools.

	Government Schools			School Sample	Grant-aided School			School Sample
	Boys	Girls	Co-ed		Boys	Girls	Co-ed	
Mean	5.8	6.9	6.7	7.0	5.4	5.8	6.1	5.7
Standard Deviation	2.5	2.9.	3.0	1.0	4.0	4.0	3.6	1.9

Table 3. Performance of pupils by school size in all schools: 1982 - 1986.

School size								
Grade 1			Grade 2			Grade 3		
Result	No.	%	Result	No.	%	Result	No.	%
1	27	0.8	1	45	1.1	1	27	3.1
2	61	1.7	2	89	2.2	2	22	2.5
3	348	9.9	3	431	10.9	3	133	15.3
4	231	6.5	4	307	7.8	4	63	7.2
5	281	7.9	5	398	10.1	5	77	9.0
6	692	19.5	6	836	21.1	6	198	22.8
7	820	23.1	7	853	21.6	7	190	21.9
8	675	19.0	8	680	17.2	8	122	14.1
9	411	11.6	9	317	8.0	9	36	4.1

Mean = 7.3
Standard Deviation = 3.2

Mean = 6.1
Standard Deviation = 3.6

Mean = 5.7
Standard Deviation = 2.0

Cramer's V of 0.718. Gamma at 0.365 meant that the high values of this category were positively correlated with the high scores by the pupils. The school total mean for the whole sample was 866.2 while the standard deviation was 284.8.

Government schools had a mean of 174.5 for the category class total. The standard deviation was 50.0. The chi-square was 152.0. It was measured at 0.05 level of significance and it was not significant with the probability at 0.37. Cramer's V was 0.736 and it showed that a strong relationship existed between the two variables. A moderate positive gamma of 0.305 meant that the large number of pupils in these classrooms did not correlate negatively with the low pupil scores. The mean for the same category in grant-aided schools of 94.4 was much lower than that for government schools. The standard deviation was 46.0. The chi-square was given at 219.9. This was significant at 0.05 level of significance with the probability at 0.02. Cramer's V was at 0.599 and it showed a strong association between the two variables. A gamma of 0.403 was quite moderate and it showed that high measures in this category were positively correlated with high scores from the pupils. The mean and standard deviation for the whole sample was 130.1 and 46.6 respectively.

Age

The mean for the whole sample in this variable was 20.8 and the standard deviation was 14.6. The mean for government schools was 20.1 with a standard deviation of 5.6. The chi-square was 84.1 and at 0.05 level of significance it was found not to be significant. The probability was given at 0.47. Cramer's V was 0.725 and it showed a strong relationship between the age of these schools and pupil performance. Gamma at 0.209 was fairly weak and showed that the high measures of the variable age correlated positively with the high pupil scores. The chi-square of 174.1 for grant-aided schools at 0.05 level of significance was significant with the probability at 0.02. Cramer's V was at 0.705 showing that there was a strong association between the age of the schools and the performance of the pupils. The gamma at 0.319 meant that the high values of the variable age were positively correlated with the high values in the performance of pupils. The mean for school type 2 was bigger than that for school type 1 at 21.5 with a standard deviation of 6.7.

The overall performance for all the schools showed that old schools had a mean of 6.0 and a standard deviation of 2.0. New schools had a mean of 6.3 and a standard deviation of 1.9. Even if the mean difference between old schools and new schools was not remarkable, the findings showed that old schools had more pupils who got a grade 1 and 2 result (3.8%) as opposed to only 2.5% for new schools. Similarly old schools had fewer pupils who failed the examination (7.9%) as opposed to 10.6% for new schools, (see Table 4).

Teacher quality

There were altogether 132 teachers of English in the whole sample. Out of these 15 (11.4%) were expatriates and 117 (88.6%) were Zambians. Of the entire sample government schools recorded only 4 expatriates (5.7%) and 66 Zambians (94.3%). Grant-aided schools, on the other hand, had 11 expatriates (17.7%) and 51 Zambians (or 82.3%).

Altogether, 52 or 39.4% of the teachers were graduates and 80 (60.6%) were diploma holders. Of the graduates 21 (30.0%) taught at government schools and 31 (50.0%) taught at grant-aided schools. In the diploma category 49 (70%) of the teachers came from

Table 4. Performance of pupils by age in all schools: 1982-86.

