

PUPILS' PARTICIPATION IN EDUCATION WITH PRODUCTION
ACTIVITIES AND THEIR OCCUPATIONAL ASPIRATIONS
IN SELECTED SECONDARY SCHOOLS ON THE COPPERBELT

BY

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To my ever loving father and mother, Eliko Mulenga Mpassa and Elizabeth Bwalya Filipo for bringing me up in a stable home thereby setting impetus to my academic prosperity.

APPROVAL

DECLARATION

This dissertation of Felix Mulenga is approved as fulfilling part of the requirements for the award

I, Mulenga Felix, solemnly declare that this dissertation is purely my own work and that it has not been previously submitted for a degree at this or another university.

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ABSTRACT

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ABSTRACT

In most former colonial dependencies of the Third world, particularly Africa after the decolonization era of the late 1950s and early 1960s, there has been relentless massive pressure, support and effort to change the inherited colonial education systems. Need for change has been precipitated by such philosophical orientations that if education is a viable tool for socio-economic developments, it must depict its relevance or worthness to the society it is intended to serve.

In Zambia like in any other former British colony, a typical British education system was carried over even after attaining political independence. The continuity of such a Western education system was socially and economically irrelevant and contradictory to the developmental circumstances and needs of the Zambian nationals. The inherited Western education system was alien in origin, its curriculum imbued Zambian children with skills and modes of behaviour appropriate for a Western society that advocate white-collarism and distaste from manual work. It was also elitist, too theoretical and examination oriented.

The First National Education Conference in 1969 and the Education Reforms in 1977 were carried out to redress the Western education system Zambia had colonially inherited. These two education policy document recommended the introduction of education with

production in all Zambian learning institutions. The concept of education with production had the following objectives in the school curriculum:

- (i) Theory to be combined with practice.
- (ii) Early school leavers to be armed with life-skills for self-employment in the world of work.
- (iii) Pupils in schools to develop positive attitudes towards work.

In the light of this brief policy framework for education with production in Zambia, the thesis was heavily anchored on the assumption that pupils' attitudes for self-employment in manual jobs become favourable and they acquire useful life-skills for self-employment by their participation in education with production activities. It is therefore assumed that there should be a significant relationship between pupils' participation in education with production activities and their occupational aspirations. Such an investigation of the relationship is correlational.

Research findings in selected secondary schools on the Copperbelt generally showed no significant relationship between the grade 9 pupils' participation in education with production activities and their future occupational aspirations. Reasons advanced by the sampled grade 9 pupils were that:

- (i) They preferred white-collar jobs to self-employment based on education with production activities.
- (ii) Self-employment based on the skills obtained from education with production was seen as fit for the uneducated.
- (iii) The skills they acquired from education with production were too elementary to enable them aspire for self-employment.
- (iv) Their parents as well as themselves preferred participating in education with production activities like metalwork and woodwork that could enable them enter technical jobs in the mines.

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CHAPTER 1

1.1 Background to the Problem

After attaining political independence in the late 1950s and early 1960s, African countries and other Third World nations were concerned with the issue of national development. In education, the prefix 'development' was added to many subjects, for example, development education and development teacher education. Development education meant a peculiarly designed form of education that could reflect the poverty of Third World countries and aimed at promoting community development and social change. Development education, was perceived as education for economic growth, social and individual change, (Adams, 1977).

Despite this development perspective, most Third World countries continued developing and expanding their education systems along Western lines. Development was narrowly conceptualized as modernization or westernization of the traditional society and its educational institutions. The philosophical orientations of the human capital theory, a dimension of the modernization theory further strengthened and persuasively consolidated this development perspective.

Human capital theorists like Shultz, (1971) strongly believed and argued that schools equipped its attendants or graduates with discipline and the right attitudes

and motivations necessary for industrialization. Furthermore schools were believed to produce the skilled manpower with new knowledge for technological advancement and economic development.

However, Harbison (1965) warned that education that is unrelated to the development needs of a given society may lead to political instability, unemployment and frustration. Harbison further argued that in many respects the education industry was inefficient and under some situations wasted both financial and human resources. Money according to Harbison was frequently wasted on pre-employment trade schools which fail to train for the types of crafts most needed in the economy. In conclusion Harbison stated, "The idea that a rising rate of investment in education per se is always 'a good thing' should be rejected by all responsible education planners." (Harbison 1965: 53).

In the vain of the development orientations of the human capital theory, developing countries in the late 1950s and early 1960s simply embarked on the expansion of their education systems. The motive was to acquire the same technically skilled manpower believed to have propelled development in Western Societies. The Karachi and the Addis-Ababa Conferences of 1961 set impetus for the expansion of education systems in Asia and Africa. These two conferences targetted 1980 for the attainment

of universal primary education in Asia and Africa (Coombs, 1970).

In Zambia, the University of Zambia was built in 1966, and secondary school enrolments increased from 13,871 to 43,000, between 1964 and 1968. This increase constituted a percentage increase of 246 (Ministry of Education, 1969).

According to Karabel and Halsey, (1977), the linear expansion of education systems was necessitated by the high rate of return to individuals who underwent schooling. Formal education was used as a stepping stone for entry into white-collar jobs. Anyone with talent was awarded a diploma by teachers as a sign of success and respect in society. Such individuals entered high salarised jobs and enjoyed high social status. Schools were believed to be the only mechanism for an equitable distribution of wealth and social mobility.

Although education systems had been grossly expanded, they did not bring about economic development in most developing countries. Some school graduates for example could not find white-collar jobs although they had been certificated with diplomas. Schools were no longer social levelers by the late 1960s. (Adams, 1977).

President Kaunda in his speech at the First National Education Conference in 1969 argued that "The unemployment problem of young school leavers is not simply on our door steps, it has entered our house". (Ministry of

Education, 1970: 7). The youth he observed demanded a better life because they had been to school. Furthermore, their sweet expectations turned bitter when they found that no places had been reserved for them. Peter Emmiliyo, a grade seven school leaver when asked by the Daily Mail reporter at the Lusaka Employment Exchange what he would next do in life answered that he wanted a clerical job and nothing else. In his own words he argued: "Why should I do any other job?" he asked. "After all I am educated." (Ministry of Education 1970: 8).

With such foreseen unemployment problems and attitudes towards work among the Zambian youth, it was resolved at the First National Education Conference in 1969 that schools should equip its graduates with vocational skills. Vocational skills meant the acquisition of life skills to render early school leavers go back to the land and settle down to productive work. By so doing, it was assumed, early school leavers' negative attitude for manual work would change.

On the basis of such line of thought and recommendations by various study groups sent outside Zambia to learn from the experiences of educational reforms of other countries, President Kaunda in 1975 declared education with production compulsory in all Zambian educational institutions. Every student according to the Presidential declaration had to participate in

productive work as part of his normal curriculum (Ministry of Education, 1977).

According to the 1977 Education Reform document, education with production consisted of the integration of various components of education or training with production in the same institution. Such an institution could be a school, a training centre or an actual place of work like a farm. The emphasis of education with production depended on the nature of the institution.

In Zambian secondary schools, the emphasis of Education with Production was pedagogical. Education with production was expected to help in enhancing learning by combining theory with practice. By participating in education with production, pupils were said to understand better the educational instructions from teachers and also learn to live by working. Additionally, in the process of enhancing learning, education with production could also enable pupils produce marketable goods of economic value.

However, in Youth Training Centres such as Siavonga the main aim of education with production was to arm trainees with skills for self-reliance through self-employment in order to help the country achieve self-sufficiency in production.

The 1977 Education Reform document viewed 'production unit or production work' as an all embracing term encompassing education with production and all school

activities that produce articles for sale. Sometimes production units in Zambian schools were organised independent of any subject department and at times dependent on subject departments. Hence there are Home Economics, Industrial Arts and Agriculture Science Production Units.

The 1977 Education Reform document and Shanks, (1981) identify four main ways through which production units manifest themselves in schools and these are:

- (i) Production units involving practical subjects like Home Economics, Agriculture Science and Industrial Arts.
- (ii) Vocationalizing the school curriculum. The curriculum is designed in such a way that a specific body of knowledge and skills that lead to the practice of a certain future vocation is imparted into pupils.
- (iii) Orientating the school curriculum around the production of particular commodities. Here production work becomes the core of the curriculum and all learning is centred around it. Schools take some form of educational workshops or farms.
- (iv) Production units are integrated with curriculum subjects and are either treated as extra-

curricula activities or given their own operational time in the school time-table.

Shanks, (1981) observed that in most Zambian secondary schools education with production was achieved through practical subjects like Home Economics, Industrial Arts and Agriculture Science. Another way through which education with production was organised in secondary schools was on the basis of extra-curricula activities or assigned its own operation time in the school time-table.

In this study the concept of education with production is used in the pedagogical and productive senses. Pedagogically, pupils' participation in education with production means that pupils are able to relate theoretical classroom instructions with practice. The combination of theory with practice make pupils' learning more exciting and meaningful. It also helps pupils improve on their academic performance and attain higher levels of education. Learning becomes pupil-centred because pupils learn to discover for themselves the theoretical knowledge underlying a given problem by combining theory with practice.

In the productive context education with production or the combination of theory with practice means that those pupils who leave school early should be able to be self-employed and produce for their own livelihood.

