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# Implementation of Geography Field Project in Zambia High Schools: a Survey of Livingstone and Monze Towns of Southern Province

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Abstract: *The New Zambian Secondary School Geography Curriculum (NZSSGC) that was launched in the year 2000 by the Curriculum Development Centre (CDC) of the Ministry of Education Science Vocational Training and Early Education (MoESVTEE) has a new component called field project. One of the major reasons for introducing a field project component is that the geography which was taught in schools earlier was just too theoretical, text-book based and left pupils with little or hardly no knowledge of their local areas. In addition, it effectively alienated the learners from their environment instead of imparting greater awareness of the environment in them. In view of these concerns, this study evaluated the implementation process of the Geography Field Project (GFP) in six Zambian Secondary Schools (ZSS) in the Southern Province of Zambia. The study investigated views, beliefs, attitudes as well as feelings and challenges experienced by Grade 11 and 12 pupils taking geography. It also sought the views of teachers of geography who taught the new component of the field project, school managers and the MoESVTEE officers.*

*The study is largely qualitative. The research questions posed are: (a) What problems do teachers and pupils face in implementing geography field project in ZSS? (b) What should be the professional and academic qualifications for teachers of geography handling the geography field project in ZSS? (c) What geographical skills must a geography teacher handling a geography field project possess? (d) How equipped are the sampled ZSS in terms of implementing the geography field project?*

*The research aimed at bringing out practical challenges experienced by stakeholders in order to suggest solutions to each identified concern. The study also sought to establish how stakeholders addressed practical problems that were encountered in implementing the field project.*

*This study employed descriptive and evaluative study design approaches to get different views, beliefs, attitudes and perceptions about the implementation of the project among different respondents. Although the NZSSGC was launched in the year 2000 the study establishes that, the project component has not yet yielded satisfactory results due to a number of challenges, which include (a) inadequately trained teachers in project related courses (b) lack of appreciation of field projects by education administrators at different levels (c) unfavourable socio-economic, natural and environmental factors. (d) Inadequate resources and (e) inappropriate time for teachers to start carrying out field project works with their pupils. To alleviate some of the challenges and experiences during the implementation of the geography field project in ZSS this study recommends that the Zambian Government through its appropriate units should provide adequately trained teachers in project related courses and also remunerate teachers who handle the field project promptly. In addition, the government should centralise the marking of the project reports at national level by inviting all teachers involved at one place to minimise the delay and the missing of project reports.*

**Keywords:** *Geography, field project, Geography Field project.*

## 1. INTRODUCTION

The implementation of Geography Field Project in ZSS has been a challenge. This study was done with a view to coming up with possible solutions to assist various stakeholders address social, economic and environmental challenges in the implementation process of the field project. The main objective of incorporating the project into the NZSSGC was to address the concerns made by various

people that the teaching and learning of geography in Zambia had been too theoretical and text-book based.

It was felt, therefore, that introducing field project into the curriculum would add value to the teaching and learning of geography because it would, among other benefits, break the monotony and boredom that exist in the coverage of the geography curriculum (CDC 2000 and Ntalasha *et al* 2004). This article springs out from a study which was undertaken in 2007 in Livingstone and Monze districts of Southern Province, Zambia.

The geography field project is a new area in the senior geography curriculum whereby earlier studies may not have included it. If earlier studies included the component, it could not have been to the broader extent this study went. Further, since inception of the geography field project into Zambian geography curriculum more than six years ago, there had never been any study conducted focusing wholly on the same.

## 2. STATEMENT OF THE PROBLEM

Since inception of the geography field project into Zambian geography curriculum about six years ago, there has never been any study conducted focusing wholly on it. Habowa's (2006) study investigated only a few aspects of a geography field project, but did not go into the details which the present study went. Lack of study wholly focusing on field work has created and provided only scanty information for the key stakeholders to work with. Furthermore, there has never been an evaluation of the geography field project since its inception. This study, therefore, aims at addressing these gaps.

The purpose of the study is to address the gaps that perhaps earlier studies did not address in the study of the implementation of the geography field project. It is also for evaluation purposes because this study has not been done before in ZSS. Furthermore, the study was done with a view to coming up with possible solutions to assist stakeholders address social, economic and environmental challenges in the implementation process of the field project.

### 2.1. The Specific Objectives of the Study are:

- To establish the problems teachers and pupils face in implementing geography field project in ZSS.
- To ascertain the qualifications and experiences of teachers of geography handling geography field project in ZSS.
- To find out the extent to which geography field project stakeholders are meeting the basic conditions in the implementation of the geography field project in ZSS as stated by Tilbury and Williams (1997) and Assistant Masters in Secondary Schools (AMSS, 1958).
- To find out the availability of relevant geography field project resources in ZSS.

### 2.2. The Following Research Questions are Posed:

- What problems do teachers and pupils face in implementing geography field project in ZSS?
- What should be the professional and academic qualifications for teachers of geography handling geography field project in ZSS?
- What should be the specific geographical skills for a teacher handling a geography field project?
- How equipped are the ZSS in terms of relevant geography field project resources?

The significance of this study can not be over emphasised. In the absence of adequate and reliable studies about the implementation process of the geography field project work in ZSS, the findings of this study may provide the initial guidance to relevant authorities to address various challenges this study may bring out.