Old Schools			New Schools		
Grade	No.	%	Grade	No.	%
1	65	1.4	1	34	0.9
2	111	2.4	2	61	1.6
3	561	12.3	3	364	9.6
4	339	7.4	4	262	6.9
5	419	9.2	5	337	8.8
6	967	21.2	6	759	19.9
7	1003	21.9	7	860	22.5
8	747	16.3	8	730	19.2
9	360	7.9	9	404	10.6

Mean = 6.0

Standard Deviation = 2.0

Mean = 6.3

Standard Deviation = 1.9.

government schools and 31 (50.0%) came from grant-aided schools. The crosstabulation between teacher quality and the results showed that for government schools expatriate teachers had a chi-square of 63.2. This was tested at 0.05 level of significance and it was not significant with the probability at 0.47. Cramer's V at 0.725 showed a strong relationship between the variables and a gamma of 0.067 meant that there was a weak positive relationship between the variables. This was interpreted to mean that the low values of expatriate teachers positively correlated with the low pupil scores. The chi-square for Zambian teachers was 62.2 at 0.05 level of significance. With the probability at 0.47, this chi-square was not significant. Crammer's V of 0.725 indicated that there was a strong association between the two variables. A gamma of -0.067 meant that the large number of Zambian teachers in government schools negatively correlated with the low pupil achievement scores. Grant-aided schools showed a chi-square of 124.9 for expatriate teachers and it was significant at 0.05 level of significance. The probability was 0.04. Cramer's V of 0.707 meant that there was a strong association between expatriate teachers and pupil performance.

A fairly weak gamma of -0.144 meant that the large numbers of expatriate teachers in grant-aided schools did not correlate positively with the high pupil scores. The chi-square for Zambian teachers was also 124.9 and was significant at 0.05 level of significance. The probability was 0.04. Cramer's V was 0.707 indicating a strong relationship between the two variables. The gamma of 0.144 showed that the relatively smaller number of Zambian teachers in grant-aided schools correlated positively with the high pupil scores.

Under qualification government schools produced a chi-square of 152.0 for graduates at 0.05 level of significance. The probability was 0.37 and the chi-square was not significant. Cramer's V was high at 0.736 showing an existence of a strong relationship between variables. A weak negative gamma of -0.008 showed that the high measures of graduate teachers were negatively correlated with the low values of pupil performance. Diploma holders had a chi-square of 152.0 and at 0.05 level of significance, it was found not to be significant. The probability was 0.37. Cramer's V at 0.736 meant that a strong relationship existed between the two variables. Gamma was quite weak at 0.044 showing that the large number of diploma

holders in government schools did not correlate negatively with the low pupil scores. Grant-aided schools had a chi-square of 117.5. At 0.05 level of significance this chi-square was not significant. The probability was 0.11. A fairly strong Cramer's V of 0.685 showed that there was an association between the variables. Gamma was 0.044 and it was quite weak showing that the high measures of degree holders were positively correlated with high pupil scores. The chi-square for diploma holders was 90.8 and it was not significant at 0.05 level of significance. The probability was 0.19. Cramer's V was 0.674 and it showed a fairly strong relationship between the two variables. A gamma of -0.071 meant that there was a negative correlation between the low measures in the diploma category and the high achievement of pupils.

Pupil quality

A mean of 2.2 for government schools approximated to a grade 2 score in English and showed that there was little difference with the mean of 2.1 for grant-aided schools. The standard deviation was 0.7 for government schools and 0.4 for grant-aided schools. The sample mean of 2.1 was the same as that for grant-aided schools and the standard deviation of 0.5 was

below that for government schools. The chi-square for government schools was 45.7 and it was not significant at 0.05 level of significance. The probability was 0.32. Cramer's V was 0.755 and it showed a strong relationship between the two variables. The gamma of -0.388 was regarded as positive gamma because of the way the loading was done. In this case this gamma meant that poor quality students correlated positively with low pupil scores. For the same reason as in government schools a gamma of 0.368 for grant-aided schools was taken to be negative. This gamma meant that poor quality students correlated negatively with high pupil scores. The chi-square for grant-aided schools was 43.9 and it was not significant at the 0.05 level of significance. The probability was 0.30. Cramer's V was 0.663 showing a fairly strong relationship between pupil quality and performance.

Time spent

A mean of 15.1 of total time spent on teaching English and a standard deviation of 11.1 was obtained for the whole sample for this variable. The mean for government schools was 17.8 and it was above the sample mean, and the standard deviation was 8.3. The mean and standard deviation for grant-aided schools was

17.0 and 6.3 respectively. The chi-square obtained for government schools was 112.0. It was not significant at the 0.05 level of significance. The probability was 0.30. Cramer's V at 0.748 indicated the existence of a strong relationship between the variables. A negative gamma of -0.052 was weak and meant that the long hours spent in teaching English in government schools correlated negatively with the low performance of the pupils. The chi-square of 142.4 was obtained for grant-aided schools and with the probability at 0.07 it was not significant at 0.05 level of significance. Cramer's V was 0.688 and it showed the existence of a strong relationship between the variables. A weak gamma of 0.139 meant that the high values of time spent in teaching English correlated positively with the high pupil scores.

