PRODUCTION UNITS IN SOME ZAMBIAN SCHOOLS AND COLLEGES: THEIR ORGANISATION PROBLEMS AND PROSPECTS.

BY

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DEDICATION

This dissertation is dedicated to the Zambian peasantry who earn their living through real sweat and toil.

I, Ignatio Kasonde Bwalya, do hereby solemnly declare that this dissertation represents my own work and that it has not been previously submitted for a degree at this or another University.

Signed: I. Bwalya

Date: 2ND FEBRUARY, 1983.

This dissertation of Ignatio Kasonde Bwalya is approved as fulfilling part of the requirements for the award of the degree of Master of Education by the University of Zambia.

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ABSTRACT

Title: Production Units in Some Zambian Schools and Colleges: Their Organization, Problems and Prospects.

The Purpose of the Study

This survey attempts to document how production units in selected schools and colleges are organized and the problems they face. Furthermore, the survey analyses the opinions of pupils, students and teachers/Lecturers in reference to production units or manual work. The study also takes a look at pupils' preferences for farming as a career compared to other jobs. Four variables (namely, sex, location of the school, boarding or day status of the school and level of education of the respondents) were taken into consideration to determine whether or not they had any bearing on the respondents' attitudes to production units or farming as a career.

Methodology

This survey was conducted in two provinces, Luapula and Copperbelt. In each province one college was chosen for the study. 40 primary school pupils, 40 secondary school pupils, 38 college students and 38 teachers/lecturers responded to the questionnaires.

Data Analysis

Four data analytic methods have been utilized in this study:

(i) On organization of production units and problems faced by them, factual presentation is done based on the responses of the respondents and personal observations made during the survey;

(ii) Percentages are used to compare the responses of various categories of respondents;

(iii) The use of chi-square to determine if there is any statistical significance in the responses of various respondents; and,

(iv) The use of gamma measure of association for ordinal variables.

Findings

1. It was found that Party Officials or influential local leaders do not sit on school production unit committees, contrary to the Ministry of Education directives.
2. The problems of water, initial capital and theft was common in all schools.
3. The four variables of sex, location of the school, boarding or day status of the school, and level of education of the respondent had little or no influence on pupils', students' and teachers'/lecturers' responses to production units. There was an overwhelming support for production units to continue in all institutions of learning.
4. Farming was the second most popular job preference. This is an indication that school-leavers are no longer illusioned about their job preference as experience has taught them that in most cases, the majority of them will not get the jobs they prefer due to stiff job competition brought about by continuous shrinking job market in Zambia.

Recommendations

1. Technical and vocational skills should be taught in schools

with stronger bias in favour of agriculture.

2. Teachers qualified in production unit skills should be deployed to boost production. This means more teachers should be trained in this field.
3. Individual schools should make efforts to purchase their own tools since the Ministry of Education is financially handicapped and unable to provide the required tools to schools.
4. Pupils in day schools should be guaranteed good concessions to buy the produce at reduced prices as an appreciation for their labour.

SUGGESTIONS FOR FURTHER RESEARCH

(i) A replication of the kind of study undertaken here, but with a much larger and representative sample of schools so that results can be boldly generalized to Zambian schools as a whole;

(ii) A detailed study of two production units (one successful and one unsuccessful) to be able to pinpoint more accurately factors that account for success or failures of production unit activities; and

(iii) A more comprehensive study regarding what pupils and student-specific and school-specific variables are associated with acceptance or rejection of production units or manual work among pupils and students (and also teachers). Such insights may aid policy makers in the selection of strategies to shape attitudes in favour of manual labour among Zambians, especially young school-leavers.

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CHAPTER ONE

Introduction

On 20th July, 1975, Dr. Kenneth D. Kaunda issued a Presidential decree directing all educational institutions in Zambia to set up production units. He announced that:

> With immediate effect, all villages, primary and secondary schools, colleges and the University of Zambia will become food production units in a bid to make the country self-sufficient in food (Zambia Daily Mail, 21 July, 1975).

Prior to the Presidential directive, schools were engaged in some productive activity, mainly in Young Farmers Clubs. These were voluntary, essentially extra curricular with farming as their mainstay activity. Besides, these clubs did not exist in all schools.

The Presidential directive was a reaction to the problems besetting Zambia's educational system. Immediately after independence, the government had embarked on general expansion of the educational system by building many primary and secondary schools to the neglect of technical and vocational schools. As early as 1969, the government saw the need for corrective measures in the educational system. Opening the First National Educational Conference in 1969 in Lusaka, President Kaunda observed:

> The type of education Zambia needs, like any other developing country, is 'Education for Development', it is education to meet the special needs of our people. It must be geared to equip the student with techniques to solve such problems as he or she may encounter in future. Let us seek for education which gives our people not romantic satisfaction but practical utility (Ministry of Education, 1969:12).

On 12th July, 1975, eight days before the decree President Kaunda in his capacity as Chancellor of the University of Zambia spoke at the Graduation Ceremony. His speech had an eye-catching title called 'Education For Revolution'. Some of the contents in his speech came from his book Humanism Part 1 but on this occassion he stressed that education for revolution calls for the instilling of the spirit of patriotism, respect for human dignity, self-reliance, egalitarianism and hard work among Zambians. He called for hard work in sections, branches, wards, villages, schools, colleges and the University so that work ethic is deeply ingrained in Zambian youths. The President emphassed that the students must be brought up basically as workers and peasants producing food they eat, the clothes they wear and the raw materials they use in their work.

The government had correctly realised that the type of education it was providing was specifically for the production of white-collar and professional manpower and that it was lacking in technical skills training which Zambia badly needed. The political leadership felt that Zambia's system of education was encouraging young men and women to seek more white-collar jobs than jobs requiring manual and technical skills. Furthermore, the educational system was seen to contribute to a reward system which fostered individualism and led to rapid stratification based on educational attainment and income. Apart from rewarding a few and forsaking the majority, the educational system tended to concentrate on individual achievement and therefore,

was unable to inculcate commitment to the development of the community and the nation.

The Presidential decree departed from what had been the practice before because it stipulated that productive work be compulsory and that it be integral to studies. The 1975 Presidential directive therefore marks the beginning of the period in which productive work has been enforced as part of the school curriculum.

The Presidential decree was followed by subsequent dispatching of study tour groups to various countries which were practising study and work. Among such countries were the People's Republic of China, Cuba, Tanzania and Botswana. As part of the reform exercise, a sub-committee on production units in the Ministry of Education came out with a report in 1975 which stated that the programme should be viewed as a 'hand-and -hoe' revolution, a part of peoples' development through agrarian revolution.

Since all pupils and students in Zambian schools and colleges were to be involved in productive work, the Ministry of Education was entrusted with the implementation of the Presidential directive. The social, educational and economic goals of production units in institutions of learning were guided by the following principles and objectives:

(a) that manual work is as socially valuable and acceptable as intellectual work;

(b) that education and productive work are necessary for personal and national development;

(c) to produce a cash surplus from these activities which can be used to improve and expand educational facilities; and

(d) to reduce the public cost of educational provision through self-help by institutions themselves (Ministry of Education, 1976 a:32:33).

The Ministry of Educational final document on Educational Reforms (1977) emphasised educational rather than economic values. The document stated that production units were to form a basis for practical training since the main objective was to give the pupils an all-round education. Nevertheless, this document also acknowledged that production units should be used to enhance the spirit of and practice of self-reliance. It was also hoped that knowledge gained by pupils from school productive work would aid them lead productive lives in the absence of wage employment after they left school.

As can be expected, not all innovations in the world will be accepted by everyone. Professor Lameck Goma as the then Minister of Education observed that, there have been many examples of educational innovations in the world which have not succeeded even though the ideas behind them seemed valid and promised many benefits. The inclusion of production units in the educational reforms was opposed by some prominent people in Zambia (Ministry of Education, 1977a pp A2-A3 and H4). In Tanzania Adams (1981 found that

teachers were hostile towards the new curriculum planned for them and found extreme difficulties in reconciling the two conflicting functions which they were asked to carry out. Nyerere had ordered that each primary school, secondary school and teachers' college should have a farm to contribute towards its own upkeep, thus inculcating a respect for manual labour and developing skills and attitudes necessary for socialist cooperative production. Adams indicates that the students and parents found goals set by Nyerere to be in conflict with their aspirations and perceptions of education because of economic incentive attached by the students and parents to education.

In Zambia, despite little opposition to the introduction of production units in schools, a few dissenting voices expressed misgivings about the proposal. According to the Ministry of Education (1977a, p H4), people or groups who opposed the introduction of production units in schools were: 1) E.M. Chipimo, Chairman of Standard Bank said that either educational institutions shall become productive, economic, profit-making centres or they shall primarily be schools; the likelihood is that they will be schools; 2) the University of Zambia representatives, who expressed the view that the relationship between economic and educational activities was unclear and that the attempted distinctions were misleading. They said further that it implied schooling was one thing and productivity another

and that economic activities may be educational if properly conducted and therefore, the main objective must be educational; representatives from Livingstone Teacher Training College, who observed that the idea of production units was giving the impression that economic objectives were more important than educational ones and that children would be exploited as cheap labour at the expense of their lessons.

On the educational reforms as a whole, people like Chipimo, E.A. Kashita, I.M. Chanda, W. Longwani and representatives from the University of Zambia said that since independence the educational system in Zambia had suffered many changes for the worse such as closing Trade Schools and abandoning handcrafts. They saw the reform proposals as the latest and most drastic in the series of mistakes made by the Party and its government. They felt that the new policy would lower the standards and destroy international recognition by creating a unique educational system which would be incomprehensible outside Zambia and saw nothing new in the proposed reforms (Ministry of Education, 1977a, pp A2-A3).

Looking at the status of these people, one is inclined to conclude that they were essentially spokesmen of the middle-class who had benefitted from the educational status quo and now felt threatened by the proposed changes.

Before leaving this point, it is important to be reminded that the criticisms during the National Debate on Education Reforms seemed to have influenced the final document on Education Reforms of 1977. The earlier document called Draft Statement on Education Reforms of 1976 contained very radical proposals, but the 1977 document had most of 1976 radical proposals moderated. This is why some observers have referred to the 1977 document as a rejection of the reforms (Clarke 1978) and Lulat (1982).

Given the kind of opposition to educational innovations that Adams documented in Tanzania, this study solicited the views of teachers and lecturers on the introduction of production units in Zambian schools. The basis for this interest of the study is that teachers, especially those in secondary schools and teacher colleges belong to the middle class and hold jobs that are white-collar in nature. As for the pupils and students, this survey tapped their attitudes to establish whether they are unsupportive of or receptive to production units.

The Research Problem

It is important to know how the directive has been implemented and assess to what extent pupils, students and teachers have accepted production units in schools. Accordingly, this survey has four objectives. First, to examine organisation of production units in selected schools and colleges.