Since pupils learn by doing as they participate in education with production, it is expected that they would acquire life **skills**. This would make early school leavers employed and at least lessen the unemployment problems of early school leavers.

The objectives of Education with Production are:

- (i) To integrate theory with practice.
- (ii) To develop positive attitudes towards work among the young and to subsidize institutional expenses.
- (iii) To equip early school leavers with skills relevant for self-employment and service to the nation.
- (iv) To introduce pupils in schools to organisational and management skills (Ministry of Education, 1977: 43-45).

In the light of these objectives, it was assumed that there may be a significant relationship between pupils' participation in education with production and their occupational aspirations. An investigation of this nature is correlational. It illustrates the degree of association between pupils' participation in education with production and their-occupational aspirations. The study was confined to grade 9 pupils in selected secondary schools on the Copperbelt.

1.2 Statement of the Problem

The study sought to investigate the following question:

Is there any significant relationship between pupils' participation in education with production activities and their occupational aspirations?

By introducing education with production activities in schools, the Zambian government had hoped youth unemployment problems would be minimized. Early school leavers would settle meaningfully in society and make use of the skills acquired from their participation in education with production. Pupils' participation in education with production meant attitude formation.

Attitude formation implied that pupils would appreciate the value of manual work and become self-employed in education with production related occupations. Self-employment on the land is necessary to early school leavers because the number of white-collar jobs available are very few to meet youth employment demands. Also because of too many educated Zambian youths with better qualifications than grade 9s, it is becoming very difficult for early school leavers like grade 9s to enter white-collar jobs.

1.3 Purpose of the Study

The purpose of this study was to investigate the relationship between pupils' participation in education with production activities and their occupational aspirations. The assumption being that pupils acquired life skills for self-employment by their participation in education with production activities.

This aspect of skill acquisition made early school leavers like grade 9s master certain productive trades to render themselves self-employed in the world of work. In this way it was hoped that the unemployment problem of early school leavers would be lessened. The Zambian government hoped pupils attitude of downgrading manual labour in preference for white-collar jobs would change. More and more early school leavers would take up self-employing jobs based on the skills acquired from their participation in education with production activities.

1.4 Hypotheses

The following hypotheses were adopted in this study:

1. Pupils develop strong occupational aspirations in education with production activities that are more economically rewarding.

2. There is a relationship between stiff competition for limited wage labour and pupils' favourable attitudes for manual work.
3. There is a relationship between education with production activities as extra-curricula activities and the grade 9 pupils' occupational aspirations for such extra-curricula education with production activities.
4. There is a relationship between the pedagogical role of education with production activities and the grade 9 pupils' low occupational aspirations for self-employment based on production work.

1.5 Implications of the Hypotheses

- (i) The first hypothesis implies that pupils tend to develop interest and occupational aspirations in economically lucrative education with production activities. If the monetary returns are high for a given education with production activity, then more pupils will aspire for it as a future job.
- (ii) The implication underlying the second hypothesis is that as jobs become scarce due to stiff competition among job seekers, pupils' attitudes of downgrading manual jobs change.

They instead start appreciating and taking up manual jobs based on education with production activities. They stop thinking of manual jobs as jobs only fit for the uneducated.

- (iii) For the third hypothesis, the implication is that when education with production activities become extra-curricula, their value and status among pupils become low. Very few pupils will develop future occupational aspirations in education with production-related jobs. Other jobs unrelated to education with production will be desired.
- (iv) The fourth hypothesis implies that, by emphasizing the educational function over the productive function, pupils' occupational aspirations for education with production-related jobs become low. Pupils would look at education with production as a mechanism to enhance learning. They will not view it as a preparation for their future employment in society.

1.6 Significance of the Study

Most studies on education with production in Zambia have concentrated on the problems and successes of education with production in secondary schools. Some

examples are Achola and Kaluba, (1986), Bwalya, (1983) and Shanks, (1981). Yet the First National Education Conference in 1969 and the 1977 Education Reform Proposals emphasized skill acquisition for self-employment as the primary objective of education with production activities. These two government policy documents view pupils' participation in education with production activities as a strategy to help in reducing unemployment problems among early school leavers.

With this background in view, it was justified that an investigation be undertaken to find out the relationship that exist between pupils' participation in education with production activities and their occupational aspirations. Furthermore the study could direct policy makers in formulating ideal future strategies aimed at solving youth unemployment problems in Zambia.

Also because the Copper mines are the largest employing sector on the Copperbelt, it was assumed in this study that the majority of pupils came from parents who were occupationally miners. Therefore it was worthwhile finding out if children from home backgrounds of miners had different or similar occupational aspirations.

1.7 Limitations of the Study

The limitations of this study were:

- (i) The study confined itself to urban secondary schools on the Copperbelt. It neglected rural schools. Therefore generalizability of research findings only applied to secondary schools on the Copperbelt. The findings could not be extended to any other secondary schools in Zambia apart from the Copperbelt.
- (ii) The occupational aspirations stated by pupils, might not reflect their actual occupations in the labour market. If funds and time were available, a tracer study of the sampled grade 9 pupils would have been necessary. This would have shown whether or not grade 9 pupils entered self-employment based on education with production activities.

1.7 Operational Definition

- (i) The term 'Education with Production', refers to all production taking place directly as part of skill training in a school setting.
- (ii) Practical subjects in this study are subjects in the secondary school curriculum that involve the translation or application of

theoretical classroom knowledge into reality.

- (iii) Vocational Training refers to skill acquisition training given to school leavers to prepare them for specific occupations trained for.

1.8 General Overview of the Study

Although the concept of education with production was introduced in the Zambian school curriculum, it did not do much in changing the attitudes of pupils towards manual jobs. Pupils did not anticipate to take up self-employing jobs based on the skills they acquired from education with production after leaving school early.

Pupils preferred entering white-collar jobs. White-collar jobs tended to assure them of high salaries and respect in the Zambian society. Pupils felt the purpose of schooling was to enable them enter white-collar jobs. Pupils only tended to participate in those education with production activities like woodwork and metalwork that would see them enter technical jobs in the copper mines.

CHAPTER 2

REVIEW OF RELATED LITERATURE

In general education with production is intended to combine theory with practice. The justification given for the pedagogical value of education with production in learning institutions is that pupils understand learning instructions better when they combine theory with practice. Pupils to be able to learn by doing. Equally education with production is viewed as valuable in intergrating theoretical knowledge with practice., for example theoretical knowledge acquired in agriculture science lessons could be put into practice by farming. Tiberondwa (1976) argued that education with production tended to change the attitudes of pupils towards manual jobs. Education with production, he further argued produced job-makers instead of job-seekers. It was therefore assumed in this thesis that there should be a relationship between education with production and pupils' occupational aspirations.

Aryee, (1981) and Kanya, (1981) in their surveys conducted in Lusaka and Kitwe on self-employment among the Zambian youths, observed that Zambian youths hated entering self-employment in the informal sector. The reason was that the majority of the Zambian youths who engaged in self-employment either did not have any formal education at all or had dropped out at grade seven level. Aryee defined the youth as the economically active population between the age of fifteen and

twenty-four.

From such findings it can be argued that early school leavers do not think of entering self-employment in the informal sector as their first priority. Only when they have failed to secure some form of white-collar jobs do they consider the possibility of self-employment in the informal sector. School leavers tend to have negative attitudes towards self-employment in the informal sector. The fact that they have been to school, convinces them that their rightful jobs in the Zambian society are white-collar ones. Only when the attitude of early school leavers has changed in favour of manual jobs based on education with production activities, will there be strong occupational aspirations for manual jobs.

Bwalya, (1983) illustrated in his study that the non-availability of white-collar jobs due to too many school leavers looking for white-collar jobs, forced early school leavers to enter self-employment in the informal sector. Early school leavers are forced by circumstances to take up self-employment based on education with production. Their attitudes have not practically changed. Given a choice they would still give priority to white-collar jobs.

Mkandawire, (1985) also argued that it is because of poverty that the majority of the youths enter self-employment in the informal sector. According to Mkandawire, it is because of the employment crisis in

the formal sector that force school leavers to enter self-employment based on education with production activities. This means that it is most unlikely that education with production activities will serve the occupational aspirations of early school leavers if pupils do not change their negative attitudes towards productive work.

Tiberondwa, (1976) stated that the essence of declaring education with production compulsory in all education institutions in Zambia was to develop self-confidence in early school leavers regarding self-employment. It was envisaged that pupils would have little difficulty in starting their own farms and other kinds of production related jobs.

Pupils, it was hoped would develop new values of life and new philosophies about the aims of education. Pupils would conceive education not just as a preparation for employment in government firms, but as preparation for relevant life with all its complexities. Tiberondwa argued that UNIP wanted to use schools as an instrument for social change. Schools were to change pupils' belief that white-collar jobs are the only avenue to a decent life.

Foster, (1965) argued that it is a fallacy to expect schools to initiate social change. Schools according to Foster are meant to educate people. If social change has to occur, the whole social system must

change. Schools alone are insignificant institutions to initiate social change. This connotes that if education with production has to make pupils appreciate the value of manual labour in self-employment, society at large should set an example. Then the young in schools would follow suit. This way favourable attitude formation among early school leavers towards productive work would be achieved. Accordingly there would be strong occupational aspirations for jobs based on education with production among early school leavers.