Examination Preparations

The sample mean of 1.9 pointed to the fact that most schools started their examination preparations at the beginning of the School Certificate year. The standard deviation was 0.7. The mean for government schools was 2.3 and the standard deviation was 0.5. Grant-aided schools recorded a mean of 1.7 and a standard deviation of 0.5. The chi-square for government schools was 44.2 and it was not significant at

0.05 level of significance. The probability was at 0.37. A high Cramer's V of 0.743 showed the existence of a strong relationship between the variables. Gamma was 0.004. However, because of the way the values were loaded as explained above this gamma was regarded as negative. It showed that the high measures in this category were negatively correlated with the low measures of pupil performance. Similarly a gamma of -0.689 for grant-aided schools was regarded as positive for the same reasons. This strong gamma meant that the long time these schools took to prepare the pupils for examinations correlated with the high achievement of the pupils. The chi-square for grant-aided schools was 37.4 and at 0.05 level of significance with a probability of 0.01, it was quite significant. Cramar's V at 0.866 also showed a very strong association between the two variables. It meant that the longer schools took to prepare pupils for school certificate, the better the result.

A sample mean of 1.2 was given for the actual methods used pointing to the fact that past exam papers were more widely used than any other method in English examination preparation. The standard devia-

tion was 0.4. The mean for government schools was 1.3 and the standard deviation was 0.8. The mean and standard deviation for grant-aided schools was 1.0 and 0.0 respectively. The chi-square for government schools was given at 38.9. At 0.05 level of significance and with a probability of 0.60, the chi-square was found not to be significant. A fairly strong Cramer's V of 0.697 showed the existence of a relationship between the variables. A gamma of 0.234 for this category was taken to be negative due to the way the loading was done. This gamma showed that the methods used by government schools to prepare pupils for examinations were negatively correlated with the performance of the pupils. Similarly, a gamma of -0.003 for grant-aided schools was regarded as positive for the same reasons given above. This weak gamma showed that the high values of this category were positively correlated with the high pupil scores. The chi-square for grant-aided schools was 22.9 and at 0.05 level of significance with the probability at 0.29, it was found not to be significant. Cramer's V was 0.677 and it showed the existence of a fairly strong association between the variables.

School Resources

Government schools recorded a mean of 949.5 items and a standard deviation of 683.7. The whole sample mean was 765.0 and the standard deviation was 234.4. The mean for government schools was above that for the whole sample. The chi-square was 152.0 and it was not significant at 0.05 level of significance. The probability was 0.37. Cramer's V was 0.736 showing that a strong degree of association existed between school resources and the performance of the pupils. A gamma of -0.311 showed that even if government schools recorded the higher number of resources, that number correlated negatively with the performance of the pupils. The mean score of 339.5 for grant-aided schools was far below that for the whole sample. It was also lower than that for government schools. The standard deviation was 233.2. The chi-square of 219.9 with a probability of 0.02 was found to be significant at 0.05 level of significance. Cramer's V of 0.699 showed the existence of a strong relationship between school resources and performance. A gamma of -0.233 showed that the low values in the school resources were negatively correlated with the high pupil scores.

CHAPTER 5

DISCUSSION OF RESULTS

This study hypothesised that performance in English as judged by School Certificate results would be better in grant-aided schools than it would in government schools. It also hypothesised that such performance was related to certain factors which brought about disparities in results between government schools and grant-aided schools. It sought to find out to what extent those factors were related to the performance of the pupils in the two school types.

The overall situation showed that the performance of pupils in grant-aided schools was better than that of pupils in government schools, as expected. The percentage analysis showed that grant-aided schools obtained 4.6% for grades 1 and 2 result as opposed to only 2% for government schools. This meant that these schools had more pupils who got a distinction in the School Certificate English examination than government schools. Put another way, of the total number of pupils who sat for the School Certificate English examination in these schools during the whole period, 93.5% passed the examination and only 6.5% failed. In contrast,

of the total number of pupils who sat for the School Certificate examination in government schools 88.8% passed, while 11.2% completely failed. A mean of 5.7 for grant-aided schools showed that most pupils got at least a grade 5 result, while a mean of 6.9 showed that most pupils in government schools got a grade 7 result, (see Table 1, and Fig. 1).