Second, to investigate problems being encountered by production units. Third, to analyse attitudes of pupils, students and teachers towards productive activities or manual work; and fourth, to ascertain primary and secondary school pupils' attitudes to farming as a career. In particular the main aim is to find out:

(a) What are some of the problems being faced by production units in the selected institutions?

(b) What actual objects are being produced in the selected institution?

(c) For what purposes are production units included in the school curriculum?

(d) Do pupils and students think that skills acquired from production units are useful to them when they leave school? and

(e) What in general are the opinions of pupils, students and teachers about production units?

Theoretical Framework and Some Hypotheses

The first and second objectives of this study are essentially exploratory, aimed at finding out how production units are organized and the problems faced by these units. However, the third and fourth objectives can be conceptualized along certain dimensions.

In pursuit of these last two objectives, it is hypothesised that factors such as level of education, rural or urban background, sex and boarding or day status of a school may have some bearing on pupils', students' and teachers' attitudes towards production units and farming as a career.

To begin with, the level of the educational institution attended by students can influence their perceptions of occupational choice and liking or disliking for production units or manual work. The involvement of the University of Zambia students in production units has not been undertaken because the University authorities perhaps suspect that such a move is unlikely to be accepted by most students. The only students involved in productive work are those in the School of Agricultural Science. These students do their practicals at the University farm, University field station and private farms for a duration of 30 weeks evenly spread in the second, third and fourth years of their studies. Their practicals involve doing all the 'dirty' farm work and a student is passed or failed if she/he does not do that kind of manual work properly. These practicals are part of the syllabus and have been there since 1971 before the Presidential directive. There is the possibility that students do these practicals purely for certification.

In Zambia, parents as well as the pupils look upon the acquisition of secondary school and higher education as a gateway to white-collar jobs.

Teachers in Zambia may hold the same views and might think that the introduction of production units in schools may adversely affect academic performances of the pupils. This is probably true in other countries as well. Ezell and Tate (1965) in Waco, Texas found out that high school students preferred professional jobs to blue-collar jobs. Similarly, Hicks (1968) confirmed in Zambia that the general positioning of occupations by secondary school pupils was similar to the positioning of occupations in developed nations. This might be due to the fact that by 1968 almost all pupils who completed secondary school education had the opportunity to find white-collar jobs and those left by expatriates. However, Wood (1974) found that choice of careers by Form V pupils in Zambia was based on prestige rather than practical reality. Wood contended that some sociological factors may be so strong as to persuade Form V leavers to choose jobs about which they know very little or for which they do not posses appropriate qualifications. On the basis of the works cited above, it is expected in this study that primary school pupils should respond more positively to production units or manual work and to farming as a career than secondary school pupils and college students. This assumption was arrived at after also considering that it is primary school pupils who stand less chance of getting formal employment than secondary school pupils and college students.

For this reason, it was assumed that primary school pupils would look at production units and farming as a normal way of life as this was the kind of work they would be expected to engage in after leaving school. It is therefore, hypothesised that:-

1. Teachers/lecturers will respond unfavourably to the introduction of production units in schools.
2. Pupils in primary schools will respond more favourably to production units than secondary school pupils and college students.
3. Pupils in primary schools will respond more favourably to farming as a career than secondary school pupils.

Second, the location of the school (rural or urban) can have some effect on pupils perceptions of production units and choice of careers. Klingelholfer (1967) studied the occupational preferences of Tanzanian secondary school pupils and indicated that rural-urban differences had some effect on the occupational preferences of the pupils. He concluded that urban pupils made more realistic preferences than their rural counterparts. Wood (1974) found out in the case of Zambia that rural Form V pupils rated teaching and nursing as high prestige jobs in contrast to Form V pupils in Lusaka who rated mechanical engineering, medicine and law as high prestige jobs. Wood contends that rural Form V pupils were only exposed to teaching and nursing as high prestige jobs while their counterparts

in Lusaka were exposed to a wider range of jobs and had access to information concerning different careers they could choose from. Osuji (1976) in Nigeria also found that rural students were less ambitious in their level of vocational aspirations, found information about jobs more difficult to get, and had less chance of benefiting from such services as career counselling. He acknowledged that rural students' sources of job information (usually fathers, mothers, relatives or friends) were less reliable and that rural students were less optimistic about achieving their vocational ambitions than urban youths. On the basis of the works cited above and the fact that in rural Zambia most people earn their living through the use of the hoe and hand, it is expected rural pupils and students will respond more favourably to production units than urban pupils and students. The following hypotheses are suggested:-

4. pupils and students in rural schools will respond more favourably to production units than their counterparts in urban schools.
5. Pupils in rural schools will respond more favourably to farming as a career than pupils in urban schools.

Third, sex can be a strong variable influencing pupils' or students' occupational choice and attitudes to production units or manual work.

Deutsch (1960) found Negro and white boys in a New York city elementary school to have unrealistic aspirations for high prestige jobs such as medicine and engineering. In contrast he found girls (especially low-class girls) to be realistic in their aspirations. The point is, of course, debatable as to whether girls in Zambia with comparable qualification with boys appear to have better chances of getting employed because of concessions normally given to them. But the fact of the matter is that in Zambia, and probably elsewhere, some jobs such as nursing, typing and kindred are traditionally identified with women while jobs such as mechanics, driving, farming and mining are regarded as men's jobs. These 'traditions' are slow to change and will stay with us for sometime. It is assumed in this study that in Zambia girls in Grade VII and beyond will shun production unit activities and farming as a career. It is, therefore, hypothesized that:

6. Male pupils and students will respond more positively to production units than female pupils and students.
7. Male pupils will respond more favourably to farming as a career than female pupils.

Fourth, literature on whether the status of a school (boarding or day) can have some influence on pupils'

perceptions about production units or occupational choice is very difficult to get. At the moment all boarding institutions in Zambia are either secondary schools or colleges. Boarding schools use food produced from their units (or money generated from the units) to supplement their food stocks in times of food crisis, as such, their students and staff have seen practical and economic utility of these units than students and teachers in day schools. It is believed that self-reliance of schools as a result of these units is more crystallised in boarding institutions than in day schools. Accordingly, it is hypothesized that:

8. Pupils and students in boarding schools will respond more favourably to production units than their counterparts in day schools.
9. Pupils in boarding schools will respond more positively to farming as a career than their counterparts in day schools.

Confirmation or disconfirmation regarding the hypotheses about attitudes to production units will be based on whether or not differences between any contrasted groups are statistically significant at least at the 0.05 level. Confirmation of the hypotheses about preference for farming as a career will depend on the magnitude of the percentage differences between any contrasted groups.

After all, a percentage difference that is very large is bound to be statistically significant.

Significance of the Problem

The questions raised earlier need to be answered if we are to know whether production units are serving the purposes they were intended for. There is a need to know if at all production unit activities are really worthwhile or a waste of teachers' students' and pupils valuable time for other subjects. It is necessary to know if teachers, students and pupils have willingly accepted the inclusion of production units in schools or if they are engaged in these activities simply because it is a directive from higher authorities. The acceptance of production units in schools by teachers, students and pupils is important because these groups are the primary participants in productive work. Alternatively, rejection of production units by teachers, students and pupils can make the units unsuccessful no matter how good the conditions for production might be. This survey also aims at documenting how the units are organized and the problems encountered by them with a view to making recommendations for their improvement.

The next chapter on the review of literature takes a look at the nature of the debate on the issue of combining

work and study as an integral whole and how this concept is gaining recognition in Zambia and other parts of the world.

Definition of Terms

In this dissertation, the following terms will have their specific connotations:

1. Production Unit is the entire engagement of educational institutions in some collective productive activities. The terms productive units and productive activities will be used interchangeably to mean the same and one thing. They both refer to any work or activities undertaken by the pupils or students to produce food or goods of some sort either for their own consumption or for sale.
2. Production simply refers to the actual output of food or goods by the pupils or students in any given production unit.
3. Manual Work is the application or use of physical energy by pupils and students to produce food or goods in their production units.
4. Primary School in Zambia is an educational institution catering for Grades one to seven. Primary education lasts for a duration of seven years. A child enrolled in Grade one will normally be about seven years old if a boy and about six years old if a girl.

5. Secondary School caters for Grades Eight to Twelve (Forms 1 - 5). Roughly a pupil will complete his secondary education between the ages of nineteen and twenty-one years.

6. College caters for post-secondary students who are not accepted by or do not seek admission to the University of Zambia which normally enrols the best pupils from secondary schools.

7. Pupil refers to a boy or girl in a primary or secondary school.

8. Student is a male or female learning at a college or university.

9. Teacher refers to a man or woman trained to teach either in a primary or secondary school.

10. Lecturer is someone who teaches at a college or university.

11. Headmaster is a teacher at a primary or secondary school appointed by the Ministry of Education to be the overall incharge of other teachers and to carry out administrative duties of the school.

12. Principal is a person appointed by the Ministry of Education who is the administrative head at a college.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Study and Work in Colonial Zambia

The idea of combining study and work is not unique to socialist thought; it is an old practice. Van Rensburg (1978) made the point that education and production is not a new idea and not exclusively a Marxist one. The idea, he says, was inherent in the educational system of traditional pre-capitalist societies of most countries. This idea was embodied in apprenticeship, in the work of Robert Owen, in the British Factory Acts, in the work of Rey Alley in China and Gandhi in India.

Even early missionaries and colonial administrators in Zambia, who were not socialists, appreciated the need to teach the Africans productive skills. The idea of combining study and work in colonial Zambia stretches back at least as far as 1922, when G.C. Latham, an education officer, who later became Director of African Education, is reported to have said that:

> A mere bookish education is worse than useless for a native. The minds of the natives can only be really awakened through intelligent industry. I hope that in future the teaching profession will only be open to boys who have combined industrial and agricultural with literacy education. Some means must be found for ensuring that as much as possible all natives who learn to read and write should complete a course of literacy and manual work training of not less than 5 years.... (Snelson, 1974:35).

While realising the racist overtones in Latham's words, we cannot wholesomely condemn his intentions because

this is similar to what the Party and its Government is trying to do today.

Similarly, the Phelps-Stokes Commission on Education in East Africa which visited Northern Rhodesia (Zambia) in 1924 expressed similar concern for a type of education suitable for the needs of African societies. To this effect Jones (1925) acknowledged that the first steps towards agricultural instruction as an educational aim was the development of real appreciation of its importance. Jones accused the school program of being exclusively devoted to the literary and other conventional elements of the school curriculum which caused the Africans to think that agriculture was not really important. He emphasized the need for teaching industrial skills to the Africans based on the needs of their society.