Shanks, (1981) in his study of production units in Zambian secondary schools had observed that some subjects other than production activities were perceived by pupils to be of more academic excellence and leading to far much self-betterment in life. Shanks argued that this was so because production units in schools were organised on the basis of 'interested groups'. This, according to Shanks, made production activities unpopular among pupils. Pupils therefore viewed self-employment based on education with production activities as low-status jobs in the Zambian society.

Implied in Shanks' Study is the idea that Education with production is not the rightful subject pupils ought to study that can serve their occupational aspirations. As such pupils' attitudes towards education with production as a basis for their self-employment is bound to be low and negative. Accordingly,

education with production would achieve very little in its contribution to the alleviation of unemployment problems among early school leavers.

Haan, (1982) in a survey conducted in Kitwe and Lusaka established that Zambian youths who engaged in self-employment in the informal sector were not directly from school. They were those that had worked in the formal sector and amassed enough savings, experience and training to afford them self-employment in the informal sector.

From these findings it can be argued that it is difficult for early school leavers to enter self-employment based on education with production activities. Early school leavers lack the necessary requisites like finance and experience to start self-employing ventures. With this in view education with production would do very little in serving the occupational aspirations of early school leavers. Therefore pupils' attitudes towards self-employment in the informal sector are likely to be negative.

Achola and Kaluba, (1986) in their evaluation study of secondary school production units generally observed that pupils contended that the skills they acquired from education with production would make them self-employed in future. However some pupils disagreed. They argued that the skills they were exposed to were inadequate to afford them self-employment.

Haan, (1982) in a survey in Lusaka and Kitwe noted that Zambian youths generally disliked self-employment in the informal sector based on traditional skills. Instead youths enjoyed taking up self-employment based on modern informal activities like radio and motor-car repairing. These modern informal activities appear to be somewhat more prestigious and highly remunerative.

Haan defined traditional trades as those trades in which traditional skills are put to use, for example pottery and basket making. Since modern informal activities are viewed as highly remunerative and prestigious, early school leavers in Zambia would be eager to be self-employed in such activities. Therefore if modern informal activities were introduced in schools, pupils would develop strong occupational aspirations and favourable attitudes towards self-employment based on productive work.

Foster, (1965) also argued that the occupational aspirations of school leavers in Ghana were largely influenced by the economic remunerations and social status accompanying a given job in the labour market. Ghanaian school leavers, he observed tended to pursue academic subjects rather than vocational training programmes in agriculture. To them academic training was more remunerative and of high social status.

Foster, (1965) continued to argue that societal attitude towards certain jobs was crucial in influencing

the occupational aspirations of school leavers. According to Foster the Ghanaian society undervalued agricultural jobs. Therefore school leavers felt they had to conform with their societal norms by seeking white-collar jobs and developing a negative attitude towards vocational training in agriculture.

The implication for Zambia is that, if education with production has to serve the occupational aspirations of early school leavers, productive activities that are accorded high social status and high salaries should be introduced in schools. By so doing early school leavers would develop favourable attitudes towards productive work, because society would have respect for manual labour. In the same vain pupils' occupational aspirations for self-employment in productive activities would be stronger and positive.

In fact, Kelly et al, (1986) noted that Zambian parents generally discouraged their school-going children from participating in education with production activities. Zambian parents viewed productive activities as lowly paying and of low social status. If such mentality towards productive work persists among parents, it would be very difficult for school leavers to develop strong occupational aspirations for manual jobs.

Psacharopoulos and Woodhall (1985) noted that there is no assurance that once vocationally trained, school leavers would enter jobs based on vocational training.

According to Psacharopoulos and Woodhall social circumstances would determine their future employment. If society for example has no regard for jobs based on vocational training, school leavers would seek employment in other types of jobs.

Similarly, if school leavers have very little occupational aspirations for vocational jobs their attitude towards vocational training also becomes negative. Therefore early school leavers in Zambia would only engage in self-employment based on productive work, if the Zambian society appreciated and respected the value of manual labour. It is only then that the attitudes of early school leavers towards productive work would be favourable.

Haan, (1982) and Baldouille (1981) have attributed the negative attitude of early school leavers in Zambia towards self-employment to the colonial legacy. Colonialists they observed never encouraged self-employment. Colonialists were only interested in cheap wage labour and markets for their commodities. Because of this colonial tendency, school leavers tend to equate self-employment based on productive work to the cheap wage labour of the colonial days.

Early school leavers therefore have no high regard for self-employment in production activities as their future occupations. Early school leavers in Zambia only think of employment in white collar jobs. It would

then be justified to argue that, so long this colonial mentality towards manual work persists in schools, early school leavers in Zambia would never develop positive attitudes towards productive work. In the same vain their occupational aspirations for self-employment based on manual work would be negative

M'Bow and Faure, (1979) and Thompson, (1981) have shown that the role of practical subjects in the school curriculum in most developing countries is pedagogical rather than preparation for productive work. To them the combination of theory with practice facilitates or enhances theoretical learning. Pupils understand learning instructions better when theory is intertwined with practice. The Zambian education system has the same perspective regarding the function of production units in schools. The 1977 education reform policy document states; "Production work which undermines or contradicts the learning function of an education institution will not be accepted" (Ministry of Education 1977: 44).

From the above stated functional role of practical subjects in Zambian schools, it is clear that practical subjects are not intended to prepare school leavers for their future occupational roles. This being so, practical subjects as an aspect of education with production activities, cannot develop positive attitudes towards work among early school leavers. Their purpose is to make learning easier rather than positive attitude

formation towards work among early school leavers. Pupils participation in productive practical subjects cannot therefore serve the occupational aspirations of early school leavers in Zambia

From this review of literature, it can be deduced that early school leavers in Zambia do not view their participation in education with production activities as a preparation for self-employment after leaving school. In as much as they are concerned, education with production activities facilitate their learning progress in that theoretical classroom instructions are combined with practice. Pupils therefore look at education with production activities as a learning technique that should help them attain higher levels of education and also enable them enter white-collar jobs. Furthermore pupils' participation in education with production does not fully expose early school leavers to the necessary skills and experience needed in order to be self-employed. It is therefore possible to postulate that it is most unlikely to expect a significant positive relationship between pupils' participation in education with production activities and their occupational aspirations. Such postulations call for studies like this one.

CHAPTER 3

PROCEDURE AND METHODOLOGY

3.0 Population

The target population for this study were those pupils in selected secondary schools on the Copperbelt who were in grade 9 in 1989. It was assumed in this study that grade 9s were early school leavers and that their participation in Education with Production should afford them life skills for self-employment in the world of work.

3.1 Sample Size

The sample size was 240 grade 9 pupils. This sample size was systematically sampled from the twelve (12) randomly selected secondary schools. The twelve secondary schools that constituted the sample had been randomly selected from the twenty-four (24) secondary schools that were on the Copperbelt. Simple random sampling was used in selecting the twelve (12) secondary schools out of the population of twenty-four (24).

Since twelve (12) secondary schools out of twenty-four (24) were sampled, this meant fifty percent (50%) of the target population was included in the sample size. The sample size of fifty per cent (50%) provided large enough a representative sample to generalize research

findings to all secondary schools on the Copperbelt. Basic schools run on community self-help basis and mine schools were not included. Secondary schools included in the sample were both government and government-aided mission schools. Out of the twelve sampled secondary schools, seven (7) were co-educational schools and five (5) were single sex.

3.2 Sampling Procedure

The ballot procedure of sampling was used. The twelve secondary schools to be included in the sample were selected from the twenty-four (24) by simple random sampling method with replacement. After randomly selecting the twelve (12) secondary schools, the 240 grade 9 pupils to be included in the sample were then systematically sampled. From each of the twelve (12) secondary schools, twenty (20) grade 9 pupils were systematically sampled. Sampling the schools and pupils was necessary because it gave equal chances to each school and pupil to be included in the sample.

2.3 Type of Data Collected

Since the study was an attempt to investigate the extent of the relationship existing between pupils' participation in education with production and their

occupational aspirations, it essentially became a correlational study. Being a correlational study, the questions to the respondents were framed in such a way that data measured on an ordinal scale was collected. Data collected on the basis of an ordinal scale of measurement is more informative and allows comparison between variables to be made.

According to Clair Bless and Paul Achola, (1987), data measured on an ordinal scale establishes rank order between values of variables. This aspect makes it possible to know by how much one value is greater or less than the other. Respondents' opinions, for example were not only classified into 'agree' or 'disagree' but into strongly agree and strongly disagree. This classification enabled the extent of comparison of 'agree' to be made between different persons. Ranked data also allows Chi-squared (X^2) as a statistical method of analysis to be used.

To measure variables that needed classification of information into groups or naming, the nominal-data method of collection was used. Clair Bless and Paul Achola (1987) refer to nominal data as data obtained by naming or classifying information into categories. Pupils for example were asked to state their sex, their parental levels of education and how many times a week they participated in education with production activities. However, categories of information obtained from nominal

data can not be compared because they are qualitatively different.