The results showed that in general boys' schools performed better than girls' and co-education schools in both school types. This meant that boys tended to achieve better results when they worked on their own than when they worked with girls. This might have been due to the fact that boys tend to compete among themselves in their class work. Such competition is an incentive on its own for them to work hard. It can also be said that the superior performance of boys over girls can be attributed to the fact that the boys' grades in English at the grade 9 selection examination might have been superior to those of the girls. This would confirm Sharma's assertion that there is a high correlation between the performance at grade 9 examination and that at School Certificate on the same subjects, (Sharma, 1975).

The results within each school type showed that government co-education schools performed better than girls' schools. The presence of boys in co-education schools provided competition to the girls, who compared their performance with that of the boys. This was evidenced by the fact that girls performed worse when they were left on their own than when they were with boys. The other reason why government girls' schools performed badly may be that generally these girls might have got inferior grades in English at the Grade 9 selection examination to those of boys.

Girls in single sex grant-aided schools achieved better results if they worked on their own than if they worked with boys. Since these girls could not gauge their performance with that of the boys, the explanation could be that they achieved better grades in English at both the grade 7 and grade 9 selection examinations, than the girls who were selected to go to government girls' schools. In addition, even if discipline was not one of the variables looked at in this study, it can still be speculated that pupils in grant-aided girls' schools performed better because of the strict way in which the authorities applied discipline on them.

Grant-aided schools, commonly known as mission schools, are known for their strict code of conduct for girls. Such discipline, coupled with the girls' own initiative, is supposed to improve the performance in results.

Distance

Government schools were found to be closer to provincial headquarters than grant-aided schools. Such a location had a favourable effect on the performance of pupils. On the other hand, even if most factors favoured grant-aided schools, the location of these schools correlated negatively with the performance of the pupils. This seemed to confirm the hypothesis that the farther away a school was from the provincial headquarters the less it adhered to the Ministry's guidelines, (Theisen, Achola and Boakari, 1983). Most of the grant-aided schools studied were located in rural areas. This might mean that there was less inspection of these schools from the Ministry's officials due to the long distances involved. Consequently, these schools probably rarely received latest information on the teaching of English from the provincial headquerters. Teachers of English would find it difficult to attend seminars and workshops organised by the headquarters.

Size

The total school enrollment revealed that government schools tended to enroll more pupils than grant-aided schools. This supported the assumption that grant-aided schools were likely to have smaller classes than government schools. The large numbers of pupils in government schools are in line with the government's policy of providing education to as many children as possible. On the other hand grant-aided schools keep their numbers low probably because they want to keep the reputation of performing better than government schools. Another reason may be that grant-aided schools cannot support large numbers of pupils in their schools due to limited financial assistance from the government.

The overall result for all the schools showed that the smaller the school the better was its performance. The assumption that smaller schools performed better than bigger schools was confirmed by this finding. Grade 3 schools produced better results than grade 2 schools, and grade 2 schools were better than grade 1 schools. The reason behind this trend is probably that most grade 1 schools were also government schools which in any case produced

worse results than grant-aided schools. Conversely, most grade 2 schools were grant-aided schools and all the grade 3 schools were also grant-aided schools.

The result also revealed that government schools were negatively affected by size. These schools had poor results in English probably because they were too large to be administered properly. Additionally, the large classes in these schools meant that there was little personal attention by teachers to individual pupils. It also meant that the teachers' working load was increased thereby leading to their inability to properly check and supervise the pupils' work. English as a subject requires that almost every exercise be marked by the teacher. Grant-aided schools on the other hand performed well because they were smaller. Teachers probably found it much easier to mark the pupils' exercise books and so the results in English in grant-aided schools were positively affected by small classes in them. Such classes are generally thought to be easier to control than large ones.

Age

The result for this variable confirmed the assumption that grant-aided schools were generally older than government schools. The findings also showed that old schools overall performed better than new ones. Of all the pupils who sat for the School Certificate English examination in old schools 92.1% managed to pass the examination and 7.9% failed. Conversely, of the total number of pupils who sat for the same examination in the new schools only 89.4% managed to pass and 10.6% failed. The explanation could be that most of the old schools were also grant-aided schools, and most of the new schools were also government schools. There were altogether 10 old schools; 7 of them were grant-aided while only 3 were government. On the other hand out of the 8 new schools 5 were government and only 3 were grant-aided. The age of the school had a favourable effect on the performance of the pupils in both school types. The fact that government schools were relatively new did not, contrary to what was expected, correlate negatively with pupil performance. The assumption that old schools would perform better than new schools because old schools had a longer history and because they had accumulated experience in school administration, was also confirmed by the findings.