Since a detailed study of this nature in Zambian teaching methods has not been done before, it is hoped that new grounds could be provided for the beneficiaries such as the CDC, ECZ, teachers and learners. The CDC may find the findings of the study very beneficial in that they might come to learn what they needed to include or eliminate in the design of the geography curriculum and its relevant teaching methods as regards the field project. Since the ECZ plays a greater role in the marking and the grading of the project, the study may help them in designing guidelines for the marking scheme.

The ECZ would then use such guidelines during teachers' meetings/seminars in order to improve marking standards.

For the teachers of geography, the research findings may help them increase their skills and enthusiasm in teaching the field project component. Furthermore, in the absence of adequate written guidelines, teaching and learning strategies for geography field project, the findings in this study may provide guidance especially to teachers who were inadequately trained in the modern techniques of handling geography field project.

## 3. METHODOLOGY

This study employed descriptive and evaluative design approaches. Besides being descriptive and evaluative in nature, it is also quantitative and qualitative in design. It is descriptive in that it brings out subjective experiences and views of pupils, geography teachers, school managers and the MoESVTEE officials. It is evaluative in nature in that the researcher makes some critical assessment of how the basic conditions (cf Tilbury and Williams (1997) are being met in ZSS.Besides, it seeks to establish whether the project is a viable component in the geography curriculum.

This study is largely qualitative in nature, thus, the use of research questions only rather than hypotheses. The quantitative design aspect comes in due to some computations which are done to quantify some collected data.This is because certain responses and all objective responses are quantified in form of percentages and numbers. It is qualitative in design in that subjective views from respondents are recorded as they were presented and also the preference of research questions to hypotheses.

The researcher used four different research instruments; for pupils, teachers of geography, school managers and MoESVTEE officials. Semi – structured interview guidelines were order to collect primary data. Some of the questions in the research instruments used were closed while others were open ended.

The sampled population was 199 respondents. This number comprised 180 pupils. Out of this number 154 were Grade 12 pupils while 26 were Grade 11 pupils. There were supposed to be twelve teachers of geography, who were handling geography classes, but only eleven teachers managed to respond because Chikuni Girls, had only one teacher of geography handling all geography classes from Grade 8 to 12. The other group of respondents comprised six school managers, though only five took part in the study. The last group was made up of MoESVTEE geography specialist officials from CDC, ECZ, and the Southern Provincial Office (That is, Livingstone office). This brought the final target population group to 199 respondents. Grade 12 pupils were selected purposively to give detailed data of their long experience in field project since their Grade 10.

Livingstone and Monze districts were purposively selected because they have the type of schools needed for the study. The two districts are serviced by the Government of the Republic of Zambia (GRZ) (that is, Hillcrest Technical, Linda, and Monze Boarding), grant-aided (that is, St. Raphael's and Chikuni Girls) as well as private sectors (that is, Lwengu). Teachers of geography, school managers and MoESVTEE officers were used to confirm and clarify some observations that were raised by pupils.

The use of Grade 11 pupils at Chikuni Girls and Lwengu Schools to make up for the required 30 respondents from each school was appropriate in that there was not much difference in terms of work coverage by both Grade 12s and Grade 11s in these schools. The other reason is that both groups were handled by the same teacher and also that they had just started learning about the field project component, doing the same things at the same time except that Grade 12s were to submit their written reports by 1st November, 2006 according to the ECZ guidelines.

Six schools out of 36 were purposively chosen. Three secondary schools were chosen from Livingstone district and the other three from Monze district. Secondary schools in the Southern Province are Hillcrest Technical, St. Raphael's and Linda. From Monze, the schools chosen are Monze Boarding, Lwengu and Chikuni Girls. Hillcrest being the only Technical School in the district and with the highest number of degree holder teachers of geography was chosen in order to establish how field projects were being handled in such a school. St. Raphael's was chosen to represent grant-aided schools for boys. Linda, being one of the oldest co-education government schools was also

chosen. Monze Boarding was chosen for being not only a boarding school, but also a co-education government school. Lwengu which is also a co-education school was considered to represent private schools. Chikuni was chosen to represent grant-aided schools for girls. Since this is a survey, six schools from two districts are deemed adequate.

The sampling procedure was done in the following categories: Hillcrest Technical, Linda and Monze Boarding, had four Grade 12 classes each whereas St. Raphael's had two Grade 12 classes only. Chikuni Girls and Lwengu had only one Grade 12 class each with 15 and 19 pupils respectively. For Chikuni and Lwengu schools, the balance to make up for 30 respondents were sampled from Grade 11 learners.

The lottery technique was used to select the required number of pupils from each school. Each school provided two sets of class lists for each grade which had already been serialised. One of the class lists from each school was cut into small pieces and the other was not to preserve the serial numbers. For example, St. Raphael's, had two Grade 12 classes namely 12A and 12B. The class list which was cut for St.Raphael's for 12A class was given the labels 1A, 2A, 3A, 4A, up to 30 A. Those from 12B were given labels 1B, 2B, 3B, 4B, up to 30B. The researcher thereafter, put all the labelled pieces of paper in a box. Two independent pupils who were not doing geography from other senior grades were randomly picked to help in picking the 30 would-be respondents. The box was thoroughly shaken and then the two pupils took turns in picking the serial numbers from the box. After every draw, the researcher shook the box thoroughly well until 30 serial numbers had been picked. The researcher together with the pupils who helped in picking the serial numbers from the box, matched the picked numbers with the class list which had not been tampered with to align the numbers to the actual names of pupils represented by the drawn numbers. In instances where the picked number was for a pupil who was transferred or absent on that particular day, the box was again thoroughly shaken to allow the pupil who was picking the numbers to draw again. This was done successfully at all schools with the co-operation of heads of social sciences and also teachers of geography.