3.4 Construction of Research Instruments

A questionnaire was constructed based on specific variables of investigation contained in the literature review. Initially, all the specific variables to be investigated on by the questionnaire were listed. Then an analysis of the type of data needed to study these variables was decided on. Thereafter construction of specific questions aimed at measuring certain attributes related to pupils' participation in education with production and their occupational aspirations were carried out.

Questions set were then taken to the supervisor for discussion and approval. Discussions with the supervisor were essential because certain weaknesses in the questionnaire were identified and corrected. Questions set were both fixed and open ended. For fixed questions respondents were requested to place a tick (✓) against the right answer of their own choice. In the case of open ended questions, blank spaces were left within the questionnaire where respondents had to write their answers.

3.5 Coding or Scoring Procedure

Tuckman, (1972) refers to data coding or scoring as the initial stage for processing information. Clair Bless and Paul Achola, (1987) argue that by data coding or scoring, raw data from questionnaires is transformed into tables of figures that have information value. In this study a code book was first developed showing an outline of what each research question was all about and what values were associated with it. After this, coding of data started. Respondents who answered the same question in a similar manner were assigned the same code and their total number was recorded.

The tally mark method of coding or scoring was used. Tuckman, (1972) refers to this method of coding or scoring as 'respondent counting'. Afterwards data obtained by 'respondent counting', was put in contingency tables. This was done so that Chi-square (X^2) could be applied in analysing data. Data coded or scored in this fashion were nominal. For coding ordinal data, rank scoring was used. Pupils for example were asked to rank in their order of preference their future occupations from a list of jobs.

3.6 Data Collection

Since the study is a survey of the extent of the relationship between pupils' participation in education

with production and their occupational aspirations, a questionnaire method of data collection was used.

According to Clair Bless and Paul Achola, (1987), a questionnaire can be used as a data collection tool for research requiring a description of a situation or research concerned with an assessment of a correlation between two variables. In this case the two variables being pupils' participation in education with production and their future occupational aspirations. Since the study is correlational, the data collected by the questionnaire method reflected measurement of variables on an ordinal scale.

A scheduled structured interview based on a questionnaire format was used. This type of questionnaire indicated precisely to the interviewee how to answer the questions. It also minimized the role and influence of the interviewer. Furthermore results obtained could be objectively compared because the questionnaire was presented to respondents in exactly the same manner. The scheduled structured interview based on the format of a questionnaire was given to the respondents as a self-administered questionnaire.

A self-administered questionnaire according to Clair Bless and Paul Achola, (1987) has the advantage of minimizing personal influence of the researcher. It also determines the frequency of certain answers and the relationship between answers to different questions.

Furthermore it rids the interference of sex, social status and age factors in data collection. For example a female interviewer might collect more and better information from female respondents than a male.

3.7 Data Analysis

The Chi-squared (X^2) analysis and the rank order correlation coefficient were used to test the hypotheses. According to MacCullagh, (1974) the Chi-squared (X^2), tests an observed distribution against some other hypothetical distribution. The hypothetical case being that variables are evenly distributed. Then an assessment of the extent to which the difference might be due to chance is made using the formula:

$$X^2 = \sum \frac{(O-E)^2}{E}$$

Where O is the frequency observed, and E, the expected frequency or the frequency that results from the hypothetical distribution. \sum refers to big sigma and is a symbol for adding up the results of working out each fraction. Using the formula for Chi-squared the critical value for X^2 is calculated and the extent of association between variables can be ascertained.

The Spearman's rank order correlation coefficient was also used. According to MacCullagh, (1974) it provides a mathematical measurement of the degree of

association between variables having paired values. According to Farleigh (1983), a correlation between two things may be purely by chance. Therefore to be able to ascertain whether the correlation is by chance or not the Spearman's Rank Order Correlation Coefficient was used as a test. Its formula is:

$$R = 1 - \frac{6 \sum d^2}{n^3 - n} \quad \text{where}$$

R = the accuracy of the relationship

n = the number of values or items

CHAPTER 4

RESULTS AND DISCUSSIONS

Generally it was observed that the sampled grade 9 pupils in selected secondary schools on the Copperbelt, based their occupational aspirations on three major aspects. These were, how well a job was paying, social prestige attached to a job and personal interest in a job.

The sampled grade 9 pupils' opinions were sought as to whether education with production had an influential role to play in their occupational aspirations. Their opinions were measured on a nominal scale ranging from 'yes' to 'no'. Findings revealed that 198 of the sampled grade 9 pupils (82.5%) affirmed education with production influenced their occupational aspirations. Among them 117 (59%) were boys and 81 (40%) were girls. However 42 of the sampled grade 9 pupils (17.5%) argued education with production had no influential role to play in determining their occupational aspirations. Among these 42 pupils, 17 were girls and 25 were boys.

From these findings it was deduced that the grade 9 pupils' opinions regarding the role of education with production in determining their future occupational aspirations was positive. Nevertheless when their opinions were further sought as to whether they would enter self-employment based on productive work after

finishing their grade 9 education programme, they disagreed. They argued they would seek employment in white-collar jobs. Only after failing to secure some form of white-collar job would they consider the possibility of self-employment based on education with production activities.

Pupils' opinions were measured on a nominal scale. They were asked to either state 'yes' or 'no'. Results were that 149 (62%) disapproved of self-employment based on productive work after finishing their grade 9 education. They further argued that their first priority would be to seek white-collar employment. Within this category of opinion 94 (63%) were boys and 55 (37%) were girls. When asked why they preferred to enter white-collar jobs to productive work, they argued white-collar jobs offered higher salaries and commanded more respect in society than productive work.

On the other hand 91 of the sampled grade 9 pupils (38%) totally disagreed to enter self-employment in productive work even if they could not secure white-collar jobs in the labour market. Among these grade 9 pupils, 40 were girls (44%) and 51 were boys (56%).

These findings meant that grade 9 pupils in selected secondary schools on the Copperbelt generally hated self-employment based on education with production activities as their future occupations. Hence they had very little occupational aspirations for productive work.

To them, their grade 9 education standards entitled them to be employed in white-collar jobs.

This negative attitude against self-employment in productive work among grade 9 pupils in selected secondary schools on the Copperbelt corresponded with the findings of other scholars. Aryee, (1981) in a survey on youth unemployment problems in Lusaka and Kitwe illustrated that Zambian youths considered self-employment in the informal sector as fit for the uneducated.

Foster, (1965) noted the same negative attitude among Ghanaian pupils towards self-employment in agriculture. Foster, (1965) argued that the negative attitude of Ghanaian pupils towards self-employment in agriculture was because the Ghanaian society gave high regard, prestige and high salaries to individuals who entered white-collar jobs. If therefore the grade 9 pupils' attitude towards self-employment in productive work has to be favourable, the Zambian society must recognise the importance of productive work.

Furthermore the sampled grade 9 pupils on the Copperbelt were presented with a list of occupations equivalent to their level of education. They were then asked to rank each enlisted occupation in accordance with their occupational aspirations. Table 4.1 illustrates the rank order preference of the occupations

grade 9 pupils in selected secondary schools on the Copperbelt aspired to join after completing their grade 9 education.

From the information given in Table 4.1, 70 (29%) of the sampled grade 9 pupils aspired by first choice to become accounts clerks. Those that gave first priority to mining as a future occupation were 64 (27%). Generally grade 9 pupils in selected secondary schools on the Copperbelt ranked highly white-collar jobs than jobs based on education with production activities as their future occupational aspirations.

Reasons advanced by grade 9 pupils for the rank order of jobs in relation to their occupational aspirations are shown in Table 4.2. From this table it was evident that the sampled grade 9 pupils on the Copperbelt based their choice of future occupational aspirations on the salary, prestige and interest associated with a given job in the labour market. Generally the sampled grade 9 pupils tended to associate white collar jobs with high salaries and high social prestige. Because of this tendency, they developed interest and strong occupational aspirations for white-jobs.