Teacher quality

The overall situation in the sampled schools showed that there were more expatriate teachers in grant-aided schools than in government schools. In addition, grant-aided schools had more graduate teachers than government schools, which had more diploma holders than grant-aided schools.

The fact that there were more expatriate teachers in grant-aided schools did not, contrary to expectations, positively affect the performance of the pupils. Conversely, being a Zambian teacher in grant-aided schools had a positive effect on the performance of the pupils. The reason could be that the Zambian teachers in these schools had better qualification in teaching English than the expatriate teachers; or that not all the expatriate teachers were native speakers of English. Another reason may be that the Zambian teachers in grant-aided schools are probably better looked after in terms of accommodation and other incentives than their counterparts in government schools. Such incentives act as motivation for them to work harder and as a result these teachers improve pupil performance. An opposite result was obtained for government schools where the small number of expatriates correlated positively, though weakly,

(see Table 5) with pupil performance, and the large number of Zambian teachers correlated negatively with pupil performance. There is a possibility that the four expatriate teachers in the government schools might have been native speakers of English. Such a case would confirm the hypothesis that native speakers of English improved the performance of pupils in that subject. This, however, should remain a speculation because the number of expatriate teachers in the government schools studied was too small for the findings to be generalised to the entire sample. On the other hand, the negative effect of Zambian teachers on pupil performance may be due to the general dissatisfaction of these teachers with both the salaries and their conditions of service.

Under qualification, degree holders contributed significantly to the performance of pupils in grant-aided schools, but not in government schools. It could be that degree holders who work in government schools do not enjoy the same privileges as those who work in grant-aided schools. If this is the case it means that these teachers are probably demoralised and so their morale and consequently their performance as well as that of pupils would be low. The other

Table 5. Number of teachers of English and their qualifications in government and grant-aided schools.

		Expatriate	Zambian	Total	Deg.	Dip.	Cet.	Total
Government	No.	4	66	70	21	49		70
	%	5.7	94.3		30.0	70.0		
	Chi-square	63.2	62.2		152.0	152.0	11.8	
	Cramer's V	0.725	0.725		0.736	0.736	0.543	
	Gamma	0.067	-0.067		-0.008	0.044	-0.439	
Grant-aided	No.	11	51	62	31	31	-	62
	%	17.7	82.3		50.0	50.0	-	
	Chi-square	124.9	124.9		117.5	90.8	-	
	Cramer's V	0.707	-0.707		0.685	0.674	-	
	Gamma	-0.144	0.144		0.044	-0.071	-	
Whole Sample	Total	15	117	132	52	80		132
	%	11.4	88.6	100	39.4	60.6		100

reason may be that grant-aided schools may demand from the government better qualified teachers on the understanding that such teachers would improve the performance of the pupils. Diploma holders in grant-aided schools did not contribute significantly to the performance of the pupils. The reason could be that they are treated rather differently from degree holders, probably ejoying less privileges than the other group. This may lead to their low performance. Diploma holders in government schools produced positive results which indicated that their presence was favourable to the improving of pupil performance. Finally, certificate holders contributed significantly to the poor performance of pupils. The reason may be that certificate holders are not trained in secondary school teaching methods. Furthermore, due to the nature of their training which was not based on specialisation, they are not expected to have the competence and the performance necessary for teaching at secondary school level. Such competence and performance would be reflected in their performance on the job and hence in the performance of the pupils.

Pupil quality

There was no difference in the quality of pupils selected into grade 10 between government schools and grant-aided schools. The selection was done by the central administration of the Ministry of General Education and Culture. Because of this some schools had pupils who got a grade 4 result in English, which was the lowest grade.

Pupil quality correlated positively with the performance of the pupils in government schools. However, even if the pupils qualified to go into grade 10, by the time they reached grade 12 their performance had dropped thereby contributing to the poor result in the School Certificate examination. A possible explanation may be that pupils as well as teachers in these schools relax after the selection examination. In grant-aided schools pupil quality at junior level correlated negatively with the performance of the same pupils at School Certificate. This correlation might have been due to the fact that even if the pupils at grade 10 level were of poor quality (some grant-aided schools had pupils with grade 4 scores) these schools improved the performance of the pupils by the time they reached grade

12. It is possible that the reasons for the better performance of pupils in these schools at School Certificate level is due to the fact that whatever type of administration is found in these schools favoured their better performance. Another possible explanation is that these schools prepare their pupils for School Certificate examination much earlier than government schools.