To ensure the suitability, validity and reliability of the drawing and the matching of the drawn serial numbers with the actual names of the pupils, teachers of geography who were handling the sampled classes were consulted to confirm the presence or absence of such pupils. Thereafter, the researcher went back to the classes involved and called out the names of randomly selected pupils. The pupils who were called out were the ones who were administered to by the researcher in a separate room.

As for teachers of geography, the heads of social sciences purposively chose those they felt could handle the given task appropriately. Two teachers were appointed from each school and one from Chikuni Girls. As for school managers, only five of them were administered to. The other three came from the MoESVTEE, geography specialists at CDC, ECZ, and a Senior Education Standards Officer (SESO) from Southern Province Provincial office. CDC are the curriculum developers in the country, while ECZ, are the recipients and custodians of the reports or scripts that constitute 12 per cent of the total marks in geography. SESO at provincial office was used because that is the office that monitors the teaching of geography in the province. Standard officers deal with the teaching standards, including the project component.

The study does not have a specific framework but the literature consulted constitute the frame upon which this work is based.

## 4. RESULTS AND DISCUSSION

This chapter combines the presentation and discussion of the findings.

### 4.1. Rating of Geography in Relation to Other Subjects in Schools

The findings show that amongst many subjects pupils took, 85 % of the total number of pupils indicated that geography was one of their favourite subjects. By implication, geography field project would successfully be carried out by pupils taking geography in ZSS. As for the 14.4 % of pupils who indicated that geography was not their favourite subject, they cited geography curriculum as still being broad-based due to human, physical and economic components. The other challenge cited by pupils is that geography was not properly taught by some teachers in that they failed to fully comprehend some topics. Archer (1972:11) states that "It should remain the teacher's responsibility to provide the stimulation of the interest, and to guide his pupils into the exciting world of exploration and discovery."

For Hillcrest Technical School, 100 per cent of pupils indicated that geography was one of their favourite subjects, perhaps suggesting that teachers of geography from the technical schools taught the subject well. As for field excursions, Lwengu and St.Raphael's had done better.

Table1: ***Rating of Geography in Relation to other subjects in schools***

| School | Geography Favourite | Geography not favourite | Totals |
|---|---|---|---|
| Lwengu | 15 | 15 | 30 |
| Hillcrest | 28 | 00 | 28 |
| Monze Boarding | 30 | 01 | 31 |
| Linda | 27 | 02 | 29 |
| St. Raphaels | 26 | 05 | 31 |
| Chikuni | 27 | 03 | 30 |
| **Totals** | **153** | **26** | **180** |
| **Percentage (%)** | **85 %** | **14.4 %** | **99.4 %** |

**Source:** ***Field data, 2006***

### 4.2. Field Excursions Undertaken By Pupils in Previous Terms

Results show that 66.7 per cent representing 120 pupils had never been taken out for any field project since their Grade 10 when they started the field project. Reasons for not taking their pupils for field work excursions included little time to do that. One teacher of geography said

> *I have been dealing with other components of geography. I have never taken pupils out for field excursions but I explain processes and procedures to them. Pupils have to go out on their own for field data collection.*

**Table2:** *Frequency of field excursions by pupils according to schools*

| School | Number of pupils taken | Number of pupils not taken | Totals |
|---|---|---|---|
| Lwengu | 21 | 09 | 30 |
| Hillcrest | 02 | 26 | 28 |
| Monze Boarding | 03 | 28 | 31 |
| Linda | 02 | 28 | 30 |
| St. Raphaels | 29 | 02 | 31 |
| Chikuni | 03 | 27 | 30 |
| **Totals** | **40** | **140** | **180** |
| **Percentages(%)** | **22.2 %** | **77.8 %** | **100 %** |

**Source:** *Field data, 2006*

Taylor (1951:398) advises that "every geographer should have a field knowledge of at least one of the natural sciences in addition to his geographical training; under our present system we have very few teachers with the training or inclination and practically none who are permitted the time to take a class into the field." He further says education has been imprisoned in the classroom resulting in a negligence of the environment.

Assistant Masters in Secondary Schools (AMSS) (1967:212) identify yet another challenge of fieldwork being perceived as time consuming. They observe that, "some Geography masters feel that they cannot conscientiously afford adequate time for fieldwork. After all, they argue, it demands much careful study and even research on their part, as well as room in a syllabus already strained to the limit." They however, advise that, "every pupil should have a minimum of one full day's fieldwork per year, although many teachers like to take junior forms only for one day a term" (Ibid: 213). The authors add that, "it should be a regular time-tabled feature, otherwise good fieldwork habits are not established" (AMSS, 1967:213). Considering the above concerns on allocating separate time for the field project work away from geography periods, it becomes a challenge for individual teachers to allocate time for it Lambert and Balderstone (2000:26) expand on AMSS (1967) that, "fieldwork cannot be taken for granted. It is often under threat because it is mistakenly considered to be unnecessary luxury which disrupts pupils' progress in other subjects whose lessons they miss when they are out of school".Problems range from economic, social-cultural, physical and environmental. Findings show that 77.8 per cent representing 140 individual pupils faced problems as

regards the carrying out of the field project. 20 per cent representing 36 pupils indicated that they had not yet experienced problems.