Self-employment in productive work, like crop growing was regarded secondary and inferior to any white-collar job. The sampled grade 9 pupils for example preferred to become office sweepers or security guards

TABLE 4.1 FREQUENCY AND PERCENTAGE RANK ORDER PREFERENCES OF GRADE 9 PUPILS' FUTURE OCCUPATIONAL ASPIRATIONS IN
SELECTED SECONDARY SCHOOLS IN THE COPPERBELT

OCCUPATION	1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH	11TH	12TH	13TH	14TH															
ACCOUNTS CLERK	29	56	23	51	21	37	15.4	32	13.3	39	16.2	40	16.6	34	14	31	12.9	28	11.6	17	7.1	7	2.9	8	3	6	2.		
TRAINING	64	27	42	17.5	30	12.5	20	8.3	26	10.8	31	12.9	21	8.7	19	7.9	21	8.7	17	7.1	10	4	9	3.7	10	4	10	4	
TEACHING	62	25.8	40	16.6	29	12.1	31	12.9	24	10	25	10.4	20	8.3	22	9.2	20	8.3	14	5.8	12	5	8	3	11	4.6	8	3	
RECEPTIONIST	19	7.9	22	9.2	17	7.1	14	5.8	16	6.6	20	8.3	10	4	18	7.5	10	4	16	6.6	13	5.4	11	4.6	10	4	7	2	
DRIVER	5	2.1	19	7.9	20	8.3	24	10	20	8.3	24	10	14	5.8	12	5	11	4.6	13	5.4	10	4	14	5.8	9	3.7	10		
BUS CONDUCTOR	5	2.1	8	3	14	5.8	18	7.5	12	5	11	4.6	15	6.2	10	4	13	5.4	10	4	11	4.6	16	6.6	11	4.6	8		
OFFICE CLERK	4	1.6	10	4	15	6.2	12	5	15	6.2	16	6.7	13	5.4	11	4.6	12	5	17	7.1	20	8.3	17	7.1	13	5.4	13	5	4
OFFICE CLERK	3	1	6	2.5	10	4	9	3.7	11	4.6	14	5.8	15	6.2	14	5.8	11	4.6	12	5	18	7.5	18	7.5	16	6.6	16	6	
SECURITY GUARD	2	0.8	7	2.9	9	3.7	4	1.6	9	3.7	10	4	14	5.8	13	5.4	16	6.6	15	6.2	20	8.3	21	8.7	17	7.1	18	7	1
SHOP ASSISTANT	1	0.4	6	2.5	9	3.7	7	2.9	14	5.8	16	6.7	18	7.5	16	6.7	18	7.5	20	8.3	21	8.7	22	9.2	21	8.7	22	9	2
WARRANTY CLERK	1	0.4	3	1	11	4.6	13	5.4	16	6.7	18	7.5	10	4	12	5	14	5.8	16	6.6	17	7.1	19	9.9	22	9.2	29		
BUILDING SUPERVISOR	1	0.4	5	2.1	7	2.9	11	4.6	11	4.6	13	5.4	15	6.2	16	6.7	16	6.6	18	7.5	21	8.7	19	7.9	26	10.8	32	1	
CHILDREN'S WORKER	1	0.4	6	2.5	4	1.6	14	5.8	10	4	15	6.2	17	7.1	18	7.5	17	-	20	8.3	14	5.8	21	8.7	24	10	21		
CULTURAL WORKER	1	0.4	7	2.9	5	2.1	17	7.1	13	5.4	10	4	8	3	14	5.8	16	6.6	12	5	15	6.2	20	8.3	21	8.7	20		
BERRY PICKER	1	0.4	3	1	11	4.6	9	3.7	11	4.6	18	7.5	10	4	11	4.6	14	5.8	12	5	22	9.2	18	7.5	21	8.7	19		

H % 15TH %

2.5 7 2.9

4 9 3.7

3 3 10 4

7 2.9 6 2.5

10 4 8 3

8 3 11 4.6

13 5.4 18 7.5

16 6.6 21 8.7

18 7.5 20 8.3

22 9.2 24 10

29 12 19 7.9

32 13.3 26 10.8

21 8.7 18 7.5

20 8.3 21 8.7

19 7.9 22 9.2

TABLE 4.2: REASONS EXPLAINING THE RANKS ORDER PREFERENCES OF PUPILS' OCCUPATIONAL ASPIRATIONS

<u>OCCUPATION</u>	<u>REASONS FOR JOB ASPIRATIONS</u>	<u>FREQUENCY</u>	<u>PERCENTAGE OF 240</u>
Accounts Clerk	- Highly salaried job	100	42
	- Personal interest in the job	61	25
	- Like office work	79	33
Mining	- Highly salaried job	150	62.5
	- Personal interest in the job	90	37.5
Teaching	- Jobs makes oneself famous	86	35.8
	- Personal interest in the job	105	43.7
	- Improve Zambian educational standards	49	20.4
Receptionist	- Like office work	128	53.3
	- Like meeting people	10	4.2
	- Personal interest in the job	20	8.3
Bus Driver	- Highly salaried job	82	34.2
	- Like travelling to places	117	48.7
	- Personal interest in the job	123	51.2
Bus Conductor	- Personal interest in the job	60	25
	- Job that a grade 9 school leaver can secure	180	75
Office Orderly	- Like office work	130	54
	- Job that a grade 9 school leaver can secure	110	45.8

OCCUPATION

REASONS FOR JOB ASPIRATIONS

FREQUENCY • PERCENTAGE
OF 210

Office Sweeper	- Interest in the job	45	18.7
	- Like office work	90	37.5
	- Job that a grade 9 school leaver can secure	105	43.7
Security Guard	- Job that a grade 9 school leaver can secure	140	58.3
	- Like to reinforce law and security	30	12.5
Crop Growing	- Beat high cost of food	70	29
	- Highly salaried job	40	16.6
	- Scarcity of white-collar jobs for grade 9s	162	67.5
	- Personal interest in the job	38	15.8
Carpentry	- Highly salaried job	52	21.6
	- Scarcity of white-collar jobs for grade 9s	188	78.3
Welding	- Scarcity of white-collar jobs for grade 9s	148	61.6
	- Personal interest in the job	92	38.3
Tailoring	- Highly salaried job	32	13.3
	- Beat the high cost of clothes from shops	208	86.6
Piggery	- Be self-sufficient in pork	172	71.6
	- Highly salaried job	68	28.3
Poultry	- Beat high cost of chickens by producing own	130	54.1
	- Highly salaried job	51	21.2
	- Personal interest in the job	59	24.5

to going back to the land and farm. Evidence from Table 4.1 showed that three (3) of the sampled grade 9 pupils aspired by first choice to become office sweepers rather than becoming crop growers. Only one (1) of sampled grade 9 pupils ranked crop growing first as a future occupation aspiration.

Findings of this nature closely approximate to what Haan, (1982) had established in a survey among the Zambian youths in Lusaka and Kitwe. Haan, (1982) observed that Zambian youths engaged in self-employment based on modern informal activities like radio and watch-repairing. Zambian youths did not want to enter self-employment in the informal sector based on traditional trades like farming and basket making.

Haan, (1982) argued that Zambian youths preferred self-employment in modern informal activities to traditional ones, because Zambian youths considered modern informal activities highly paying and more prestigious. In the view of many Zambian youths, modern informal activities were equivalent to white-collar jobs. Hence the Zambian youths were eager to enter self-employment in modern informal activities.

Foster, (1965) came up with similar findings among Ghanaian pupils. Foster, (1965) argued that Ghanaian pupils conceptualized formal education as a passport for entry into white-collar jobs. Ghanaian pupils did not see other functional roles of formal education like the

transmission of cultural norms and values from one generation to another. In conclusion Foster, (1965) blames the Ghanaian society rather than the pupils for such an attitude towards school. In his view, pupils' appreciation of the other functions of formal education would only occur when society has changed its perception of schools as employment providers.

World Bank, (1980) in its various studies noted the same attitude of society towards formal education in providing employment to its recipients. Dore, (1976) had this to say:

"Unfortunately not all schooling is education. Much of it is mere qualification earning. And more and more becomes so. Everywhere, in Britain as in India, in Russia as in Venezuela schooling is more often qualification earning" (Dore 1976: 1).

To determine whether grade 9 pupils' participation in education with production equipped them with life skills for self-employment, a list of skills education with production was supposed to equip them with was presented to them. If certain skills they had acquired or would have acquired by the end of their grade 9 education programme did not appear on the list, they were requested to include those skills on the list. Skills claimed to have been acquired were measured on a nominal scale. From the given list of skills, grade 9 pupils were asked to name the skill or skills they had acquired

by placing a tick (✓) against that skill or those skills.

Findings illustrated that out of the 240 sampled grade 9 pupils, 213 (88.7%) claimed they had acquired life skills. This meant that twenty-seven (27) of the sampled grade 9 pupils (11.25%) claimed not to have acquired any life skills from education with production. Out of those twenty-seven (27), thirteen were girls (5.4%) and fourteen (5.8%) were boys.

When asked why they had not acquired any life skills from education with production, twenty (20) out of the twenty-seven (27) grade 9 pupils argued that they were more interested in other curriculum subjects like Commerce, English and Mathematics. They further argued that such subjects would enable them enter occupations they most aspired to join after finishing their grade 9 education. Occupations like accounts clerks, receptionists and office orderlies. To them such jobs were of, recognizeable social status and highly paying in relation to their grade 9 level of education.

The other seven (7) grade 9 pupils pointed out that education with production was optional. Therefore they did not want to participate in productive activities. As a result they had not acquired any life skills.

Among the 213 grade 9 pupils who claimed to have acquired life skills, seventy-two (30%) felt they had acquired crop growing skills. Those that claimed to have acquired carpentry skills were fifty-eight (24.2%).

Table 4.3 illustrates the other various skills the sampled grade 9 pupils acknowledged to have acquired from their participation in education with production.

Crop growing and carpentry were generally the dominant production activities that most grade 9 pupils claimed they had acquired life skills in. The reason given was that crop growing was the most popular productive activity in most schools. The other reason was that pupils derived a lot of personal gains from these two education with production activities, for example they bought foodstuffs from the school garden and the chairs and tables they made from the woodwork shop cheaply.

Although the 213 grade 9 pupils agreed they had acquired life skills from production activities, the majority of them argued that such skills could not afford them self-employment in the world of work. They further argued that education with production did not give them the necessary or complete training they needed for self-employment.