Time spent

In general government schools allocated slightly more time to the teaching of English than grant-aided schools. In spite of this, this variable did not seem to improve pupil performance in government schools. It is very likely that there was lack of strict supervision to ensure that the pupils used that time for English activities. Left on their own, the pupils probably used the time allocated to English for other subjects. It is also possible that the prep. and homework given during the time allocated to English were not checked by the teachers due to heavy teacher loads. In that case the pupils did not get any feed-back and might not have seen the need to work harder.

In grant-aided schools this variable had a favourable effect on pupil performance. These schools

probably exercised strict control on whatever time they allocated to the pupils to make sure that it was used properly. In addition, the teachers of English in these schools probably marked pupils' prep. or homework. In this way the pupils got their feedback and that acted as an incentive for working harder.

Examination preparations

Most schools started their preparations at the beginning of the School Certificate year. Grant-aided schools tended to prepare their pupils for examination much earlier than government schools.

Starting examination preparations late as was the case with government schools negatively affected the performance of the pupils. On the other hand a very significant positive result was obtained for grant-aided schools. The result confirmed the assumption that the earlier schools prepared their pupils for School Certificate examination in English the better the results would be.

To prepare pupils for School Certificate examinations most schools used past examination papers. In fact all the grant-aided schools studied almost

exclusively used past examination papers. The methods used in government schools correlated negatively with the performance of the pupils. In contrast the same methods had a positive effect on English achievement for grant-aided schools. The reason may be that grant-aided schools had a greater abundance of past examination papers than government schools by virtue of their longer examination history. A complementary reason may be that grant-aided schools supervised the administration of these examination papers much more systematically than did government schools.

School resources

The findings showed that government schools had more books than grant-aided schools, (see Appendix C for complete analysis). In spite of this, school resources correlated negatively with the performance of the pupils in government schools. The reason may be that in real terms the books did not correspond proportionately to the number of pupils in the classrooms. There were not enough books for every pupil to have a copy, so that pupils were made to share whatever available school resources - textbooks, past examination papers, libraries, radios and radio cassettes, were simply not put to proper use by the teachers of English due to lack of proper management

of these resources. It should be noted here that the analysis was limited to textbooks only. The discussion of the other resources though investigated into, was beyond the scope of this research.

The non-availability of school resources had a positive effect on the performance of pupils in grant-aided schools. The reason may be that there were enough text books because of the proportionately small classes in these schools. The other reason could be that grant-aided schools knew how to manage their resources to their advantage.

In conclusion, of all the factors mentioned above the size of the school, the age of the school, distance from provincial headquarters, time spent in preparing pupils for School Certificate and examination preparation were found to be strongly related to pupil performance. On the other hand teacher quality could not be relied upon in showing relationships in the performance of the pupils. Some of the categories of teachers within the variable correlated negatively with pupil performance while others correlated positively even within the same school type. Both pupil quality and school resources yielded results contrary to what was generally expected.

CHAPTER 6

SUMMARY AND RECOMMENDATIONS

SUMMARY

1. General

The purpose of this study was to identify the factors that could be related to disparities in School Certificate English results between grant-aided schools and government schools. It sought to find out to what extent those factors were related to the performance of pupils in English at School Certificate level. The results that were used were those of the School Certificate examinations between 1982 and 1986.

The following is a summary of the most significant overall findings:

a) Grant-aided schools, as hypothesised, performed much better than government schools in the School Certificate English examinations for the period studied.

b) Grant-aided schools were generally smaller than government schools. In the entire sample of eighteen schools there was only one grade 1 grant-aided school. The rest were either grade 2 or grade 3 schools. There were five grade 1 government schools

and the rest were grade 2 schools (see Appendix B)

c) Government schools were found to be slightly newer than grant-aided schools. The average age for government schools was 20, while that for grant-aided schools was 22.

d) Government schools were located nearer to the provincial headquarters than grant-aided schools.

e) Government schools allocated more time to the teaching of English and to activities related to the improvement of results in English than grant-aided schools.

f) Grant-aided schools started earlier to prepare pupils for School Certificate Examinations in English than government schools and

g) Boys' schools in both government and grant-aided schools performed better than either girls' or co-education schools. Within government schools co-education schools performed better than girls' schools while in grant-aided schools single sex

girls' schools performed better than co-education schools.