When the Colonial Office took over administration of Northern Rhodesia from the British South Africa Company, it directed special efforts towards the encouragement of technical and agricultural education. Snelson (1974) has written that a portion of a school's working week was devoted to manual work and apart from working in school gardens, pupils were supposed to learn woodwork and other practical skills. In 1929, seven mission stations were specializing in agricultural instruction at Kafue, Chikuni, Chipembi, Chitambo, Madzimoyo, Mapanza and Kambole. A demonstration garden at Nsadzu

produced 1180 kilos of maize from one acre and served as an encouragement to the local people.

The encouragement of study and work continued. Pupils who completed their standard 6 (though a few of them found clerical jobs) were warned not to shun manual work and that their certificates were not passports to office work, but mere indications that they had completed their primary education. The warning was clearly printed at the back of all standard 6 certificates. In 1950s and early 1960s, pupils used to be taken for community service during the long school holidays as a way of orienting them to manual work. The Ministry of Education (1958-60) indicated that boys undertook projects which were of service to the local community such as building schools for the blind or houses for old people, making roads and bridges, constructing fish dams and irrigation schemes.

The idea of combining study and work was not appreciated by African pupils and politicians because they considered it to be a deliberate move used by the colonialists to try and keep Africans away from white-collar jobs. The contradictions between the economic and social realities of the colonial state and the formal objectives of colonial education policy have been well analyzed by Foster. He points out that:

> The demand for technical workers came very late in colonial period, but the nature of European over-rule and activities of European commercial enterprises made it inevitable that employment needs be more heavily oriented towards clerical workers to fill the lower achelons of the administration. Access to such remunerative employment was more clearly guaranteed by academic than by technical forms of education (Foster 1965:135).

Foster is saying that African students, even those who had done technical courses, shunned technical jobs in favour of clerical jobs which were better remunerated.. This tendency by the students continued in Zambia even after independance. In Tanzania, Adams (1981) indicates that when Nyerere introduced farming in schools and colleges he (Nyerere) was reflecting his views on anti-manual labour attitudes in Tanzania's education system. These anti-manual labour attitudes in Tanzania's education system influenced students to shun jobs requiring manual labour in favour of white-collar jobs.

The Global View of Combining Study and Work

Although the idea of combining study and work is not exclusively a socialist one, the most fully elaborated concept of combining work and study is probably found in socialist educational literature. This concept has found practical applications in the education systems of the Soviet Union, the People's Republic of China, Cuba and other socialist countries which are dependent on the same body of pedagogical theory. The socialist view of combining work and study is based on the assumption that building socialism involves not just changing material conditions but also altering social consciousness. As

Castles and Wustenberg (1979) have indicated, values such as individualism, profit-seeking, competitiveness and belief in the superiority of mental work over manual work are all unsuitable for building socialism. In other words, the socialist position stipulates that there should be no division between manual and mental work and no distinction between work and learning. 'Book-learning' alone is not regarded as enough to create the kind of socialist society to which Zambia aspires. What is needed is an all-round education. Mao has aptly described this type of education:

> Our educational policy must enable everybody who receives it to develop morally, intellectually and physically and become a worker.... Education must serve proletarian politics and be combined with productive labour and while their main task is to study, they (students) should learn other things, education should be revolutionalized..... (Mao quoted in Tchen, 1977: 413-414).

Briefly, what Mao meant is that any educational process which does not make a learner a worker as well is unsuitable for building socialism. This is what Nyerere (1968) meant when he said that there is no such a thing as socialism without work. Mao and Nyerere believe that separation of learning from working is incompatible with socialism..

Cuban educational reforms were guided by a similar ideology after the 1959 Revolution that brought Fidel Castro to power. Education was seen as a tool for economic development; the learner had to be made a productive worker so that he could contribute to community development. Semykin (1977) contends that

preparing pupils for work involves, first and foremost, giving them a love for it and the deep conviction that they must make a personal contribution to society. This type of education purportedly lays the foundation for inculcations of high moral principles and beliefs.

One of the purposes for introducing production units in all institutions of learning in Zambia is to make the pupils and students productive. Money generated or food produced from these units can make the schools self-reliant in some ways and reduce government expenditure on them. What is needed, then, is to convince pupils and the general public that the use of pupils's labour for productive activities has some purpose especially during this time of economic recession.

The concept of combining study and work has been applied in Botswana in the Brigades. The only problem with the Botswana Brigades is that they were run privately by Van Rensburg, a refugee from South Africa, and as such were considered by students and the general public as inferior because they were not part of the official school system. In Tanzania, Nyerere's Blue Print on Education For Self-reliance (1967) outlines corrective measures aimed at making and reorganizing schools to practice self-reliance. That is, the material and financial needs of the schools should be provided, as far as possible, by the schools

themselves, thus making them less dependent on the government. This is why Nyerere suggested that the school and its surrounding community should constitute an integral whole. Nyerere's idea of increasing school entry age from five to seven years was based on his concern about mass unemployment at the end of primary education. He felt correctly that those who joined primary school at the age of five years completed the primary course at too young an age to be productive members of their societies. His ideas of vocationalization of the curricula was directed at solving the unemployment problem by teaching the pupils productive skills which they could fall back on after leaving school.

Combining study and work is quickly gaining recognition in many countries and has the blessing of UNESCO as is shown in its Report entitled Education and productive Work: Final Report. It is observed in this report that:

> The key factor of educational innovations designed to integrate education to productive activity is the effort made to involve all active forces of the country in production. In particular, this includes the young school dropouts and the inhabitants of the agro-pastoral environments who get no functional education thus fostering their integration into the economic system (Unesco, 1979:4).

An organization known as the Foundation For Education with Production has been formed with Van Rensburg as its director. It has branches in Zambia, Zimbambwe, Botswana, Tanzania, Kenya, Upper Volta, Guinea-Bissau and other countries. Its aim is to make the idea of combining study and work meaningful to its members.

In North Carolina in the United States, Warren Wilson College students are involved in productive work as one way of reducing the costs of running the institution. It is reported that students from this college come out with skills they never dreamed of. By using students in productive work such as keeping cattle, pigs and gardening, Warren Wilson College has saved a substantial amount of money. As one comentator has observed:

> Everyone works on the mountain-ringed Warren Wilson campus in Swannanoa Gap, 10 miles east of Ashville. No matter how affluent the student, the only acceptable payment for room and board is 15 hours of labour each week (Charlotte Observer, 20 September, 1981).

Zambia's system of education has been criticized as being elitist in nature. Linking learning and productive labour is perhaps among the best ways to overcome elitism and establish a closer link with school and community. Education with production is definitely the best way of narrowing the gap between mental and manual labour.

Production Units and the Selection System in Zambia

The obvious public reaction when the Ministry of Education announces Grade Seven selection results is the demand for more secondary schools to be built to reduce the number of'dropouts'. What the public does not seem to realise is that such an action would only delay but not solve the problem because at Form III or Form V level there will still be 'dropouts' since only a handful of pupils will go to the University or colleges. Because of the very competitive nature of the selection system,

parents are aware that whatever their children do at school might affect their selection. There are some parents who think that production unit work can adversely affect the academic performance of their children. The following incident reported a little time back in a Zambian newspaper illustrates the point:

> A Chief and his subjects are fuming at the continuous poor results at a school where only three pupils have qualified for Form 1 since 1972. For the past eight years the school has produced thousands of bags of maize, sunflower and cotton. The Chief accused the Headmaster and his staff of spending most of their time trying to become farmers instead teaching (Zambia Daily Mail, 29 February, 1980).

While there is some ground for this concern over the selection of children into Grade 8 or Form 1, it should be made clear that it is not only production unit work that may adversely affect the performance of children at school. After all, pupils in other schools are also involved in production unit work and perform well in their Grade 7 examinations. The problem may be that some schools tend to spend more time on production units than is required. Maliyamkono (1979) in his research in Tanzania found that there was no correlation between academic achievement of the school and its success or failure in productive work. The performance of pupils or students in schools may be affected by factors other than preoccupation with productive work. In fact one of the schools targetted for my survey, is reported by educational authorities in the district to rank among the best in both production work and pupils' academic performance in grade 7 final examinations. This point

confirms Maliyamkono's finding and disconfirms the position of those who think that production unit depresses pupils' academic performance.

According to Knox and Castles (1982), combining study and work in the Botswana Brigades proved highly successful and by mid-seventies, they existed in most of Botswana's towns and large villages. However, the Brigades were benefitting mainly children of somewhat better-off groups. The best trainees of building and mechanical Brigades were not remaining as cadres for rural development, but were pulled into the towns, often as foremen or skilled workers for South African companies. The Brigades also ran into economic difficulties and internal conflicts on political aims and management policies exacerbated the situation. Today most of the Brigade centres have been turned into secondary schools or technical and trade schools under government control.

What happened in Botswana Brigades cannot simply be written off as a failure because for over fifteen years the Brigades showed how linking education with production could stimulate an alternative type of development. Production units in Zambia (as we shall see later) are serving economic purposes for the schools and as such are not unrealistic as some critics may suggest. Above all, the units are not a financial burden on the government as they have been started and operate on

self-help basis by the schools themselves.

The next chapter outlines the methodology of this study, the instruments used to gather data, and the techniques used in data analysis.

CHAPTER THREE

METHODOLOGY

Selection of Provinces and Educational Institutions

Six educational institutions, three from Luapula Province and three from the Copperbelt Province were selected for investigation. Selected from each of the two provinces were a primary school, a secondary school and a teacher training college. Several criteria guided the selection of the six educational institutions. In each province, the primary and secondary school selected were, according to the official views of the Regional Inspectors of Schools, among the most outstanding in the area of production unit activity. Only one of the two training colleges for secondary school teachers in the Copperbelt Province was selected for this study. It was preferred because unlike its counterpart, it trains teachers in practical subjects such as typing, woodwork, metalwork and technical drawing. These are among some of the skills eventually taught to some of the pupils in production units. In Luapula Province, the only college which trains primary school teachers, Mansa Teacher Training College, was selected for study.

The most important reason for choosing the two provinces is that they have contrasting features. Luapula is predominantly a rural province while the Copperbelt is more urbanised and industrialized. Apart from Mansa

Batteries and Kawambwa Tea Estates, which are both in their infancy, the major economic activity for most of the people in Luapula is fishing on Lakes Mweru, Bangweulu, Kampolombo and in the Luapula River. In contrast, the Copperbelt is more industrialised with mining as the major industry. The industries and factories have attracted different people from many parts of Zambia and from neighbouring countries to the Copperbelt in search of employment. Since one of my hypotheses in this study is that pupils and students in rural schools will respond more favourably to production units and farming as a career than their counterparts in urban schools, the two provinces were ideal for testing this hypothesis. The above hypothesis was arrived at on the assumption that rural pupils are more used to farming and manual work than their counterparts in urban schools. The other reason for choosing the two provinces was that the questionnaires needed interpretation in some instances from English to Bemba which is the prevalent Zambia language in both provinces. Since I can speak Bemba, interpretation was relatively easy for me.