Shanks, (1981) came up with similar findings. His study pointed out that inadequate vocational training seemed to be prohibitive to self-employment among secondary school leavers in Zambia. Bwalya, (1983) also established that secondary school pupils in Zambia felt that education with production only gave them basic

TABLE 4.3: FREQUENCY AND PERCENTAGE OF THE TYPES OF SKILLS GRADE 9 PUPILS HAD ACQUIRED IN EDUCATION WITH PRODUCTION ACTIVITIES

TYPE OF SKILLS ACQUIRED FROM EDUCATION WITH PRODUCTION	FREQUENCY	PERCENTAGE OF 240
Crop growing skills	72	30
Carpentry skills	58	24.2
Cookery skills	21	8.7
Sewing skills	17	7.1
Poultry rearing skills	7	2.9
Piggery rearing skills	2	1
Crop growing, Cokkery and Sewing skills	9	4
Crop growing and Carpentry skills	1	0.42
Sewing and Cokkery skills	20	8.3
Crop growing and Sewing skills	1	0.42
Crop growing, Cokkery and Poultry skills	3	1.25
Crop growing, Carpentry and Sewing skills	2	1
None of the above skills acquired	27	11.25
TOTAL:	240	100

skills insufficient to make themselves self-employed.

Furthermore opinions of grade 9 pupils were sought as to whether the functional role of education with production was to prepare them for their future occupations or pedagogical. Their opinions were measured on a nominal scale. They either stated, 'pedagogical' or 'preparation for future occupation.' Results showed that the grade 9 pupils on the Copperbelt perceived their participation in education with production as preparation for future occupations. In fact 152 (63%) of the 240 sampled grade 9 pupils had this view. Only 88 (37%) of the sampled grade 9 pupils thought the role of education with production was pedagogical.

From such findings it was deduced that grade 9 pupils on the Copperbelt viewed their participation in education with production as training for productive occupations after finishing their grade 9 education. This probably explained why they showed apathy to self-employment in productive work as their future occupational aspiration. They thought they would never have access to white-collar jobs if they aspired for occupations based on education with production activities. However, the intent of education with production according to the 1977 Education Reform Proposals is pedagogical.

Van Rensburgh, (1987) argued that the role of production activities in schools should both be

pedagogical and economic production. He argued, all learning processes involved a combination of theory and practice. In order for pupils to understand fully theoretical classroom instructions they must put them into practice. However in an attempt to marry theory with practice, certain economic benefits would occur.

Measuring whether the grade 9 pupils thought their participation in education with production was a waste of time or not, was done on an ordinal scale. The ordinal scale ranged from, disagree, strongly disagree, agree to strongly agree. Findings were that 108 of the sampled grade 9 pupils (45%) disagreed while 101 (42%) strongly disagreed. On the other hand, 21 (9%) of the sampled grade 9 pupils agreed and 10 (4.2%) strongly agreed.

It was then inferred from these results that the sampled grade 9 pupils on the Copperbelt did not generally regard education with production as a waste of time, although production activities were non-examinable. This meant that production activities were important to the pupils. Practical subjects for example enhanced their learning. Also some pupils who could not secure white-collar jobs, could apply the skills obtained from education with production to make a living. Findings of this nature coincided with those of Bwalya, (1983). Bwalya, (1983) in his study of secondary school production units observed that pupils enjoyed taking part in production activities. In fact pupils wanted education

with production to be made compulsory in the school curriculum.

Parental influence on the occupation aspirations of their school-going children was measured on a nominal scale. The sampled grade 9 pupils on the Copperbelt were asked to name the types of education with production activities their parents encouraged them to participate in. Results generally showed that parents did not encourage their school-going children to participate in production activities.

Instead parents wanted and encouraged their school-going children to participate in pure academic subjects like English and Mathematics. The sampled grade 9 pupils argued that their parents saw these subjects as leading to highly paying and prestigious jobs in the Zambian society.

However there were certain production activities like woodwork and metalwork that parents encouraged their school-going children to participate in, hoping that their children would enter technical jobs in the mines. Table 4.4 shows the number and percentage of the types of education with production activities parents encouraged their school-going children to participate in. When the sampled grade 9 pupils were asked why their parents persuaded them to take part in such education with production activities, they argued that such subjects like woodwork and metalwork would enable them enter

TABLE 4.4: THE NUMBER AND PERCENTAGE OF THE TYPES OF EDUCATION WITH PRODUCTION ACTIVITIES PARENTS ENCOURAGED THEIR GRADE 9 SCHOOL-GOING CHILDREN TO PARTICIPATE IN

TYPES OF EDUCATION WITH PRODUCTION ENCOURAGED BY PARENTS	FREQUENCY	PERCENTAGE OF 240
Metalwork	65	27
Woodwork	41	17.1
Metalwork and Woodwork	31	12.9
Sewing or Needlework	22	9.6
Crop growing	18	7.5
Piggery	5	2.1
Poultry	18	7.5
Cookery	6	2.5
Cookery and Needlework	20	8.3
Cookery, Needlework and Poultry	1	0.42
Crop growing, Cookery and Metalwork	1	0.42
Cookery and Metalwork	2	1
Crop growing and Needlework	1	0.42
Piggery, Crop growing and Poultry	1	0.42
Crop growing, Poultry and Metalwork	4	1.7
Crop growing and Metalwork	3	1.25
Crop growing and Poultry	1	0.42
TOTAL	240	100

technical jobs in the mines which they thought were highly remunerative and prestigious.

Kelly et al, (1986) observed similar tendencies among Zambian parents towards the types of subjects they wanted their children to pursue in school. Kelly et al (1986) noted that in Zambia academic subjects were seen by parents as being of more relevance to the future occupations of their children. This meant that grade 9 pupils on the Copperbelt gave priority to academic subjects that could enable them enter white-collar jobs. Therefore education with production activities would not serve the occupational aspirations of the sample grade 9 pupils. Parental attitude towards productive occupations as future jobs for their children was negative.

Opinions of grade 9 pupils on the Copperbelt were sought as to whether self-employment based on education with production was lowly paying and only fit for the uneducated. Their opinions were measured on an ordinal scale ranging from, agree, strongly agree, disagree to strongly disagree.

Generally most grade 9 pupils felt that self-employment based on education with production activities was lowly paying and only fit for the uneducated. Those that simply disagreed to this viewpoint were only 7 (3%).

On the basis of these results, it was concluded that the grade 9 pupils on the Copperbelt had no intention of entering self-employment in productive work. Since they had been to school, they felt productive work was for the uneducated. Theirs were white-collar jobs.

4.1 Hypotheses Testing

Hypothesis 1

H0: Pupils develop strong occupation aspirations in education with production activities that are more economically rewarding.

H1: Pupils do not.

It is possible to expect a correlation that the more economically paying an education with production activity becomes, the more will be the pupils' occupational aspiration for that productive activity.

Testing correlation for chance relationships. (Refer to page 52).

$$R = 1 - \frac{6 \sum d^2}{n^3 - n} \text{ where,}$$

R= The accuracy of the relationship

n- The number of items, i.e. the thirteen (13) education with production activities shown in Table 4.5 that the grade 9 pupils participated in.

TABLE 4.5: EDUCATION WITH PRODUCTION ACTIVITIES GRADE 9 PUPILS ON THE COPPERBELT PARTICIPATED IN

	Frequency	Rank	Occupational Aspirations	Rank	Reference Between Rank	Difference Squared (d ²)
Crop growing	90	1	56	1	0	0
Carpentry	31	3	22	4	-1	1
Poultry	1	12.5	5	12.5	0	0
Cookery	40	2	12	6.5	-4.5	0.25
Piggery	10	5	10	8.5	-3.5	2.25
Welding (Metalwork)	20	4	7	10	-6	6
Needlework (Sewing)	3	8.5	28	2	6.5	2.25
CCarpentry and Crop growing	5	6.5	15	5	0.5	0.25
Carpentry, Crop growing and Metalwork	3	8.5	10	8.5	0	0
Crop growing, Cookery and Needlework	5	6.5	25	3	3.5	12.25
Crop growing, Cookery, Metalwork and Needlework	2	10.5	12	6.5	4	16
Crop growing, Carpentry, Cookery and Metalwork	1	12.5	6	11	1.5	2.25
Crop growing and Cookery	2	10.5	5	12.5	2	4

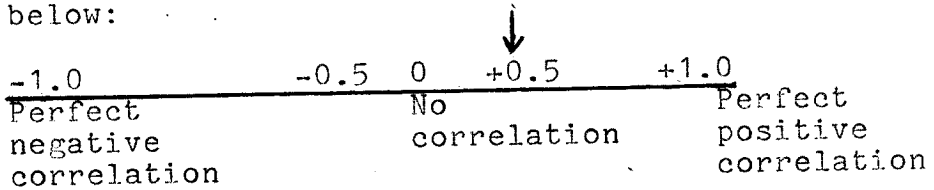
2

Ed 146.5

$$R = 1 - \frac{6 \times 146.5}{3} = 1 - \frac{875}{2197-13} = 1 - \frac{879}{2184}$$

$$R = 1 - 0.402 = 0.5$$

The results can be plotted on a scale as shown below:



Five (5) out of 100 of the observed correlation is due to chance factors. So there is a significant positive relationship between education with production activities that are more economically rewarding and the grade 9 pupils' occupational aspirations in selected secondary schools on the Copperbelt.