The 20 per cent of pupils who indicated that they did not experience problems advanced various contributing factors which include the following:

**Table3:** *Responses on whether pupils experienced problems in implementing field projects*

| Were problems experienced? | Yes | No | No response | Totals |
|---|---|---|---|---|
| **Numbers** | 140 | 36 | 4 | 180 |
| **Percentage (%)** | 77.8 | 20 | 2.2 | 100 |

**Source:** *Field Data: 2006*

- They had not been taken out for field work by their teachers,
- They had proper guidance from their teachers,
- They had enough related materials on research work which they referred to whenever they got stuck,
- They created in themselves self motivation and they had practiced enough,
- They knew the appropriate study areas to go to and also manageable topics of study, and
- They received assistance from their friends, especially former pupils who had done project report writing before.

### 4.3. The Findings Further Show that Teachers of Geography, Like Pupils, Experienced Problems.

**Table 4:** *Responses on whether geography teachers experienced problems in implementing Field Projects*

| Were problems experienced? | Number | Percentage (%) |
|---|---|---|
| **Yes** | 11 | 100 |
| **No** | 0 | 0 |
| **Totals** | 11 | 100 |

**Source:** *Field data, 2006*

The findings show that 100 per cent of teachers indicated that they had experienced problems in the implementation process of the field project. Their commonest problems in implementing the geography field project include the challenge to encourage and enable pupils respond as individuals to the field experience and also to convince their school managers about the importance of the field project in geography for them to consistently support its cause. This challenge is equally observed by Lambert and Balderstone (2000) when they state that it is difficult to encourage and enable pupils to respond individually, to the field experience. Teachers of Geography also indicated that they did not have enough time, since the field project component was not scheduled on the school time-table. The other major problem is that they observed 'sub-standard' report writing skills by pupils. Like pupils and teachers of geography, school managers also experienced their own problems in implementing the field project.

**Table5:** ***Responses on whether school managers experienced problems in implementing field projects.***

| Were problems experienced? | Number | Percentage (%) |
|---|---|---|
| **Yes** | 1 | 20 |
| **No** | 3 | 60 |
| **Blank** | 1 | 20 |
| **Totals** | 5 | 100 |

**Source:** *Field data, 2006*

The results in Table 5 show that one school manager experienced problems as compared to three school managers who indicated that they did not experience problems. The school managers who did not experience problems said that they depended on their teachers of geography who were teaching the field project component. Findings of this study retaliate what Lambert and Balderstone (2000), Archer (1972) and Long (1966) highlight on various problems encountered in the implementation

process of the geography field project in schools, though they do not classifythem as economic, social-cultural, natural and environmental.

### 4.4. The Problems Experienced by School Managers Include the Following:

- The local community prohibiting pupils to carry out some studies especially on sensitive areas like HIV/AIDS as well as prostitution,
- The local community's attitude of not easily disclosing certain information to pupils on the field project study,
- Complaints from teachers of geography that they were not paid any allowance for marking the field reports by the MoESVTEE,
- Teachers of Geography insufficient skills in teaching the field project,
- Lack of proper guidelines from the MoESVTEE on how to successfully implement the geography field projects, and

### 4.5. Problems Experienced by the Moesvtee in Implementing the Field Projects

Results in Table 6 indicate that 66.7 per cent representing two-thirds of the MoESVTEE officials experienced problems. Further the findings show that 33.3 per cent representing only one-third of the MoESVTEE officials did not experience problems. The problems experienced include:

- Results for the project reports were not sent on time as per ECZ Guide lines,
- Local communities were not giving pupils adequate information,
- Geography teachers did not have ample time to give guidance to pupils,
- Non-provision of appropriate field project resources to schools on regular basis,
- Resistance from school managers on the use of school resources such as transport for field trips on regular basis, and Frequent field visits by pupils made the local community feel bothered and therefore not accommodative at times.

**Table6:** ***Responses on whether the MoESTVEE experienced problems in Implementing the Field work***

| **Were problems experienced?** | **Number** | **Percentage (%)** |
|---|---|---|
| **Yes** | 2 | 66.7 |
| **No** | 1 | 33.3 |
| **Totals** | 3 | 100.0 |

*Source: Field data, 2006*

On comparative basis, the researcher wanted to find out how the secondary schools under study faired with regard to the problems they experienced.

**Table7:** *Number of pupils that experienced problems in carrying out Field projects according to Schools*

| **School** | **Number of Pupils who experienced problems** | **Sample no. of pupils in schools** |
|---|---|---|
| Lwengu | 16(53.3 %) | 30 |
| Hillcrest | 21(75.0 %) | 28 |
| Monze Boarding | 23(74.2 %) | 31 |
| Linda | 26(86.7 %) | 30 |
| St. Raphael's | 30(96.8 %) | 31 |
| Chikuni Girls | 24(80.0 %) | 30 |
| **TOTALS** | **140** | **180** |

***Source : Field data, 2006***

St. Raphael's secondary school comes out with the highest number where 30 pupils, representing 96.8 per cent, stated that they experienced problems. Only 3.2 per cent of pupils indicated that they did not experience problems. Linda had 26 pupils, representing 86.7 per cent indicated that they had experienced problems while Chikuni Girls had 24, giving 80.0 per cent. As for Monze boarding 23

pupils giving 74.2 per cent indicated that they had experienced problems while Hillcrest had 21 which gave 75.0 per cent. Lwengu had 16 pupils, giving 53.3 per cent who indicated that they had experienced problems. These numbers and percentages are alarming and all possible measures should be put in place if the implementation of the geography field project had to be successful in ZSS.