2. Factors related to English Examination performance.

a) The short distance from provincial headquarters correlated positively with the performance of pupils in government schools while the long distance from provincial headquarters correlated negatively with the performance of pupils in grant-aided schools.

b) The size of the school related significantly to the performance of the pupils. As expected, the large number of pupils correlated negatively with performance in government schools, while the small number of pupils correlated positively with performance in grant-aided schools.

c) The age of the school had a significant relationship with the performance of the pupils. Even if in both school types the correlations were positive, old schools, of which most were grant-aided schools, performed better than the new schools.

d) The presence of expatriate teachers correlated negatively with the performance of the pupils in grant-aided schools. This was surprising because one would have expected that the more expatriate teachers there were in these schools the better would the performance of the pupils be. However, degree holders and Zambian teachers had a positive correlation with the performance of the pupils. Government schools had only a handful of expatriate teachers who correlated positively with the performance of the pupils. Whereas having a diploma correlated positively with pupil performance, being a degree holder correlated negatively with pupil performance in government schools.

This was also surprising because the knowledge and competence degree holders have are expected to improve the performance of the pupils. The correlation differentiation between grant-aided schools and government schools for degree holders may be explained from the difference in the working atmosphere within the two school types.

e) The poor pupil quality correlated positively with the performance of pupils in government schools. It correlated negatively with pupil performance in grant-aided schools.

f) The long hours spent on teaching English correlated negatively with the performance of pupils in government schools, while the relatively short hours correlated positively with pupil performance in grant-aided schools. This was rather unexpected because government schools allocated more time to the teaching of English than grant-aided schools.

g) Examination preparation, which in grant-aided schools started early, had a very significant positive correlation with the performance of the pupils. The methods grant-aided schools used to prepare pupils for School Certificate English examinations also correlated positively with the performance of the pupils. The amount of time given for preparing pupils for School Certificate examinations in government schools

correlated negatively with the performance of the pupils. The methods used to prepare the pupils for school certificate examinations also correlated negatively with the performance of the pupils.

h) The school resources found in government schools correlated negatively with the performance of the pupils. This was another surprising result because the findings revealed that government schools had more school resources than grant-aided schools. On the other hand, school resources in grant-aided schools correlated positively with the performance of the pupils.

3. RECOMMENDATIONS

In view of the findings of this study some recommendations which may help improve the teaching of English at school certificate level are presented below.

A. Since boys were found to be higher achievers in English when they were on their own than when they were with girls the government should encourage boys' schools as much as possible. However, instead of single sex government girls' schools, co-

education schools should instead be encouraged. Grant-aided schools, on the contrary, should be encouraged to continue their practice of providing education to girls through single sex girls' boarding schools.

8. Without overlooking the government's policy of providing education to every citizen, the government should consider constructing more smaller schools than few bigger ones. Thus the basic schools that are being built presently should be made as small as possible. The ideal situation is to have grade 2 and grade 3 schools and to avoid constructing grade 1 schools. There is no justification for the government in building grade 1 schools with large enrollment figures since it has been shown that such schools only contribute to the poor performance of the pupils, at least in English.

C. Time has probably come when expatriate teachers of English are no longer needed. This is in line with the government's own policy of reducing dependence on foreign labour and of

encouraging locally trained staff. Whatever benefits are enjoyed by the expatriate teachers of English should be channelled to providing incentives to the Zambian teachers. In this way the wastage rate among the Zambian teaching staff will be minimized.

D. Since it was found that the more time the pupils had to prepare themselves for School Certificate examinations in English, the better the result, schools should be encouraged to start examination preparations as early as possible. Such preparation, however, should not be used as an excuse for teaching only those things that teachers think will be tested. A balance must be maintained not only between teaching what is in the syllabus and preparing pupils for the examinations, but also between what pupils will need in the real world when they graduate and what they need to pass the examination.

E. Even if generally speaking schools studied were moderately stocked with textbooks, there were a number of schools that had a critical shortage of teaching materials. The stocks of books, especially those on extensive reading

and structure, that were received a long time ago were not replenished. In some cases schools had the money but they could not find the books they needed in the bookshops. The government should start focussing attention on what goes on inside the classroom, especially on whether teachers have adequate equipment to work with. The annual returns from the schools to the English Inspectorate must be evaluated critically and appropriate action taken. The Teaching Service Commission should encourage more local writers to write both texts and extensive reading materials to be published locally at cheaper rates than imported books.

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APPENDIX A

STRUCTURED INTERVIEW SCHEDULE

1. Name of school .....

2. Location: Urban .....Rural .....

   Distance from Provincial Headquarters.....

3. Size: Grade .....

   Total Number of pupils .....

   Number of Grade 12 pupils .....

4. Age of school (i.e. since it started offering School Certificate) .....

5. Teachers: Expatriates .....

   Zambians .....

   Qualifications: Degree .....

   Diploma .....

   Certificate .....

   Other .....