Hypothesis 2

H0: There is an association between stiff competition for limited wage labour and pupils' favourable attitudes and occupational aspirations for manual labour.

H1: There is no association between stiff competition for limited wage labour and pupils' favourable attitudes and occupational aspirations for manual labour.

Observation:

149 grade 9 pupils opted to enter self-employment based on education with production activities after failing to secure any white-collar job in the labour market. However, 91, grade 9 pupils denied entering self-employment based on education with production activities, even if they failed to secure any white-collar job. Supposing the factors influencing the grade 9 pupils' occupational aspirations on the Copperbelt are similar, it is reasonable to expect, 240 grade 9 pupils to aspire for self-employment based on education with production activities. Therefore is it due to chance that the observed situation is true?

$$X^2 = \sum \frac{(O-E)^2}{E} = \frac{(149-240)^2}{240} + \frac{(91-240)^2}{240}$$

$$X^2 = \frac{8281}{240} + \frac{22201}{240} = 34.5 + 92.5 = 127$$

The calculated value of $X^2 = 127$

df = 2-1 = 1 at 0.05 = 2.71

Therefore since the calculated value of X^2 is 127 and the critical value of x^2 is 2.71, we reject H_0 . That is to say there is no sufficient evidence to support the claim that there is an association between stiff competition for limited wage labour and the grade 9 pupils' favourable attitude and occupational aspirations for manual

labour based on education with production activities at 95% of level of significance.

Hypothesis 3

H0: There is an association between education with production as an extra-curricula activity and the low occupational aspirations of the grade 9 pupils on the Copperbelt.

H1: There is no association between education with production as an extra-curricula activity and the low occupational aspirations of the grade 9 pupils on the Copperbelt.

Observation:

Ten (10) grade 9 pupils strongly agreed while 21 simply agreed. However, 101 strongly disagreed while 108 simply agreed.

$$X^2 = \sum \frac{(O-E)^2}{E}$$

$$X^2 = \frac{(10-240)^2}{240} + \frac{(21-240)^2}{240} + \frac{(101-240)^2}{240} + \frac{(108-240)^2}{240}$$

$$X^2 = \frac{52900}{240} + \frac{47961}{240} + \frac{19321}{240} + \frac{17424}{240}$$

$$X^2 = 220.4 + 199.8 + 80.5 + 72.6 = 428.1$$

The calculated value for $X^2 = 428.1$

df = 4-1 = 3 at 0.01 = 11.34

Since the calculated value of X^2 is 428.1 and that of its critical value is 11.34 at 0.01 level of significance, we reject H_0 . This is to say there is insufficient evidence to accept the claim that there is an association between education with production as an extra-curricula activity and the low occupational aspirations of the grade 9 pupils on the Copperbelt at 99% level of significance.

Hypotheses 4

H_0 : There is an association between the pedagogical role of education with production and the grade 9 pupils' low occupational aspirations for self-employment based on education with production activities.

H_1 : There is not.

Observation:

88 grade 9 pupils on the Copperbelt stated that the role of education with production activities in the school curriculum was pedagogical. On the other hand 152 of the grade 9 pupils on the Copperbelt stated that education with production prepared them for their future occupational roles. Therefore is this observation due to chance factors?

$$\chi^2 = \sum \frac{(O-E)^2}{E} = \frac{(99-240)^2}{240} + \frac{(152-240)^2}{240}$$

$$\chi^2 = \frac{23104}{240} + \frac{7744}{240}$$

$$\chi^2 = 96.3 + 32.3 = 128.6 \quad 129$$

The calculated value for χ^2 is 129 and that of its critical value is 6.64, we reject H_0 . That is, there is insufficient evidence to accept the claim that there is an association between the pedagogical role of education with production and the grade 9 pupils' low occupational aspirations for self-employment based on education with production activities at 99% level of significance.

From these findings it can be deduced that there was no significant positive relationship between the grade 9 pupils' participation in education with production and their future occupational aspirations. In fact 149 (62%) of the sampled grade 9 pupils disagreed to enter self-employment based on the productive skills acquired from education with production. Reasons given were that the skills claimed to have been acquired from education with production were too elementary and inadequate to successfully enable the grade 9s be self-employed. However 198 (82.5%) of the grade 9 pupils appreciated the influential role education with

production played in serving some pupils' occupational aspirations, especially those that could not secure white-collar jobs. Other reasons given by the grade 9 pupils for hating self-employing jobs based on skills from education with production were that they were educated and therefore their rightful jobs were white-collar, which gave them high salaries and social prestige. Parents encouraged their children to engage in practical subjects like woodwork and metalwork with the hope that their children would enter highly paying technical jobs in the mines.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Occupational aspirations of grade 9 pupils on the Copperbelt were generally influenced by the education with production activities they participated in. However only those education with production activities that were highly paying and of recommendable social status in the Zambian society were strongly aspired to for self-employment. Given chance for entry into white-collar jobs, grade 9 pupils on the Copperbelt argued they would not enter self-employment based on education with production.

Grade 9 pupils on the Copperbelt admitted that they were forced into self-employment by critical shortage of white-collar jobs. Otherwise they would not like to enter self-employment based on education with production activities if they could secure any white collar jobs in the labour market. A number of factors seemed to have given rise to this mode of thought among grade 9 pupils on the Copperbelt.

Firstly, grade 9 pupils on the Copperbelt argued that the Zambian society seemed to have no regard for self-employing jobs, especially those based on manual labour. The Zambian society tended to underpay manual jobs. Accordingly manual jobs assumed low social status

in the Zambian society. The Zambian society seemed to have no appreciation for self-employment based on manual labour. Instead white-collarism was the most welcome form of employment in Zambia.

Grade 9 pupils on the Copperbelt argued that they simply had to comply to this social norm. This is why they gave priority to white-collar jobs. They thought white-collar jobs were the rightful forms of employment in the Zambian society. Self-employment was only entered when all the possibilities of securing white-collar jobs had failed. This partially explains why the grade 9 pupils did not generally think education with production was a waste of time simply because it was not examinable. They turned or rather consoled themselves in self-employment after failing to enter white-collar jobs.

Even when all attempts to secure white collar jobs had failed, grade 9 pupils on the Copperbelt did not enter any type of self-employment. Only those that offered high salaries and prestige were entered. For example, those based on modern skills like carpentry and metalwork. Zambian parents were also identified as one variable that influence the occupational aspirations of their school-going children. Realizing the diminishing availability of white-collar jobs, most Zambian parents encouraged their children to participate more in economically enterprising production activities.

Skills acquired by the grade 9 pupils on the Copperbelt could not effectively afford them self-employment. The reason given was that only basic skills were acquired by grade 9 pupils on the Copperbelt in their participation in education with production. The incomplete or rudimentary skills were inadequate to enable early school leaver slike grade 9s set up successful self-employing economic enterprises. Those early school leavers that attempted to enter self-employment failed. Also early school leavers did not have the necessary finance to enable them start their business enterprises.

Also the grade 9 pupils on the Copperbelt perceived education with production activities they participated in as preparation for their future occupations. This to them meant that they had no success to white-collar jobs. They felt they were being prepared for self-employment based on education with production activities. Yet in terms of their occupational aspirations, priority was given to white-collar jobs. This view reinforced grade 9 pupils' negative attitude towards self-employment based on education with production. They saw no point of entering self-employment based on education with production when everyone struggled to enter white-collar jobs.

Furthermore the fact that education with production was not compulsory in schools meant that it was inferior

to other subjects in serving grade 9 pupils' occupational aspirations. This probably explains why some grade 9 pupils on the Copperbelt did not participate in education with production. Education with production was irrelevant to their occupational ambitions. Grade 9 pupils on the Copperbelt doubted the capability of education with production in affording them self-employment when it was optional in the school curriculum.

5.2 Conclusion

In an attempt to investigate whether or not there was a significant relationship between the Education with Production Activities that the grade 9 pupils on the Copperbelt participated in and their future occupation aspirations, no significant positive relationship was established. There was generally no relationship between the Education with Production Activities the grade 9 pupils took part in and their future job aspirations. The sampled grade 9 pupils did not aspire to enter occupations based on Education with Production Activities after leaving school for a number of reasons:

- (i) The sampled grade 9 pupils perceived self-employing jobs based on the knowledge and skills acquired from Education with Production as lowly paying, fit for the uneducated and

of low social status in Zambia.

- (ii) The grade 9 pupils aspired to enter white-collar jobs as opposed to self-employment on the basis of skills obtained from Education with Production Activities.
- (iii) The grade 9 pupils on the Copperbelt could not aspire to be self-employed in productive work after finishing their grade 9 education because the skills they obtained from their participation in Education with Production were too basic to enable them be self-employed.
- (iv) Parents encouraged their grade 9 school-going children to participate in education with production activities involving practical subjects like Industrial Arts and Agriculture Science. Parents perceived these practical subjects as leading to better white-collar jobs. Also because practical subjects made their children grasp classroom instructions easily. Hence the grade 9 pupils on the Copperbelt had very little occupational aspirations for self-employment in Education with Production Activities.