The findings on the problems experienced in implementing the geography field project are quite alarming, that, if not addressed appropriately and urgently, would seriously impede on the successful implementation of the field projects. The results of 77.8 per cent from pupils, 100 percent from geography teachers, 20 per cent from School Managers and 66.7 per cent from the MoESVTEE reveal that all these stakeholders experienced economic, social-cultural, natural and environmental problems in the implementation process of the geography field project in ZSS.

## 5. PROFESSIONAL QUALIFICATION OF TEACHERS TEACHING FIELD PROJECTS

On the qualification of teachers of geography handling geography field project, information gathered reveal that' a good number of teachers were in possession of Secondary Teachers' Diploma especially from Nkrumah Teachers' Secondary College (now Kwame Nkrumah University). Linda secondary school (Livingstone) was headed by diploma holders only. St Raphael's secondary school (Livingstone) had two Diploma holders and only one degree holder. Hillcrest Technical school (Livingstone) had all the teachers with at least first degree qualification(s). In Monze district the trend was not very different. Chikuni Girls was headed by a diploma holder only. The other teacher with first degree was reported to have gone out for a second degree. From Lwengu secondary school, the teachers interviewed were degree holders. Monze Boarding secondary school had both diploma and degree holders

The "traditional" understanding of educational guidelines for those who should teach at senior level in Zambian secondary schools (that is, from Grade 10 to 12) should be at least those with first degree attainment. All those with diplomas especially from Nkrumah, Copperbelt Secondary Teachers' College (COSETCO) and Chalimbana were meant to handle junior classes (that is, from Grade 8 to 9 as enshrined in the Zambian Educational National Policy, '*Educating Our Future*', MoE (1996). This however, has not been the practice in many ZSS:

> *In theory, Nkrumah and Copper-belt graduates teach in Grades 8 and 9, University graduates teach in Grades 10-12, and graduates from NRDC and Evelyn Hone in Grades 8 to 12. In practice, because of shortage of University trained graduates, especially in Mathematics, Science and English, Diploma-holders from Nkrumah and the Copper-belt colleges may be required to teach Grade 10-12 classes (MoE 1996:111).*

The researcher's findings on the professional qualification from the six schools under study as described above show that it is not only in Mathematics, Science and English where diploma holders were requested to teach at senior level, but they were also requested to teach geography. This picture obtaining in ZSS was contrary to the guidelines as provided for by the MoESVTEE (MoE 1996). It may be one of the contributing factors to a number of problems alluded to earlier that were faced by pupils. For instance, the use of the two year diploma holders to handle the higher grades which they were never prepared for. Furthermore, some of the teachers neither attended a ten-day orientation workshop conducted by Simukoko and Mweemba from the School of Education-University of Zambia (Lusaka) nor the five-day National Social Sciences workshop conducted by the MoESVTEE at River Motel in Kafue, from 11 to 15$^{th}$ December, 2005. As Habowa (2006) indicated in his study regarding the interview he had with Simukoko, who was the coordinator of the ten-day workshop, only few teachers attended. The findings confirm that none of the respondent teachers of geography attended any of the meetings. By implication, teachers started teaching the field project component without any necessary orientation from the organised workshops.

One of the items the researcher wanted to find out was the position of the MoESTVEE officials on the professional qualification of teachers handling field projects. Results show that CDC officer indicated that there was a Government policy on the professional qualification of teachers who were to handle senior classes. The policy was that one should possess a first degree qualification. On the contrary,

the SESO officer from Southern Province Education office said he was not aware of the policy but pointed out that anyone who had done any orientation in the field project would teach. He, however, preferred teachers in possession of at least first degree to those who did not have any. It is believed that at degree level, teachers did a lot on the field excursions, trips, visits and report writing. That being the case, degree holder teachers could handle geography field project component successfully. The latter is more in line with what had been obtaining in the Zambian education system, where all those in possession of diplomas were encouraged to handle junior classes though in practice it was not like that as alluded to earlier on. As for the ECZ officer, he did not take any position. The overall results indicate that the policy implementers were to some extent divided on the qualifications of who should teach at senior level, because each group had a different view creating an impression that perhaps there was no standard policy in this Zambia. However, the policy document *Educating our Future* (MoE, 1996) on the same, stipulates clearly that unless where guided, due to lack of relevant personnel only university graduates should teach Grade 10 to 12. Failure to implement this national policy is defeating and demeaning one of the fundamental basic conditions in implementing the geography field project. One of the solutions to this is the upgrading of many diploma holders to the level of first degree holders which perhaps as of now is being fulfilled by the UNZA FAST TRACK Project. The other one was to attract many school leavers to train as geography teachers at degree level by promoting the importance of geography. This may demand much sensitisation on the role and value of geography as well as teaching geography with interest.

From the discussion above concerning the qualification of teachers to handle the field project, it is very clear that it was only the Technical school(s) and the Private ones with appropriate personnel going by the Zambian Educational Policy, *Educating Our Future*, which advises that unless otherwise, University graduates should teach Grades 10 to 12 (MoE, 1996). Unless appropriate measures are applied in good time, the implementation of the projects would be difficult.