6. Pupils: Quality of pupils who are accepted into Grade 10.

   a) by Grade in English at Grade 9

      Only Grade 1

      Grades 1 and 2

      Grades 1 to 3

      Grades 1 to 4

b) by Division in all subjects at Grade 9.

Only Division 1

Divisions 1 and 2

Divisions 1 to 3

Divisions 1 to 4.

School Certificate results between 1982 and 1986.

Year	1	2	3	4	5	6	7	8	9	
1986										
1985										
1984										
1983										
1982										
	DISTINCTION		MERIT		CREDIT		PASS		FAIL	TOTALS

Results

7. Time spent on teaching English:

Periods per week .....

Prep .....

Homework .....

Tests .....

8. Examination preparation for School Certificate:

When it starts .....

How it is done .....

9. School resources:

a) Number of textbooks:

Structure .....

Composition .....

Intensive Reading .....

Extensive Reading .....

Summary and Note-Making .....

Total number .....

b. Other materials:

	Very Satisfactory	Satisfactory	Not Satisfactory.
Past examination papers			
English on the air			
Teachers' reference books			
Other:			

All the materials together:

Very adequate .....

Adequate .....

Inadequate .....

Very inadequate .....

c) Library:

In use ..... Number of books .....

Not in use .....

None .....

d) Television set:

In use .....

Not in use .....

None .....

e) Radio/Radio Cassette:

In use .....

Not in use .....

None .....

10. General Comments: .....

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APPENDIX B

TYPE, NATURE, AGE AND SIZE OF SAMPLED SCHOOLS

1. Government Schools

SCHOOL CODE	Nature			Age	Size		Distance from HQ (Km)
	Boys'	Girls'	Co-ed		Grade	Total enrollment (1988)	
HITS	x			32	1	800	2
KASS			x	18	1	1,277	120
MONS	x			22	1	1,134	240
PEMS	x			13	2	900	205
CHIP	x			20	2	708	292
NAMS			x	18	1	1,200	360
KASG		x		22	1	1,167	1
MASH		x		18	2	800	200
TOTALS	4	2	2				

Averages: Age = 20yrs.
Grade = 1
Enrollment = 998 pupils
Distance = 177.5 Kilometres

2. Grant-aided Schools

SCHOOL CODE	Nature				Size		Distance from HQ (KM)
	Boys'	Girls'	Co-ed	Age	Grade	Total enrollment (1988)	
STMA		x		28	3	560	3
CHOS			x	22	1	1,200	180
NJAS		x		21	2	1,005	180
STMR	x			23	2	715	255
RUSS			x	28	2	680	230
STCA	x			29	2	858	231
MZGS		x		17	3	350	340
STED	x			19	2	720	340
STJO		x		21	2	560	284
CHIK			x	22	3	619	401
TOTALS	3	4	3				

Averages: Age = 19 yrs.
Grade = 2
Enrollment = 727 pupils
Distance = 244.4 Kilometres

APPENDIX C

School Resources: Number of Textbooks per individual School

1. Government Schools

SCHOOL CODE	Structure	Composition	TEXTBOOKS Intensive Reading	TEXTBOOKS Extensive Reading	Summary and Note-Making	Totals	Lib.	TV.	Radio
HITS	92	50	333	2000	0	2475	x	-	-
KASS	262	25	310	0	7	604	x	-	x
MONS	229	106	213	0	15	563	-	-	x
PEMS	122	105	49	1056	53	1385	x	-	-
CHIP	82	0	108	264	35	489	x	-	-
NAMS	470	26	279	418	68	1261	x	-	x
KASG	105	62	46	0	0	213	x	-	-
MASH	403	20	35	0	0	458	x	-	-
TOTALS	1765	394	1373	3738	178	7448			

Average number of books per school = 931

2. Grant-aided Schools

SCHOOL CODE	TEXTBOOKS								
	Structure	Composition	Intensive Reading	Extensive Reading	Summary and Note-Making	Total	Lib.	TV.	Radio
STMA	88	34	177	74	74	447	x	-	-
CHOS	145	14	189	0	6	354	x	-8	x
NJAS	121	26	137	0	0	284	x	-	-
STMR	0	4	19	0	22	45	x	x	x
RUSS	133	45	37	100	25	340	x	-	-
STCA	96	0	42	0	0	138	x	-	-
MZGS	177	37	151	0	0	365	x	-	-
STED	424	121	190	0	100	835	x	-	-
STJO	20	37	108	0	9	174	x	-	-
CHIK	322	36	20	0	42	420	x	-	x
TOTALS	1526	354	1070	174	278	3402			

Average number of books per school - 340.