As already mentioned in Chapter one, it is hypothesised in this study that the level of educational institution can have a bearing on pupils' and students' perceptions of production units. This assumption led to selecting one primary, one secondary and one college from each of the two provinces.

Sex can be a strong variable in influencing pupils' and students' attitudes towards production units or manual work. Because of this possibility, each respondent was asked to indicate his or her gender.

It was planned to interview pupils and students who were about to enter the world of work, or who at least faced the possibility of doing so soon. Accordingly samples were drawn from Grade VII, Form III and Form V pupils and final year college students.

Sampling of Respondents and Instruments Used

The sample break down of this study is as follows: 40 primary school pupils, 40 secondary school pupils, 38 college students and 38 teachers/lecturer. The sample, therefore, consists of 118 primary and secondary school pupils and college students and 38 teachers/ lecturer which gives a total of 156 respondents.

Questionnaires for primary and secondary school pupils were personally administered because they needed interpretation in some instances from English to Bemba the local language used in the schools studied. Two of the 40 college students sampled did not complete the questionnaire as was also the case with four of the 42 teachers/lecturers sampled.

Three questionnaires were designed, one for pupils in primary and secondary schools, one for college students

and one for teachers/lecturers (see appendix 1). Some questions were administered to all categories of respondents while some were restricted to each of the groups depending on the information sought. In addition to the questionnaire, personal observations were made of what was going on in schools during production unit periods. Oral interviews were undertaken with two Party officials that this investigator was able to get in contact with.

Limitations of the Study

The limitation of the study to two out of Zambia's nine provinces makes it unrepresentative. The fact that only one primary school, one secondary school and one college were studied in each of the two provinces also makes the study unrepresentative and more like a case study. The sub-samples are also rather too small to allow for bold generalization from the results. The original plan had been to visit three provinces and enlarge the sample. This was revised downward because of the limited resources including time availalbe for this study. Nevertheless, the above problems are perhaps not serious since it is not the intention of this study to generalise the findings from the selected educational institutions to Zambia as a whole.

Data Analysis

Some of the data will be reported on the basis of participant observation. Other data will be documented

according to the information obtained from the respondents regarding, for instance, organizational structure of production units and major problems faced by production units.

The section on responses of pupils, students and teachers/lecturers to attitude questionnaire items on production units will rely heavily on the use of percentages of respondents giving various responses to questions of interest to this study. This section will also report relationships between given independent variables and dependent variables of interest by using the general method of crosstabulations to report contigency tables and significance tests using the chi-square technique. The chi-square technique is used where crosstabulations involve two nominal variables or one nominal and one ordinal variable. It is a measure of association which reveals whether or not the independent variable of interest makes a difference in the way respondents are distributed on the dependent variable; but unlike most other measures of association, it does not indicate the direction (positive or negative) and degree or magnitude of association between an independent and a dependent variable.

The section on pupils' preference for farming as a career as compared to other jobs, will rely on

percentages of respondents selecting the various occupations including farming.

The next chapter is a major one and it presents the results of this study. Some attempt is made to interpret the results.

CHAPTER FOUR

RESULTS AND DISCUSSION

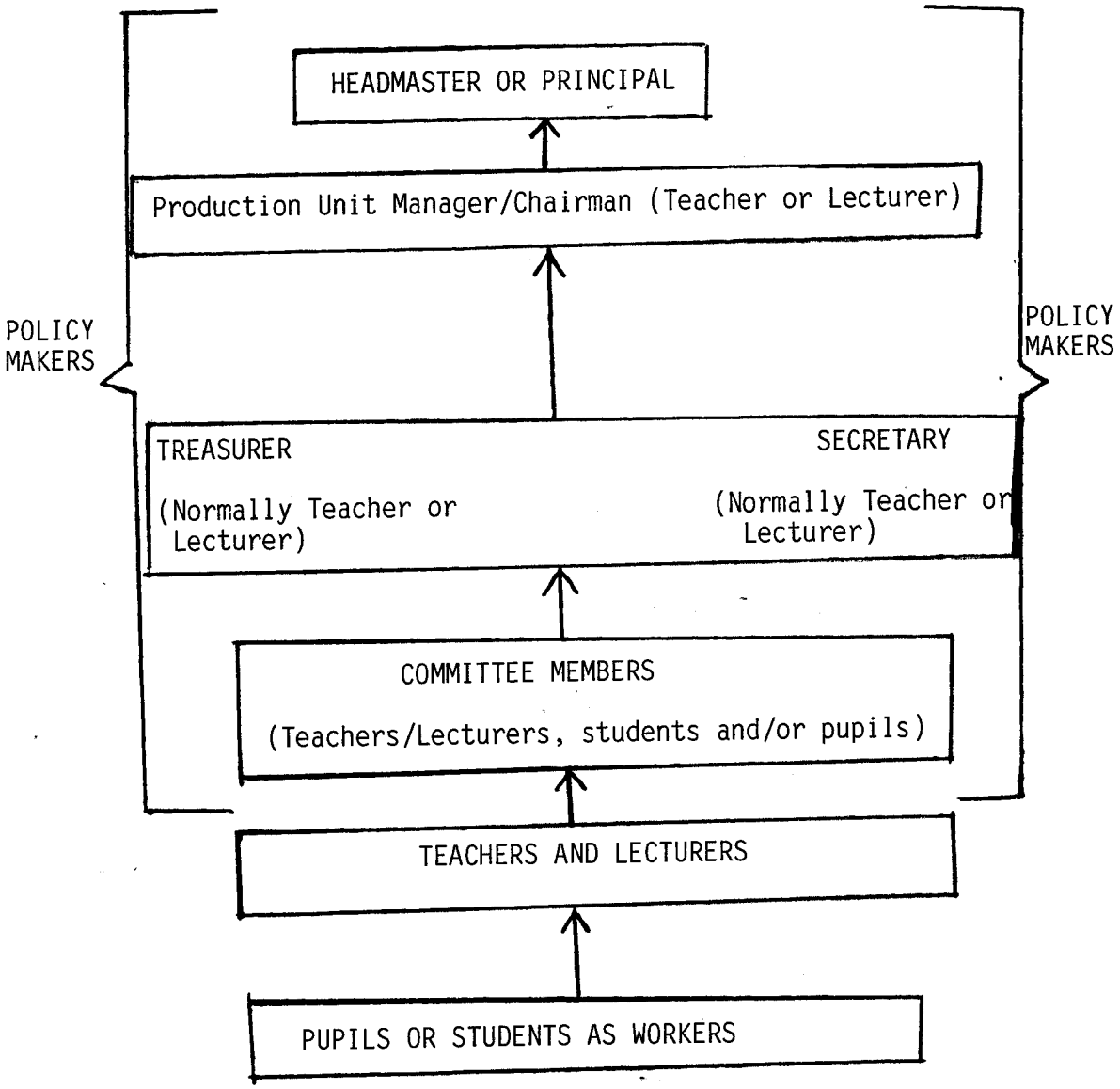
As stated in chapter one, this study has four objectives, namely to document organizational structure of production units, the problems faced by these units, to present pupils', students' and teachers'/lecturers' attitudes towards production units and, lastly, to find out pupils' preference for farming as compared to other jobs. This chapter presents results about these objectives in detail.

PART A: Organization of Production Units in Selected Zambia Schools and Colleges

There were many similarities in the way production units were organized in the six educational institutions visited. Because of these similarities, a typical organizational structure of production units in the six schools is presented in figure 1.

Although only one school had its headmaster as Chairman of production unit, production unit managers or chairmen (often ordinary teachers) in other institutions were nonetheless answerable to the head-master or principal on matters related to production units. Figure one shows the authority structure within production units in an ascending order. Apart from one college where a student was elected as treasurer, the posts of chairman, treasurer and secretary were as a rule held by teachers or lecturers.

FIGURE 1: ORGANIZATIONAL STRUCTURE OF PRODUCTION UNITS IN SELECTED ZAMBIAN SCHOOLS AND COLLEGES



There were no Party officials or any influential member from the local community sitting on any of the school production unit committees. This is surprising since the documents Production Unit Management (1978) and Educational Reform: Proposals and Recommendations (1977) recommended that Party representatives, a local farmer or parent or any member of the local community who may offer special skills or knowledge should also participate in production unit activities of the school. The reasons given by the teachers/lecturers for the absence of such people on the production unit committees were that these people were not part of the school authority and therefore were not needed. Some teachers said they would do better without the presence of these people. The two Party officials I talked to accused teachers of being unwilling to cooperate with them in matters affecting the units and the school as a whole. In fact they felt that teachers were generally unwilling to cooperate with Party officials. The reasons given by the teachers seemed suspect. In view of the unsatisfactory reasons advanced by the teachers, some inferences are made why Party officials or other local leaders were not invited to sit on the committees. These are that:

(i) Either teachers do not know that Party officials or members of the community with something to offer to the school production units can be members

of the school unit or if they (teachers) know, then they have deliberately left out such people for unspecified reasons: or

(ii) Party officials and members of the local community are not aware that if they have anything to offer (in any form) to these units they can be on the committees. Alternatively, these people may know but have not done so because they think teachers will not welcome them to sit on school production unit committees.

Apart from one institution which had a tuck-shop industrial arts projects, and photographic club as part of production unit activities, agriculture was the major activity in the schools visited. All institutions were producing maize and vegetables, two reared pigs and two had orchards. Pupils and students were engaged in cultivating, sowing, weeding, cleaning chicken-runs and pigsties and feeding the animals. Pupils and students used simple tools such as hoes, shovels, buckets, rakes, watering cans or improvised containers. Pupils worked in groups according to their classes under the supervision of a teacher.

The production unit committees hold meetings one to three times a term (depending on the need) to review failures and successes of their units. The proceedings of the meetings are taken to the head of the institution for consultations before deciding on the action to be

taken.

PART B: Problems faced by the Units

Most of the major problems faced by production units in the educational institutions studied were mainly operational, and only marginally administrative. These problems have been summarised in table 1. Before devoting attention to the problems shown in table 1, something needs to be said about production units periods.

There was no uniformity in the number of periods allocated to production units per week. Kawambwa Primary School, Samfya Secondary School and Mutamba Primary School had three periods per week. In addition, Mutamba Primary School pupils were required to go for production unit for one hour on Saturdays and Sundays. The two colleges had two periods of production unit per week and Kansenshi Secondary School had one period. This school, situated in an environment surrounded by good houses occupied by people with high status jobs and rich businessmen, was originally built to cater for European pupils before independence. Before this school became open to all races in 1963, its pupils were not involved in any type of manual work which is a new phenomenon there.