## 6. PROBLEM OF FIELD PROJECT REPORT WRITING

It was established that there were problems experienced in the project report writing. Authors like Tilbury and Williams (1997) and Archer (1972), emphasise that if the project was not handled with patience and practice, the whole exercise could turn to be a luxury, a bother and a waste of time to both teachers and pupils. Unless help was given, pupils would ever experience difficulties on how to record the findings and also to write up the project. The findings of this study established that field project was taken for luxury and a waste of time by pupils. Like Lambert and Balderstone (2000) who say that fieldwork could not be taken for granted because it was perceived as luxurious, ZSS teachers were in agreement too, for they did not take field project for luxury and a waste of time, despite various challenges they faced. During an interview, one respondent said that, *"fieldwork helps to prepare pupils for tertiary education challenges".* The other one said, *"fieldwork is a very good foundation to those who will pursue tertiary education, and also Non-Governmental Organisations (NGOs) preferred people with research knowledge"*. Apparently, negative attitudes by both teachers and pupils are cited as contributing factors to some of the problems and challenges that both groups experienced. The researcher established that even in schools which were headed by degree holders, some problems were common such as report writing and little or no exposure to field excursions.

The findings indicate that some pupils felt their teachers had not done enough to prepare them. They knew this by comparing with other pupils from other schools. The findings show that 120 (66.7 per cent) pupils had not been taken out by early 2006 for any field excursions. This became difficult for pupils to know how to collect, code and analyse data, thereby posing a challenge to the implementation process. The absence of some teachers in class is a demotivating factor to pupils. The findings support Archer (1972) who observes that one of the challenges younger pupils face is their inability to analyse the observed data. The negative attitude towards the project and also lack of special guidance from their teachers are yet other challenges faced by pupils. Pupils found it very difficult to come up with original work in their project writing. They ended up providing work which fell short of the required standards. The same findings show that 34.3 per cent representing 60 pupils indicate that they did not know how to write the project. One of the reasons stressed is that they were not taught. Few of those who indicated that they had managed to do some work on the project said

they read through other previous research findings and that they also had some guidance from former school leavers.

At Chikuni Girls, pupils bemoaned the fact that they were only exposed to one type of study activity which is agricultural in nature. This apparently has to do with their country side location. This means, one could not expect a variety of topics from pupils other than those connected to agriculture. For this reason, duplication of the same projects year in and year out was expected and experienced. This demands school authorities to assist by providing field trip logistics which could include transport to allow pupils see other geographical locations, such as mining, fishing, to name but a few as outlined in the NSSGC (CDC, 2000).

Report writing of the project, being the final part of the whole field project component of the geography curriculum, is very cardinal for the secondary school administration to provide all the necessary help so as to see pupils experience more field excursions before their final write-up.

Teachers of geography, who are in charge of the classes that are required to write the report, should provide maximum support to individual pupils. As for the local community, they should be accommodative to the pupils in spite of their busy schedules. Perhaps, pupils could be encouraged to make appointments with the local community in good time in order to alleviate this problem.

## 7. AVAILABILITY OF GEOGRAPHY FIELD PROJECT RESOURCES

The findings of this study on the availability of geography field project resources or materials in ZSS indicate that some schools had some resources but others had nothing. Those who said they had some resources which included equipment, itemised things such as the New Secondary School Geography (NSSG) text book, computers, personal pamphlets, cameras, tape recorders, magazines, encyclopedia, atlases, photocopiers, printers, compass and measuring tapes.

After checking through what was referred to as geography departmental library materials, it was discovered that each school had in stock the NSSG text book. Availability of computers in schools was also confirmed but the challenge faced by pupils was the accessibility to the computers for them to have their documents typed and printed.

From the researcher's observations and the findings, it is clear that ZSS did not have all the appropriate geography field project resources at the time of study. It was, therefore, very urgent for the MoESVTEE and other relevant authorities to equip the schools with relevant materials if the implementation of the project was to be successful. This may need involvement of donors, the local community, appropriate organisations and individuals. Depending on the NSSG text-book as the only major book may not suffice.

### 7.1. Assistance Pupils Received from Teachers of Geography:

It became clear from the findings that pupils received some assistance from their teachers, school managers and local communities as regards field project work. The following is what came out from respondents as assistance from teachers of geaography:

- Explanations on what should be done,
- Procedures on field project,
- How to write a good report,
- Accessing equipment to be used during field excursions, and
- How to become a good geographer but collecting data from targeted people.

### 7.2. Assistance Pupils Received from School Managers:

- School managers provided the following assistance to pupils:
- Provision of school materials,
- Provision of transport, and
- Provision of time to do projects.

### 7.3. Assistance Pupils Received from Local Communities

This is assistance pupils received from parents, guardians, various experts, intellectuals and

business firms:

- Solutions to problems they faced in their communities,
- Money for food and transport for field work, and
- Finding people or respondents to be interviewed.

## 8. OTHER GROUPS OF PEOPLE WHO ASSISTED PUPILS IN CARRYING OUT FIELD PROJECT WORK

This group includes friends, school leavers, and close relatives. From this group pupils received encouragement when they got stuck, and ultimately on how to write the report.

### 8.1. Experience and expertise of teachers of geography, teaching field projects:

One of the basic conditions for successful implementation of the GFP is that teachers must have the experience.The experience referred to was in terms of teachers being involved with the ECZ in examining, moderating and marking of final examinations.

The results show that 9, 1 per cent representing one teacher was a moderator and the rest 90.9 per cent representing 10 teachers were markers. The experience of the teacher in this case may lie in being utilised as examiners, moderators, and indeed as a markers where possible. The longer one remained in each of these roles, the more experienced one became. The number of years one has taught at senior secondary level could also help one to gain some experience. Results indicate that, a good number of teachers in the areas under study did not have adequate experience, especially in moderating and setting (examining) examinations at school certificate level. The other contributing factor to some of the problems encountered by geography teachers was how often they received relevant training on field projects.