5.3 Recommendations

- (i) Production activities that reflect the nature

of jobs available in an urban environment should be introduced. Modern informal activities like motor-car and watch-repairing for example should be introduced in urban secondary schools on the Copperbelt. Jobs based on such modern informal activities are considered equivalent to white-collar jobs that urban pupils always hope to enter after finishing their grade 9 education..

- (ii) Education with production activities should be made compulsory in urban secondary schools on the Copperbelt, so that pupils realise its educational value. Secondary school administrators should be able to allocate production activities equally the same number of periods like other subjects. Production activities must be examinable like any other school subjects. By so doing pupils would equally respect productive work like any other subjects.
- (iii) Production activities should equip early school leavers like grade 9s with proper skills to enable them enter into self-employment without difficulties after finishing their grade 9 education. Properly trained teachers in various productive skills should be assigned the role of teaching pupils the skills they need for self-employment in future.

- (iv) Policy makers and school administrators should explain to the pupils the pedagogical value of production activities, because most secondary school pupils on the Copperbelt tend to think that production activities lessen their future chances of securing white-collar jobs.
- (v) Parents in homes should help in changing the negative attitude of their school-going children towards productive work. Their children should be encouraged to participate actively in productive work considering the diminishing labour market for grade 9 school leavers.

5.4 Recommendations for further Research Areas

Based on the findings of this correlational study between the grade 9 pupils' participation in Education with Production Activities and their future occupational aspirations on the Copperbelt, it is pertinent that further research be carried out in the following areas.

- (i) Tracer studies of grade 9 school leavers on the Copperbelt in order to establish whether or not they enter self-employment based on the skills they obtain from education with production activities.

- (ii) Investigate **types** of education with production activities grade 9 pupils on the Copperbelt would want to be introduced in the school curriculum that would serve their occupational aspirations.
- (iii) Extend correlational studies like this to rural schools and see if grade 9 pupils in rural Zambia have the same attitudes towards self-employment based on the education with production activities they participate in.
- (iv) Investigate whether the education with production skills grade 9 pupils on the Copperbelt are exposed to are too elementary to make them self-employed after finishing their grade 9 education programme.
- (v) Undertake similar studies to grade 12 school leavers both on the Copperbelt and rural areas and investigate if grade 12 pupils have similar or different perceptions towards self-employment based on education with production activities.

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APPENDIX 1:

QUESTIONNAIRE FOR GRADE NINE PUPILS IN SELECTED
SECONDARY SCHOOLS ON THE COPPERBELT ON EDUCATION
WITH PRODUCTION ACTIVITIES (E.W.P.A.)

1. Sex: Male Female..... (Please tick one)
2. What is the occupation of your parents ? (Write your answer in the space provided below)
.....
3. Education of your Parents
 - Completed Form Five
 - Finished Form Three
 - Standard Six
 - Completed College Training
 - University Graduate
 - Never went to School(Please tick your answer)
4. The list below gives some of the EWP activities practiced in your school, tick those that you take part in
 - Farming in the school garden
 - Carpentry work in the school workshop
 - Poultry farming (rearing of chickens)
 - Piggery
 - Cookery
 - Metalwork
 - Needlework
5. Name any other EWP activities not included in the above list practiced in your school and in which you take part.
.....

6. How often a week do you actively take part in EWP activities? (Tick only one)

- Once a week
- Twice a week
- Three times a week
- Four times a week
- Five times a week

7. Below is a list of occupations. Number them in the order of your future job preferences:

- | | |
|----------------|-----------------|
| Farmer | Piggery rearing |
| Teacher | Poultry rearing |
| Accounts Clerk | Bus Conductor |
| Welder | Bus Driver |
| Cook | Receptionist |
| Sewing | Office Orderly |
| Security Guard | Officer Sweeper |

8. Give reason or reasons in the space provided below for such order of preference of your future occupations.

.....
.....
.....

9. People argue that parents decide what future occupations their school-going children must take in the labour market (Please tick one that expresses your view).

- Strongly agree
- Agree
- Strongly disagree
- Disagree

10. What factors do you consider important and influential in your choice of your future occupational aspirations. (Write your answer in the space below)

.....
.....
.....
.....

11. Would you say EWP activities are influential in your choice of your future occupational aspiration (Please tick one).

Yes..... No.....

12. Would you enter occupations based on EWP activities only if you failed to secure any other job in the labour market (Please tick one).

Yes..... No.....

13. If you answer to 12 above is YES which EWP activities would you turn to for your occupation aspiration. (Name the EWP activity as well as your reasons in the space below).

.....
.....
.....

14. What occupation do you have in mind that you would like to enter after finishing your grade nine. (Name the occupation in the space below and give reasons for your aspiration).

.....
.....
.....

15. The list below give a number of skills EWP activities are supposed to equip you with. Which skills have you acquired or mastered (Please tick).

- Crop growing skills

- Carpentry skills
- Cookery skills
- Sewing skills
- Poultry skills
- Piggery rearing skills
- Livestock rearing skills
- None of the above

16. If your answer to 15 above is 'none of the above', give reasons in the space below.

.....
.....

17. EWP activities are said to impart into you various skills like the ones listed above in question 15. Do you agree with this statement? (Please tick one).

- Strongly disagree
- Disagree
- Strongly agree
- Agree

18. People argue that the purpose of EWP activities are:

- To enable pupils learn by combining theory with practice or learn by 'doing'. (Putting into practice what pupils learn theoretically in class).
- To prepare pupils for their future occupational roles i.e. farmers.

Which one of the two statements above do you agree with (Tick one).

19. EWP activities are a waste of time because there are no examinations in the school curriculum based on Education with Production Activities (Please tick one).

- Strongly agree
- Agree

- Strongly disagree

- Disagree

20. Among the Listed EWP activities, which ones do your parents encourage you to take part in (Please tick).

- Crop growing in the school garden

- Cookery

- Needle work

- Piggery

- Poultry

- Metal work

- None of the above

21. If your answer to question 20 above is 'none of the above', name the alternative EWP activities your parents encourage you to take part in, in the space provided below.

.....
.....
.....

22. People argue that occupations based on EWP activities are lowly paying and are only good for the uneducated. Do you agree?

- Strongly agree

- Agree

- Strongly disagree

- Disagree

TABLE 4.6 NAMES AND TYPES OF SECONDARY SCHOOLS VISITED ON THE COPPERBELT

<u>SECONDARY SCHOOLS VISITED</u>	<u>TYPE OF SECONDARY SCHOOL VISITED</u>	<u>DISTRICT</u>	<u>NUMBER OF GRADE 9 PUPILS SAMPLED</u>
Kansenshi	Co-education	Ndola	20
Chifubu	Co-education	Ndola	20
Fatima	Single-sexed (Girls)	Ndola	20
Luanshya Girls	Single-sexed (Girls)	Luanshya	20
Roan Antelope	Single-sexed (Boys)	Luanshya	20
Kitwe Boys	Single-sexed (Boys)	Kitwe	20
Mukuba Boys	Single-sexed (Boys)	Kitwe	20
Chamboli	Co-education	Chingola	20
Chingola	Co-education	Chingola	20
Chikola	Co-education	Chingola	20
Butondo	Co-education	Mufuilira	20
Mufuilira	Co-education	Mufuilira	20
<u>TOTAL</u>	<u>12</u>	<u>12</u>	<u>240</u>

TABLE 4.7 WEEKLY FREQUENCY OF PARTICIPATION IN PRODUCTION ACTIVITIES BY THE SAMPLED GRADE (PUPILS)

<u>NUMBER OF TIMES A WEEK</u>	<u>FREQUENCY</u>	<u>PERCENTAGE OF 240</u>
Once a week	43	18.75
Twice a week	111	46.25
Three times a week	27	11.25
Four times a week	20	8.3
Five times a week	10	4.16
Did not participate	27	11.25
TOTAL	<u>240</u>	<u>100</u>

TABLE 4.8: FREQUENCY/PERCENTAGE TABLE OF PARENTAL EDUCATION LEVEL OF THE SAMPLED GRADE 9 PUPILS ON THE COPPERBELT

<u>PARENTAL LEVELS OF EDUCATION</u>	<u>FREQUENCY</u>	<u>PERCENTAGE OF 240</u>
Completed Form 5	66	27.5
Finished Form 3	32	13.3
Finished Standard 6	102	42.5
Completed College Training	23	10
University Graduates	10	4.2
Never went to School	7	3
TOTAL	<u>240</u>	<u>100</u>

APPENDIX 5:

TABLE 4.9: FREQUENCY/PERCENTAGE TABLE SHOWING THE OCCUPATION OF PARENTS OF THE SAMPLED GRADE 9 PUPILS

OCCUPATION OF PARENTS	FREQUENCY	PERCENTAGE OF 240
Miners	91	38
Police Officers	9	4
Teachers	27	11
Farmers	16	7
Technicians	3	1.25
Marketeers	7	3
Accounts Clerks	31	13
Businessmen	5	2.1
Engineers	6	2.5
Doctors	4	2
Typists	2	1
Pastors	4	2
Drivers	11	5
Stores Controllers	1	0.42
Lawyers	4	2
Nurses	7	3
Soldiers	4	2
Telephone Operators	1	0.42
Managing Directors	3	1.25
Carpenters	4	2
TOTAL	240	100

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