This lack of uniformity in the number of production unit periods allocated to schools leaves one with the

TABLE 1: Major Problems Faced By Production Units In Schools Surveyed

TYPE OF PROBLEM	EDUCATIONAL INSTITUTIONS					
	Kawambwa Primary	Mutamba Primary	Samfya Secondary	Kansenshi Secondary	Mansa T.T. College	Luanshya T.V.T. College
1. Lack of qualified production unit teachers	X	X		X		X
2. Lack of awareness of the wide range of productive activities suggested by the Ministry of Education	X	X	X	X	X	
3. Scarcity of initial capital (money)	X	X	X	X	X	X
4. Damage or theft of produce and/or tools	X	X	X	X	X	X
5. Insufficient working tools	X	X	X	X		X
6. Water supply problems; too much or too little or irregular water supply	Y	X	X	X	X	X
7. Lack of stock-feed	X	X	X			X
8. Lack of workers to care for animals and crops during school holidays	X	X		X		X
9. Insufficient Land		X		X		X

KEY

X denotes presence of the problem shown in left margin.

Y denotes too much rainfall

impression that each school authority is free to allocate any number of production unit periods. If at all there is an official number of production unit periods stipulated by the Ministry of Education, one then wonders if the inspectors of schools are enforcing this.

However, it seems this lack of uniformity in the number of periods allocated to production is due to organisational problems of individual schools. This is also why some schools had production periods within normal teaching periods while others had them outside normal teaching periods as extra curricular activity. As Shanks (1982) has indicated, the chief factor for not including production in normal curriculum is the examinations requirements which have to be met related to the allocative function of education in society. Teachers and some pupils/students feel that there is so much to cover in the syllabus that time is short for doing more than concentrating on the basic knowledge and skills pupils must require in order to pass the examinations.

Only two institutions, Mansa Training College and Samfya Secondary School, had qualified agricultural Science teachers manning production units. The presence of these teachers proved to be a worthwhile addition because production units at those two institutions were

doing very well and had a wide range of agricultural activities which did not exist in other institutions. Being boarding institutions, these two were able to supplement food stocks from their units and had achieved some degree of self-reliance.

Boarding institutions use some of the produce from their units to supplement their food supplies because food in these schools is prepared and eaten collectively. This, however, is not possible in day schools which cannot afford to give each pupil one head of cabbage as this would almost leave nothing for sale. This is the case because some schools have well over 1,000 pupils and giving each pupil one head of cabbage would entail giving away plenty of cabbage. Most schools do not have the potential to produce that much in one harvest.

There was lack of awareness of the wide range of productive activities suggested by the Ministry of Education. Because of this, five of the six institutions visited were engaged in agricultural activities. But there were also other reasons. The 1975 Presidential directive emphasized boosting production of food in schools and therefore most institutions still regard agricultural activities as the most important of all productive activities. There seems to be another reason for this. Most teachers, students and pupils preferred agricultural activities such as vegetable

and maize growing because according to them these were the easiest and the cheapest to start. This belief was encouraged by the fact that most schools had the problem of raising sufficient capital (money) for production units and instead had to borrow meagre sums from school funds.. Vegetable and maize growing was used to raise more money for other expensive production unit activities such as piggery, poultry and cattle rearing. Even in schools where enough money had been raised, vegetable growing was still the most popular activity.

A point on the problem of initial capital is that it appears educational institutions do not use the services of the banks to lend them money for production unit activities. President Kaunda in his 1975 directive had instructed commercial banks in the country to give loans to institutions of learning in order to boost production of food. It is probably the case that schools find it more convenient to borrow from school funds than from banks which normally want some interest on their loans.

Damage or theft of produce or tools is a national problem and more serious in urban than in rural schools. Urban schools have wire fences and some have watchmen but all these measures have not helped in minimising theft of produce and tools. In rural areas where most

schools are fenced, stray domestic animals from surrounding villages cause extensive damage to crops while petty thieves steal the crops in some schools.

The problem of insufficient working tools in most schools, has resulted in school authorities asking pupils to bring hoes and other farm implements from their homes to use during production unit periods. This is possible in day schools but not in boarding institutions. This practice had proved to be rather cumbersome especially for pupils who have to board public transport carrying hoes and empty containers. This practice is resisted by bigger pupils, especially in secondary schools, who make all sorts of excuses for not bringing the tools. Parents also do not like this idea because they too have to use the hoes especially during the planting season.

The problem of water supply (usually too little) was recorded in five institutions visited. In rural schools, the actual cause of this problem was said to be the repeated malfunctioning of water pumps maintained by the rural councils. Mansa College had been granted money by the German Volunteer Service to have its own water pump and sink a bore-hole to end its water supply problem. However, at the time of this study this college was still experiencing the problem of water supply. The problem of water supply in urban schools

is difficult to establish as this is a responsibility of town engineering department. Unless powerful organizations (as in the case of Mansa College) or the Government grant schools money to have their own water pumps and bore-holes this problem will not be solved. Kawambwa Primary School complained that too much water during the rainy season submerges groundnut plants and affects their proper growth.

Although the problem of lack of stock-feed was also experienced by urban schools, it was more acute in rural schools because of lack of transport. Stock-feed, apart from being in short supply even in urban areas, are delivered by the sole producer, the National Milling Company, which concentrates its deliveries in urban areas at the expense of rural areas of the country. Transport between the Copperbelt where stock-feeds are obtained and Luapula Province is very difficult. Kawambwa Primary School which had no van of its own to get stock-feeds from the Copperbelt had to abandon the project of rearing broilers. In Luapula Province, you need transport of your own to obtain stock-feeds in order to embark on animal rearing.

It was only Samfya Secondary School and Mansa Training College which did not experience the problem of lack

of workers to care for animals and crops during the school holidays. This is partly because they are boarding institutions and can mobilise the cooks and groundsmen to care for animals and crops. These two institutions also had qualified full-time agricultural science teachers who had raised money from their diversified agricultural production unit activities to employ temporary workers during school holidays. The other four institutions depended on the courtesy of teachers and pupils who volunteered to help assisted by one or two office orderlies on duty.

As table 1 indicates, the problem of insufficient land was experienced by urban schools. This study established two main reasons for this. First, most urban schools are located between compounds or houses and therefore have no way of expanding their acreage. Second, urban schools are usually fenced and the costs of fencing are borne by the pupils' contributions (normally K5.00 or more per pupil); so, the areas fenced are usually small in order to minimise costs.

PART C: Attitudes of Pupils, Students and Teachers Towards Production Units

Several statements and questions were posed as a means of finding out the attitudes of pupils, students and teachers to production units. The first attitudinal statement was posed to find out whether production unit

work was good for pupils' and students' health and physical development. 95 percent of Grade VII pupils, 85 percent of Form III pupils, 85 percent of Form V pupils, 90 percent of college students and 90 percent of teachers/lecturers agreed that production unit work fosters good health and physical development of those involved in it. Sex of the respondent, location of the school (urban or rural) level of the educational institution of the respondents and/or being in a boarding or day school did not make any significant differences in responses to this question. This overwhelming positive response to the statement might be due to the fact that since there is some physical use of energy involved during production unit work, especially gardening, production unit activities are perhaps regarded as physical exercises.

Regarding the question whether or not production unit work equips pupils or students with skills which are useful to them after leaving school, 100 percent of Grade VII pupils, 90 percent of Form III pupils, 85 percent of Form V pupils, 76 percent of college students and 82 percent of teachers/lecturers agreed with the statement. There were some statistically significant differences between college students and Grade VII pupils (chi-square = 10.731, 1df, $P<0.01$) and between teachers/lecturers and Grade VII pupils (chi-square = 8.097, 1df, $P<0.01$). Otherwise there were

no statistically significant differences between the other educational levels, singly or collectively. While we cannot ascertain how useful these skills are to pupils and students when they leave school, the feeling of an overwhelming number of pupils, students and their teachers/lecturers is that production units impart skills useful beyond schooling years. It might be that all categories of respondents have seen practical examples of how useful these skills are for all of them to have been unanimous on the foregoing statement. Sex, boarding or day status of the school and location of the school (urban or rural) did not make for any statistically significant differences in the way respondents answered this statement.

Pupils were asked a related question whether or not production unit work imparted skills that made pupils self-reliant. 88 percent of both primary and secondary school pupils agreed with the statement. While it is difficult to ascertain the validity of such a response as it would require a follow-up to prove if unemployed school-leavers lead productive lives, the most important thing is that pupils themselves are convinced or feel that this is the case. This conviction could be partly due to the fact that most of the pupils came from homes where they either grow vegetables or rear chicken to supplement food or generate income. Since these are some of the production unit activities undertaken

by schools, perhaps the pupils have realised how these skills can make one self-reliant. The educational level of the respondents, location of the school (urban or rural), sex of the respondents and day or boarding status of the school did not account for statistically significant differences in the responses.

Pupils, students and teachers/lecturers were also asked whether production unit was as important as other subjects on the timetable. 84 percent of Grade VII pupils, 55 percent of Form III pupils, 35 percent of Form V pupils, 82 percent of college students and 55 percent of teachers/lecturers agreed that production unit was as important as other subjects. The largest difference in percentages is between Grade VII pupils (84 percent) on the one hand and Form III pupils (35 percent) on the other hand. Nonetheless, the differences in responses to the question by level of education are statistically significant at the 0.002 level (see table 2).

TABLE 2: Responses to whether or not production unit is as important as other subjects on the time table (percentages).

	Grade VII (N=40)	Form III (N=20)	Form V (N=20)	College Students (N=38	Teachers/ Lecturers (N=38
Agree	83.5	55.0	35.0	81.6	55.3
Uncertain	0.0	10.0	25.0	2.6	13.2
Disagree	17.5	35.0	40.0	13.2	31.5
No Response	0.0	0.0	0.0	2.6	0.0
Total	100.0	100.0	100.0	100.0	100.0
	Chi-Square = 17.61, 4df, P<0.002.				

It appears that secondary school pupils as a whole seem to perceive the importance of a subject in a different way from primary school pupils and college students. Secondary school pupils most probably perceive the importance of a subject in terms of its contribution to passing the examinations at these levels. This seems to be the trend of thinking for teachers and lecturers also. This is rather surprising because in Zambia one expects Grade VII pupils to be more examination conscious than secondary school pupils since it is at Grade VII level that selection is most competitive. There is perhaps one reason which may expalin why Grade VII pupils responded more positively than secondary school pupils to

this statement. Out of all categories of respondents the Grade VII pupils are the most disadvantaged with little or no hope of getting formal employment. For this reason they are likely to consider production units important because they learn some useful skills which they may utilize later on. There were no statistically significant differences in the responses of male and female pupils or students, day and boarding school pupils or of pupils or students in urban and rural schools.