**Table 8:** ***Geography teachers experience in field work related training***

| Experience/Expertise | Number | Percentage (%) | Total number of respondents |
|---|---|---|---|
| **As Examiner** | 0 | 0 | 0 |
| **As Moderator** | 1 | 9.1 | 1 |
| **As Marker** | 10 | 90.9 | 10 |

**Source:** *Field data, 2006*

Frequency of Geography teacher on field project training.

Results presented in Table 8 show that 63.6 per cent, representing seven teachers did not receive any training from the MoESVTEE and any other relevant authorities on how to teach the field project before they commenced the teaching. These teachers went into teaching the new geography component using their own initiative. This may imply teachers may not have received much of the field project skills during their teacher education training.

### 8.2. Pupil – Teacher Ratio in Teaching Geography Project:

Pupil-teacher ratio is one of the basic conditions in the successful implementation of Geography Field Project Work. Findings from teachers of geography in schools in terms of awareness of the policy on pupil-teacher ratio or not aware show that 9.1 per cent representing one teacher claimed awareness of the pupil-teacher ratio as being 15:1 which represents 15 pupils per 1 teacher. On the other hand, 72.7 per cent representing eight teachers indicated that they were not aware of such a policy in the MoESVTEE. The remaining 18.2 percent which represents two teachers did not state their position. The figure that has to do with the teachers who were not aware was quite high implying that teachers were not aware of their limitations in terms of the number of pupils each teacher was to handle. This 'loose ends', may imply that a teacher could handle as many pupils as he/she could possibly manage. The findings show that 36.4 per cent representing four teachers were in the majority and proposed 30 pupils to one teacher. This was followed by three teachers who proposed the ratio of ten pupils to one teacher. As the results show, teachers who handled the field project classes would be comfortable with a ratio of 30:1.

The aspect of unawareness was not only confined to the teachers but to the school managers, as well. Results show that 80 per cent which represents four School Managers were not aware of the pupil-teacher ratio. On the other hand, 20 per cent representing one school manager, claimed awareness of the national policy on pupil-teacher ratio. The reasons advanced by the 72.7 per cent and 80 per cent of geography teachers and school managers respectively for not being aware of the policy under discussion include the following:

- CDC had not been open to schools on the field project and the ratio inclusive,
- Schools had more pupils than teachers thereby creating a problem on maintaining a common ratio,
- ZSS had different capacities in terms of number of pupils as well as teachers,
- Change to incorporate the field project occurred without real assessment of its effects, and
- Project was new in the curriculum.

The situation of having so many key stakeholders who are not fully aware of what should govern them as regards pupil-teacher ratio posed a serious concern to the successful implementation of the field project. For instance, at the time of the research, one teacher was handling 135 pupils in the field projects where as another was handling 82. The least was handling 17 pupils. By ratio these were: 135:1, 82:1, and 17:1. Lambert and Balderstone (2000:29) commenting on the teacher ratio of 1:20, in terms of supervision, in some UK schools, as a law, asks, "Is this feasible?" If it cannot be feasible for this UK ratio, can it be feasible for a Zambian teacher who has 135 pupils to supervise in field projects? Because pupils submit their project reports at the end of their Grade 12, the MoESVTEE may assume all is well as regards the implementation of the field project work, yet not. The researcher further found out from MoESVTEE officials what their position was on the ratio. Responses from them show different figures:

Each one - third, (that is, 1 (33.3%) of the total respondents had a different answer. The CDC official who said 'Yes' gave the ratio of 40:1, implying 40 pupils were to be handled by one teacher. This response was in accordance with the normal class load according to the NEP, Educating our Future, MoE (1996). This assumption, as much as it is in accordance with the class load policy does not address the aspect of the field project. In some of the Zambian Schools, the enrollment was more than 40. The CDC official went further to propose that the appropriate ratio would be 35:1. One of the suggestions from the SESO was a maximum of two classes per teacher. What was not stated by all MoESVTEE officials was the number of pupils in those two proposed classes. The reason advanced for the officer who said 'No' was that plans were under way to come up with a uniform and standard ratio.

The above results clearly demonstrate that there is no clear information from the MoESTVEE on the pupil-teacher ratio policy. If it was there, the information was not shared among key stakeholders, thus, different responses on the same question. Like geography teachers, school managers in the same schools had their own views. Four school managers out of five, representing 80 per cent indicated that there was no policy on the pupil-teacher ratio. However, one, representing 20 per cent left the item unanswered. The seriousness of the matter is where even the MoESVTEE officials who are the formulators and policy implementers had different opinions on the same ratio.

Indications from the findings suggest that teachers of geography would like to have a policy on the pupil-teacher ratio as their proposed ideal ratios showed. The uncertainty about the pupil-teacher ratio by the geography field project stakeholders as discussed above posed a threat to the implementation process of the project in the Zambian schools. It does not satisfy one of the conditions of a successful geography fieldwork experience as advised by Tilbury and Williams (1997) and AMSS (1958 , 1967).