The assumption made in reference to the responses of Grade VII pupils and college students on whether production unit is as important as other subjects on the timetable seem to be confirmed by results in Table 3a.

Table 3a

Responses to whether or not production unit should become examinable like other subjects (percentages)

	Grade VII (N=40)	Form III (N=20)	Form V (N=20)	College Students (N=38)
Agree	77.5	45.0	50.0	52.6
Uncertain	2.5	5.0	15.0	52.6
Disagree	20.0	50.0	35.0	34.2
No Response	0.0	0.0	0.0	2.7

Chi-square = 10.28, 4df, $P<0.05$

The results in table 3a show that about 78 percent of Grade VII pupils, 45 percent of Form III pupils, 50 percent of Form V pupils and about 53 percent of college students agreed that production units should become examinable like other subjects. The differences are statistically significant at the 0.05 level. The point here again is that it is the Form III and Form V pupils who have responded less positively than Grade VII pupils (and college students) as was the case about whether production unit was as important as other subjects (see table 2). A possible reason why a good number of pupils and students disagreed with the proposition that production unit should become examinable like other subjects is that there is no theory taught about production unit and, as Shanks (1982) said, production unit does not fall under any subject department even at the schools where agricultural science is taught.. Since production unit as a subject does not aid a candidate's selection to the next level of education, some pupils and students see no need for it to become examinable but to remain a practical subject.

Table 3b on the same statement shows that 68 percent of rural pupils as compared to 58 percent of urban pupils were of the opinion that production unit should become examinable like other subjects. However, the 10 percent difference was not statistically significant.

In contrast, while 74 percent of rural college students agreed that production unit should become examinable, only 32 percent of urban college students subscribed to this view. Moreover, the difference between the two college groups is statistically significant at the 0.05 level (see table 3b). On the whole, rural pupils and students responded more positively than their counterparts in urban schools to the statement that production unit should become examinable. But the real major difference is between urban and rural students.

Table 3b

Opinion of rural and urban pupils and students on whether production unit should become examinable like other subjects (percentages)

	PUPILS		STUDENTS	
	Rural (N=40)	Urban (N=40)	Rural (N=19)	Urban (N=19)
Agree	67.5	57.5	73.5	31.6
Uncertain	7.5	5.0	10.5	10.5
Disagree	25.0	37.5	15.8	52.6
No Response	0.0	0.0	0.0	5.3
Total	100.0	100.0	100.0	100.0
	Chi-square = 0.52, 2df, (not significant)		Chi-square = 7.97 3df, P<0.05	

Rural students were those at Mansa Training College which trains primary school teachers while urban students were those at Luanshya Technical and Vocational Teachers' College which trains secondary school teachers in subjects like typing, woodwork, metalwork, technical drawing and commerce. Urban college students may have felt that production unit should not be examinable because the content of their training at the college is more academic and requires more time than would be the case at Mansa College where the content of the course is much more related to students' profession. Luanshya Technical and Vocational Teachers' College is one of the three colleges in the country which trains diploma-holding secondary school teachers and as a policy students admitted at this college have better 'O' level results than those accepted at Mansa College which trains primary school teachers. Mansa College even accepts students with Form III qualifications. The status of Luanshya College may have contributed to the largely negative responses of its students regarding the examinability of production unit as a subject.

There was another statement to the effect that time allocated for production units should be spent on other academic subjects. This statement implied removing production units from school timetable.

93 percent of Grade VII pupils, 95 percent of Form III pupils, 90 percent of Form V pupils and 84 percent of college students disagreed with the statement. This clearly shows that pupils and students want production units to continue in schools. The chi-square indicates that there were no statistically significant differences in the way Grade VII pupils, Form III pupils, Form V pupils and college students responded to the statement (see appendix 2).

As regards the question about what type of workers get more money for their work, blue-collar workers, white-collar workers or both, it was surprising that fewer Form V pupils than either Form III or Grade VII pupils felt white-collar workers get more money. The surprise stems from the expectation that more education should lead to the view that white-collar workers get more money than blue-collar workers (see appendix 3.1). A slightly larger proportion of pupils believed that blue-collar workers get more money than white-collar workers. Pupils gave examples of a farmer, a mechanic and a carpenter. They said these types of workers can make a lot of money in a short time than workers like clerks and teachers depending on how hardworking such workers are. The few who felt white-collar workers get more money than blue-collar workers said that those workers are educated and are policy makers who lead the society.

60 percent of rural pupils believed blue-collar workers get more money compared to about 53 percent of urban pupils, but the seven percent difference was not statistically significant (see appendix 3.2).

Being a boarder or a day school pupil did not seem to matter regarding the opinion as to which type of workers get more money for their work. As results in appendix 3.3. clearly confirm the percentages for the two contrasted groups are virtually equal.

Appendix 3.4. shows that more girls than boys thought blue-collar workers get more money, while more boys than girls felt that white-collar workers get more money. While the differences are not statistically significant, the results reveal some mixed evidence, as we shall see more clearly later, about job preference between boys and girls in primary and secondary schools.

Perhaps the most important question in this survey was meant to find out how popular or unpopular production units were in schools. The question was: Should production units in all schools be voluntary, compulsory or abolished? 90 percent of Grade VII pupils, 85 percent of Form III pupils, 80 percent of Form V pupils, 71 percent of college students and 90 percent of teachers/lecturers wanted production units to be <u>compulsory.</u>

This, without any doubt, confirms that pupils, teachers and lecturers want production units to continue in schools. Only a small proportion wanted production units to be voluntary and no single respondent said that production units should be abolished. The main reason given by the majority who said production units should be compulsory was that schools should grow food or generate money to become self-reliant in some aspects.

In reference to the same question, 90 percent of rural pupils wanted production units to be compulsory compared to 83 percent of urban pupils. Moreover, 74 percent of rural students compared with 68 percent of urban students advocated that production units should be a compulsory school activity. An extremely high number (95 percent) of both rural and urban teachers/lecturers felt production units should be compulsory. The foregoing results reveal that the relationship between urban or rural context and the way respondents perceive whether production units should be voluntary, compulsory or abolished is not important.

In day schools, 83 percent of the pupils wanted production units to be compulsory compared to 79 percent for boarding school pupils and students. 85 percent of male pupils compared to 88 percent of female pupils felt production units should be compulsory.

Only 11 percent were uncertain and eight percent disagreed with the above view. Since farming or gardening was the most popular production unit activity in all the six institutions surveyed, teachers and lecturers might have seen how that particular activity was shaping pupils' attitudes to manual work. This is actually what is important because the introduction of production units (especially farming) was partly meant to orient pupils to manual work and partly to make schools self-reliant.

TABLE 4

Male and female pupils/students' responses on whether production units should be voluntary, compulsory or abolished.

	PUPILS		STUDENTS	
	Male (N=40)	Female (N=40)	Male (N=21)	Female (N=17)
Voluntary	15.0	12.5	13.6	50.0
Compulsory	85.0	87.5	86.4	50.0
Abolished	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0

Chi-square = 0.000, 1df, not significant

Chi-square = 4.32, 1df, $P < 0.05$

One headmaster admitted that when production units were introduced, pupils were not keen to do manual work, but after sometime they (pupils) began to enjoy the work especially after seing that their labour produced something for sale or consumption.

To conclude this section, table 5 gives a summary of whether or not there are significant differences between contrasted groups in the responses to the items tapping attitudes towards production units.

Table 5 shows that only on three occassions out of eight did the level of education make any statistically significant differences. Consequently, our hypothesis that Grade VII pupils will respond to production units more positively than secondary school pupils and college students, is not confirmed. Only on one occasion out of eight did the influence of rural or urban environment make a statistically significant difference to pupils'/students' responses to the statements tapping attitudes to production units. This then disconfirms the hypothesis that rural pupils/students will respond more favourably to production units than urban pupils and students. On no occasion did boarding or day status of the school seem to influence pupils' and students' responses to production units. This, then disconfirms the hypothesis that pupils and students in boarding institutions will respond more positively to production units than their counterparts in day schools. On one occasion there was statistically significant difference in the responses of male and female college students on whether production units should be voluntary, compulsory or abolished. Again the hypothesis that male pupils and students will respond more favourably to production units than female pupils and students is by and large disconfirmed.

TABLE 5

Summary of Responses to Items Tapping Attitudes Towards Production Units Showing Significant or Non-significant Differences by Level of Education, Rural/Urban, Boarding/Day and Male/Female

Questions about Production Units	Level of Education	Rural/ Urban	Boarding/ Day	Male/ Female
1. Is good for pupils' students' health and physical development	N.S[a]	N.S	N.S	N.S
2. Equips pupils with useful skills	Significant	N.S	N.S	N.S
3. Imparts skills that foster self-reliance	N.S	N.S	N.S	N.S
4. Is as important as other subjects	Significant: Primary Vs. Secondary	N.S	N.S	N.S
5. Should be examinable like other subjects	Significant	Significant: Rural Vs. Urban students	N.S	N.S
6. Time allocated for production units to be spent on other subjects	N.S	N.S	N.S	N.S
7. Who get more money: Blue-collar workers; White-collar workers or both	N.S	N.S	N.S	N.S
8. Production Units to be voluntary, compulsory or abolished	N.S	N.S	N.S	Significant: male students Vs. female students.

[a] N.S = Not Significant

PART D: Pupils' Preference for Farming as a Career Compared to other Jobs

The purpose of this section was to find out how hostile or receptive pupils in primary and secondary schools were to farming compared to other jobs. Pupils were asked to make two choices of jobs they would like to do after completing their grade or form. The jobs suggested to them appear in appendix 5. Farming appeared in all the three lists.

As table 6 shows, secondary school teaching, farming, typing and primary school teaching were popular. Addition of the percentages for first and second choices reveals that the two most popular job preferences were secondary school teaching and farming. This appears to suggest that pupils could be willing to take up farming as a career provided there are some incentives, especially the provision of working capital to start with. There is also the possibility that successful local farmers could have served as role models who influenced pupils favourably towards farming. This may be the case considering the incentives the Government has been giving to farmers to encourage them to grow more food. Weiss (1971) dispelled, in the case of Uganda, the myth that educated youths will not work with their hands, when he found that a large proportion of school-leavers were actually engaged in agriculture, trading and cottage industries and only a few youths were genuinely 'sitting.'

He found that most of the youths when interviewed indicated that they were unemployed when in fact they were earning considerable amounts of money through self-employment and contributing to the development of their communities This point, of course, needs to be ascertained in Zambia. There are no large differences in the selection of farming as a career between boarding or day school pupils, Grade VII or Form III or Form V pupils, urban and rural pupils. The following hypotheses are, therefore, disconfirmed: that pupils in boarding schools will respond to farming as a career more favourably than their counterparts in day schools; that Grade VII pupils will respond to farming as a career more favourably than both Form III and Form V pupils; and that rural pupils will respond to farming as a career more favourably than their counterparts in urban schools.

There are some very large differences, however, between male and female pupils regarding a number of careers. As table 6 shows, the proportion of males in favour of farming was 80 percent compared to only 35 percent females. The proportion of male pupil respondents in favour of primary school teaching was only 20 percent as against 50 percent of female pupil respondents. Only ten percent of male pupils chose typing as a career compared to 47 percent of female pupils.

This shows female pupils were considerably less inclined to take farming or jobs requiring manual work. This provides mixed evidence because earlier on we had seen that more female pupils than male pupils felt that blue-collar workers get more money for their work than those who do white-collar jobs; and yet the majority of these female pupils do not aspire for manual work, such as farming.

Alternatively, it could be that female pupils were realistic in choosing jobs that they could actually do in real life taking into consideration the fact that girls having more than Grade VII education do not actually become farmers. This partly confirms our hypothesis that male pupils will respond to farming more favourably than female pupils.

In summary, the following are the major findings of this study.

The organisation of production units in the educational institutions studied were similar in many aspects. There were no Party Officials or influential members from the local community involved in production units in the six education institutions studied.

Agriculture was the main production unit activity in all the institutions. There was no uniformity in the number of periods allocated to production units.

The problems faced by production units were mainly operational and only marginally administrative. Among the most common problems were: lack of qualified production unit teachers; lack of awareness of the wide range of productive activities suggested by the Ministry of Education; scarcity of initial capital (money); damage or theft of produce or tools; insufficient working tools; lack of stock-feed; lack of workers to care for animals and crops during school holidays and lack of adequate water supply.

A survey of the opinions of pupils, students, teachers and lecturers revealed that they were generally receptive to production units; and that farming as a career was the second most popular choice among both primary and secondary school pupils. However, more girls than boys did not prefer farming as a career.

In the next and last chapter, concluding remarks and recommendations are made based on the findings of this study. Suggestions for further research on production units in Zambia are also included.

CHAPTER FIVE

CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

CONCLUSION

In Chapter one (Introduction), it was indicated that in Tanzania Adams (1981) found that teachers, parents and the pupils were hostile to the introduction of productive work in schools. This was seen to be in conflict with their aspirations and perceptions of education because of economic incentives attached by the pupils and their parents to education. It was anticipated that this might be the case in Zambia. To round-off the attitudes of pupils, students and teachers/lecturers the question was posed as to whether production units in all learning institutions should be voluntary, compulsory or abolished. The results as already seen, indicate 90 percent of Grade VII pupils, 85 percent of Form III pupils, 80 percent of Form V pupils, 71 percent of college students and 90 percent of teachers/lecturers wanted production units to be compulsory. No respondent wanted production units to be abolished. On the side of pupils and teachers in Zambia, these results reveal the opposite of Adams' (1981) findings in Tanzania. However, this survey did not get the views of parents or Party Officials concerning the introduction of production units in schools. This was because there were no Party Officials or parents sitting on school production unit committees as indicated already. However, it may be assumed that since 90 percent of teachers and lecturers wanted production units to be compulsory, support for production units may be quite high among parents and Party Officials.

Looking at the responses of pupils, students and teachers/lecturers, it appears production units (or manual work in general) have been accepted in schools. This actually confirms what the participants at the National Debate on Education Reforms had said. According to the Ministry of Education (1976 b:7), the participants observed that students' and teachers' attitudes would gradually change. The participants expressed the need for short seminars for teachers and cautioned that attitudes towards work cannot be created independent of other conditions. They noted that attitudes are related on one hand to the degree of satisfaction students derive from their work, and on the other to the attitude towards work displayed by persons in positions of authority or leadership. It seems pupils and students are getting some satisfaction from production unit activities and this may have made them to respond favourably to attitude statements and questions on production units. Logically, teachers stand to gain from production units because they can buy the produce at much cheaper prices and as such are able to encourage the pupils by participating in the actual work in one way or the other.

It is not the intention of this survey to generalise findings to all Zambian schools, but it is fair to say that, unlike rural reconstruction centres, production unit programme in schools is one of the successful Party objectives. In the meantime, the

Party and its Government has not invested much money in production units and their success in some schools has entirely depended on the efforts of schools themselves.

According to this survey, the acceptance of production units and manual work by the pupils and students in the educational institutions studied was due to four factors. First, production units (according to teachers, lecturers, pupils and students in the schools) generate funds which are used for the benefit of the schools. Second, production units supplement schools, especially boarding ones, with food. This concurs with the idea of production and the spirit of self-reliance as stated by the Ministry of Education (1977) on page 45. Third, production units are intended to provide the individual pupil with skills which may aid him or her in being productive after completion of schooling to enable him or her to contribute to the welfare of his society. This is compatible with what the Ministry of Education (1977:43) said concerning the social value of production. The skills imparted by production units may not be complex or advanced, but are perhaps necessary for the pupil to become productive later on in life. Fourth, the involvement of pupils in production units is intended to make them aware of the importance and dignity of land and manual labour for man's own survival through the use of basic tools like hoes. This again, concurs with the assertion by the Ministry of Education (1977) on page 43 on forming desirable attitudes towards manual work. This is why production units are regarded as 'hand-and-hoe' revolution whose aim is to break pupils' contempt for manual work.

It was reported that Party officials were not invited to sit on the school production unit committee. Whatever the concealed reasons are (either by teachers or Party officials), this antagonism between the two groups should be solved amicably for the benefit of the units, since both groups are complementary in making the 'green revolution' in schools successful. There is no victor or vanquished in the present confrontation between teachers and the leaders of the local community. The school should be an instrument for community development and should be fully utilized for that purpose. The school has abundant labour force which if properly used can produce enough food to benefit the school and the local community. It is for this reason that the schools and their local communities should try to work together to improve the school production units. Party officials or other local leaders may not have the technical knowledge or skills to offer to the units, but may be of help in some ways such as minimising theft of the produce and tools from school production units by appealing to people in section, branch and ward meetings to refrain from stealing the produce from the school grounds. This may be possible especially where party organization is effective.

Conditions in schools where production units are being carried out are poor because of the problems mentioned in chapter four. However, this is no justification for abandoning production units since they are proving to be viable without much external help. These problems are not unique to school production units, but are also experienced by farmers and can be ameliorated if more money is made available.

It may be unreasonable to expect teachers solely trained to teach other subjects to be able to handle and organize school production units successfully. Admittedly, the two institutions which had qualified agricultural science teachers in charge of production units were doing much better and had more diversified agricultural activities than those institutions without qualified agricultural science teachers. Nevertheless,unqualified teachers were doing their best in ensuring that their production units produced some food by applying common knowledge based on their pratical experience of their environments. It is not necessary to wait until every school has a qualified production unit teacher because this will take a long time to be realized. Besides, unqualified teachers are also responsible for other academic subjects besides production units. This problem will hopefully be solved as more agricultural and technical teachers are trained and deployed in schools to teach these skills.

RECOMMENDATIONS

In light of the fact that pupils, students, teachers and lecturers appear to have accepted production units in schools (as per schools surveyed), what is needed is to reinforce and sustain positive attitudes towards production units or manual work. In view of this, it is recommended that:-

1. The Ministry of Education should seriously consider the changing of the school calendar to ensure that schools are open in the whole month of December to allow more time for tilling and planting.
2. For the purpose of community development and self-employment for school-leavers who might not find formal employment, technical and vocational skills should be taught in schools with a bias in favour of agriculture.
3. In order to boost production units, more qualified agricultural and technical teachers should be deployed in schools. First of all, boarding schools should have qualified agricultural teachers to increase food production in order to supplement food in these costly institutions.
4. Let production remain a practical subject only. If it becomes examinable there is a danger that there will be more concentration on passing the subject at the expense of actual production.

5. Knowing very well that the Ministry of Education cannot supply every learning institution with the necessary tools for production units, individual schools should be encouraged to purchase their own tools after realising enough profits from their units.
6. Headmasters and Principals should be made answerable for the accountability of production unit funds. This can be done either by making parents in the Parents' Teachers' Association (P.T.A.) be responsible for keeping money realised from production units. Alternatively, the District Education Officers should check on the headmasters on the accountability of this money and erring or offending headmasters should be punished accordingly. The feeling by pupils that teachers are misusing money from production units can have irreparable adverse effects on the pupils.
7. Day school pupils should be guaranteed good concessions to buy the produce at reduced prices as an appreciation of their labour.

SUGGESTIONS FOR FURTHER RESEARCH

Further research on production units may consider the following aspects:-

1. A replication of the kind of study undertaken here, but with a much larger and representative sample of schools so that results can be boldly generalized to Zambian schools as a whole;
2. A detailed case study of two production units (one successful and one unsuccessful) to be able to pinpoint more accurately factors that account for successes or failures of production unit activities; and,
3. A more comprehensive study regarding what pupils and student-specific and school-specific variables are associated with acceptance or rejection of production units or manual work among pupils and students (and also teachers). Such insights may aid policy makers in the selection of strategies to shape attitudes in favour of manual labour among Zambians, especially young school-leavers.

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APPENDIX 1.1.

UNIVERSITY OF ZAMBIA

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATION

Questionnaire For School Pupils on Production Units

All the answers and discussions will be treated as confidential and no pupil's name will be referred to anywhere.

SECTION A

1. Grade/Form _____ Sex _____
2. Name of the School _____
3. At your home do you:
   (a) have a vegetable garden? YES NO
   (b) rear some chickens? YES NO
   (c) produce food in any other way? YES NO

SECTION B

1. What kinds of production units are there in your school?

   _____

   _____

   _____

SECTION B (contd.)

2. In which ones do you take part?

_____

_____

_____

3. Which kinds of production units do you think would be best whether they are offered or not offered by your school?

_____

Why? _____

_____

4. Do you go for production unit work?

(a) during school hours? _____

(b) after school hours? _____

5. During production unit do you:-

(a) work in groups? _____

(b) work individually? _____

6. What do you actually produce?

_____

_____

_____

7. Are you given or can you buy some of the produce from Production Units?

_____

_____

_____

SECTION B (contd.)

8. What tools or equipment do you use for Production Units?

_____

_____

_____

9. What do you actually do during Production Units?

_____

_____

_____

SECTION C

1. How many periods of Production Unit do you have per week?

_____

2. Do you feel the time allocated for production units is:-

   (a) enough?

   (b) not enough?

3. Would you prefer it to be:-

   (a) reduced? _____

   (b) increased? _____

   (c) remain the same? _____

4. Production Unit work is good for pupils' health and physical development.

   Agree

   Uncertain

   Disagree

SECTION C (contd.)

5. Production Unit work equips pupils with skills which are useful to them after leaving school.

   Agree

   Uncertain

   Disagree

6. Skills learnt during Production Unit make pupils self-reliant.

   Agree

   Uncertain

   Disagree

7. Production Unit is as important as other subjects on the time-table.

   Agree

   Uncertain

   Disagree

8. Time allocated to production unit work should be spent on other subjects.

   Agree

   Uncertain

   Disagree

9. Production Unit should become examinable like other subjects.

   Agree

   Uncertain

   Disagree

SECTION C (contd.)

10. Should Production Units in all schools be:-

    (a) Voluntary? _____

    (b) Compulsory?

    (c) Abolished?

SECTION D

1. Who do you think get more money for their work?

    (a) Blue-collar workers?

    (b) White-collar workers?

    (c) Both

    What is the reason for your answer?

    _____

    _____

2. From the list of ten jobs, choose two you would prefer to do in order of your preference after your present grade or form.

GRADE VII	FORM III	FORM V
1. Driver	1. Receptionist	1. Sec. Sch. Teacher
2. Hotel Cook	2. Typist	2. Comm. Farmer
3. Office Orderly	3. Pr. Sch. Teacher	3. Air Hostess
4. Carpenter	4. Farmer	4. Radio Announcer
5. Tailor	5. Mechanic	5. Junior Clerical Officer.
6. Typist	6. Miner	6. Mechanic

SECTION D (contd.)

2. (contd.)

GRADE VII	FORM III	FORM V
7. Farmer	7. Shop Assistant	7. Dressmaker
8. Sewer	8. Carpenter	8. Fitter
9. Bricklayer	9. Painter	9. Plumber
10. Prison Warder or Warderess	10. Telephone Operator	10. Z.C.B.C Cashier

Jobs I would prefer:

1. _____

2. _____

THANK YOU VERY MUCH FOR YOUR COOPERATION

APPENDIX 1.2.

UNIVERSITY OF ZAMBIA

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATION

Questionnaire for College students on Production Units

All answers and discussions will be treated as confidential and no students' name will be referred to anywhere.

SECTION A

1. Name of the College _____
2. Sex _____
3. At your home do you:-
   (a) have a vegetable garden? YES NO
   (b) rear some chickens? YES NO
   (c) produce food in any other way? YES NO

SECTION B

1. What kind of Production Units do you have at your College?

   _____

   _____

   _____

SECTION A (contd.)

2. In which ones do you take part?

_____

_____

_____

3. Which Production Units do you think would be best whether they are offered or not offered by the College?

_____

Why? _____

_____

4. Do you have Production Units:-

(a) during school hours? _____

(b) after school hours? _____

5. During Production Units do you:-

(a) work in groups? _____

(b) work individually? _____

6. Are you given or can you buy some of the produce from Production Units?

_____

7. What happens to the produce otherwise?

_____

8. What do you actually do during Production Units?

_____

9. What do you actually produce?

_____

SECTION C

1. How many periods of Production Unit do you have per week?

   _____

2. Do you feel the periods allocated to Production Unit are:-

   (a) enough? YES NO

   (b) not enough? YES NO

3. Would you prefer time allocated to Production Unit to be:-

   (a) increased? YES NO

   (b) reduced? YES NO

   (c) remain the same? YES NO

4. Production Unit work is good for students' health and physical development.

   Agree

   Uncertain

   Disagree

5. Production unit work equips students with skills which are useful to them after leaving school.

   Agree

   Uncertain

   Disagree

6. Time allocated to Production Unit work should be spent on other subjects.

   Agree

   Uncertain

   Disagree

SECTION C (contd.)

7. Production unit is as important as other subjects on the time-table.

   Agree

   Uncertain

   Disagree

8. Production Unit should become examinable like other subjects.

   Agree

   Uncertain

   Disagree

9. Should Production Units in all schools be:-

   (a) voluntary? YES NO

   (b) compulsory? YES NO

   (c) abolished? YES NO

SECTION D

1. What do you think are the major problems facing Production Units?

   _____

   _____

   _____

2. In what ways can Production Units be improved?

   _____

   _____

   _____

THANK YOU VERY MUCH FOR YOUR COOPERATION

APPENDIX 1.3.

UNIVERSITY OF ZAMBIA

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATION

Questionnaire for Teachers and Lecturers on Production Units

All answers and discussions will be treated as confidential and no Teacher's or Lecturer's name will be referred to anywhere.

SECTION A

1. Name of the School/College _____
2. Sex _____
3. At your home do you:-
   (a) have a vegetable garden? YES NO
   (b) rear some chickens? YES NO
   (c) produce food in any other way? YES NO

SECTION B

1. Have the Teachers/Lecturers in charge of Production Units expertise in the relevant fields? YES NO
2. What is the composition of Production Unit Committee?

   _____

   _____

SECTION B (contd.

3. Are Party Officials on the School Production Unit Committee? YES NO

4. If not, why not?

_____

_____

_____

5. How many pupils/students are on the Production Unit Committee?

_____

_____

6. How many times are Production Unit Meetings held per term?

_____

_____

7. Are these meetings held during teaching time or after?

_____

_____

8. How are Production Units financed?

_____

_____

9. Is Production Unit money kept separately from school funds?

_____

_____

SECTION B (contd.)

10. If kept separately, who is in charge of it?

_____

_____

11. When pupils/students go for production unit, do they work in groups or individually?

_____

_____

12. Are pupils/students always accompanied by teachers/lecturers during production unit time?

_____

13. How are crops or animals cared for during school holidays?

_____

_____

14. Does production unit committee employ permanent workers, use groundsmen or use pupils/students only?

_____

_____

15. Do pupils/students consume some of the produce?

_____

16. How is money from Production Units used?

_____

SECTION C

1. 1. Do you have problems specifically regarding tools, land or water?

_____

2. Do you find problems in storing or selling the produce?

_____

_____

3. Can you easily obtain fertilizers or chicken feed?

_____

_____

4. Has the School/College experienced theft of production unit products, or tools in the past one year? YES NO

5. If yes, what measures has the school or college taken to minimise thefts?

_____

_____

6. Who do you think are responsible for thefts?

_____

_____

7. How does the local community help the school or college to solve production unit problems?

_____

_____

SECTION C (contd.)

8. What time-table problems are caused by having production unit in the curriculum?

_____

_____

9. Are there any other problems encountered in production unit?

_____

_____

10. What suggestions can you make to improve production units?

_____

_____

SECTION D

1. Teachers/Lecturers find production unit work useful in changing pupils' or students' attitudes to manual work.

   Agree

   Uncertain

   Disagree

2. Production unit work is good for pupils' or students' health and physical development.

   Agree

   Uncertain

   Disagree

SECTION D (contd.)

3. Production unit work equips pupils and students with skills which are useful to them after leaving school.

   Agree

   Uncertain

   Disagree

4. Production unit is as important as other subjects on the time-table.

   Agree

   Uncertain

   Disagree

5. Should time spent on production unit be:-

   (a) reduced? YES NO

   (b) increased? YES NO

   (c) remain the same? YES NO

6. Should production units in all schools be:-

   (a) voluntary? YES NO

   (b) compulsory? YES NO

   (c) abolished? YES NO

THANK YOU VERY MUCH FOR YOUR COOPERATION

APPENDIX 2

Pupils' and Students' Opinion on Whether Time Allocated for Production Units Should be Spent on Other Academic Subjects (Percentages).

	Grade VII (N=40)	Form III N=20)	Form V N=20)	College Students (N=38)
AGREE	7.5	0.0	0.0	5.3
UNCERTAIN	0.0	5.0	10.0	10.5
DISAGREE	92.5	95.0	90.0	84.2
TOTAL	100.0	100.0	100.0	100.0
	Chi-Square = 7.44, 6df, not significant.			

APPENDIX 3.1.

Opinion of Grade VII, Form III, and Form V pupils on what type of workers get more money for their work (Percentages).

	GRADE VII (N=40)	FORM III (N=20)	FORM V (N=20)
Blue-collar Workers	57.5	50.0	60.0
White-collar Workers	42.5	45.0	35.0
Both	0.0	5.0	5.0
TOTAL	100.0	100.0	100.0
	Chi-Square = 2.47, 4df, not Significant.		

APPENDIX 3.2.

Opinion of Rural and Urban Pupils on What Type of Workers Get More Money for Their Work (Percentages).

	RURAL PUPILS (N=40)	URBAN PUPILS (N=40)
Blue-collar Workers	60.0	52.5
White-collar Workers	37.5	45.0
Both	2.5	2.5
TOTAL	100.0	100.0
	Chi-Square = 0.47, 2df, not Significant.	

APPENDIX 3.3.

Opinion of day and boarding school pupils on what type of workers get more money for their work (Percentages).

	DAY SCHOOL PUPILS (N=60)	BOARDING SCHOOL PUPILS (N=20)
Blue-collar workers	56.7	55.0
White-collar workers	47.7	40.0
Both	1.6	5.0
TOTAL	100.0	100.0
	Chi-Square = 0.68, 2df, not Significant	

APPENDIX 3.4.

Opinion of Male and Female Pupils on What Type of Workers get More Money for Their Work (Percentages).

	MALE PUPILS (N=40)	FEMALE PUPILS (N=40)
Blue-collar workers	50.0	62.5
White-collar workers	47.5	35.0
Both	2.5	2.5
TOTAL	100.0	100.0
	Chi-Square = 1.31, 2df, not Significant	

APPENDIX 4

Opinion of Pupils, Students and Teachers/ Lecturers on Whether Production Units Should be Voluntary, Compulsory, or Abolished (Percentages).

	GRADE VII N=40	FORM III N=20	FORM V N=20	COLLEGE STUDENTS N=38	TEACHERS/ LECTURERS N=38
VOLUNTARY	10.0	15.0	20.0	28.9	10.5
COMPULSORY	90.0	85.0	80.0	71.1	89.5
ABOLISHED	0.0	0.0	0.0	0.0	0.0
TOTAL	100.0	100.0	100.0	100.0	100.0
	Chi-Square = 6.65, 8df, not Significant				

APPENDIX 5

Possible careers for members of the sample

GRADE VII	FORM III	FORM V
1. Driver	1. Receptionist	1. Sec. Sch. Teacher
2. Hotel Cook	2. Typist	2. Commercial Farmer
3. Office Orderly	3. Pr. Sch. Teacher	3. Air Hostess
4. Carpenter	4. Farmer	4. Radio Announcer
5. Tailor	5. Mechanic	5. Junior Clerical Officer
6. Typist	6. Miner	6. Mechanic
7. Farmer	7. Shop Assistant	7. Dress-Maker
8. Sewer	8. Carpenter	8. Fitter
9. Brick-Layer	9. Painter	9. Plumber
10. Prison Warder/ Warderess	10. Telephone Operator	10. Z.C.B.C. Cashier