The other compounding factor besides schools being understaffed and having different capacities, was the existence of Open learning classes in schools. There seemed to be more pupils in schools. There were regular pupils who reported to school in the morning and those for Open Learning who reported to school in the afternoon. Most of the teachers who were involved in the morning session were also utilised in the afternoon. In addition, some of those teachers also handled the evening General Certificate Education (GCE) classes. In such situations, one teacher has too many pupils to attend to which in the long run may breed inefficiency, sub-standard and less concentration on each pupil's individual work. At the end of the pupils' reports, they would not submit the standard work as

expected because in the first place guidance at individual pupil level was not sufficient and this was in agreement with (Archer 1972) and research findings.

On the issue concerning adequate time allocation of field project on the school time-table as advised by Tilbury and Williams (1997), it is evident that time allocation for the field project is limited in ZSS. Pupils and teachers in all schools indicated that there was no time allocated to the projet on the master time - table. There was nothing on the school master time-tables to specify when pupils and their teachers were to go out on geographical excursions and other experiences. It all depended upon the teacher's discretion to use part of the already existing three or four Geography periods per week depending on the school. Both groups of teachers and pupils said that, it had become difficult to create extra time for the field project. All teachers interviewed used their already strained geography class periods to carry out the project. Some claimed that they used one, yet others used two periods per week respectively. This, however, was being done at the expense of other geography components. One teacher respondent said that, "*I meet them only three times in a term. After covering much work on other geography components, I will go back to fieldwork".*

Some recommendation by Tilbury and Williams (1997:195) is that, "fieldwork should always be integrated with classroom activities. It must be integrated with the scheme of work, with the key questions for investigation in the field emerging from previous tasks…and direct subsequent work". The Zambian Education system has not been providing enough time to the geography field projects. What may further result from this experience is little or no attention to pupil individual needs. One pupil respondent commenting on problems encountered said, *"my teacher should explain what we are expected to do".* The other pupil said, *"teacher should talk to us individually"*. There is need to consider giving adequate time to fieldwork in Schools. As for Lwengu teachers ended up carrying out part of their project activities during weekends because they could not fix that within the given geography period**.** The school may have been finding it easier to meet pupils during the week – end because Lwengu is a boarding school. It was observed that the project was quite costly in terms of production in that pupils met all the costs in the production of the final field project report. Besides, the monetary aspect, pupils showed that geography encroached into other subjects and extra curricular activities.

Consultations with the MoESVTEE officials on the inadequacy of time for the project work received diverse responses. CDC and the SESO officers said there would be no need for separate periods from the already existing three or four geography periods per week. The advice they gave was that teachers were supposed to start their project works in Grade 10. This was in accordance with the stipulated regulations by the ECZ. In terms of time allocation for Grades 10s and 11s, the ECZ recommends that:

> *A minimum of three periods of teaching per term, at least one excursion (This translates into a minimum of 9 periods of teaching field project and at least 3 excursions per year (ECZ 2003:8).*

The argument was that Grade 10 was meant to lay a foundation only. Grade 10 time allocation would be used to familiarise pupils to what was required (a preparatory stage). Grade 11 was meant to expose pupils to the field experiences and some initial writing of the project. Grade 12 would be for proposals and the approving of topics and the area of study. This should be accompanied by writing of the project. The observation from schools is that some of them did not begin their project work in either Grade 10 or Grade 11, but in Grade 12. This, later, put pressure on both the teachers and on pupils thereby, leading to poor write-up exercise for pupils. If the project was given the rightful time and attitude by both groups (that is, teachers and pupils), there would be less pressure especially on pupils.

Due to the delay in carrying out the project at the appropriate time, some candidates fail to submit their final written reports in good time. This delay affects the whole process of marking and submitting the final grades to ECZ. The ECZ officer observed this and confirmed that, at times they had to follow up some schools for either the submission of the results; some sampled written reports or missing results. There is need perhaps to centralise the marking of the projects in order to improve the implementation process.

## 9. CONCLUSIONS

This study shows that majority of pupils consider geography as one of their favorite subjects which makes it easier for the successful implementation of the geography field project in ZSS especially in Technical secondary Schools. Teachers of geography, however, do not adequately equip their pupils in terms of fieldwork excursions to prepare them for a write up of the project report at the end of their Grade 12.

Private schools expose their pupils to more fieldwork excursions as compared to any other school, yet there is little or total departure from some of the basic conditions to a successful implementation of the geography field project as outlined and observed by Tilbury and Williams (1997) and AMSS (1958;1967).

This study has also shown that geography pupils, teachers of geaography, school managers, MoESVTEE experience practical economic, social-cultural, natural and environmental problems during the implementation of the field project in ZSS and also that the ZSS are not fully stocked with the relevant literature on geography field project to facilitate the successful implementation of the field projects.

This study has further shown that the MoESVTEE did not equip teachers and school managers with the necessary skills, tools and equipment at the commencement of the geography field project component.

The study continues to show that geography field project component should be compulsory and not optional due to the various advantages it offers and that the majority of the teachers handling the geography field project in the schools surveyed were not trained for the task at all.

It is hoped that this study has provided reliable information on which practitioners could base their planning for the implementation of the geography field project in ZSS. In this regard, the following aspects are recommended:

## 10. RECOMMENDATIONS

| | **Recommendation** | **Responsible** |
|---|---|---|
| **1** | Re-training of Geography Teachers in carrying out geography field work | **1.** MoESVTEE : Hopefully FAST TRACK Project would take care of this need. |
| **2** | Centralisation of field project marking at national level | **2.** The MoESVTEE through the ECZ should at national level select a central place where all teachers involved should meet and mark the projects. |
| **3** | Need for group geography field project work by some pupils | **3.** Geography teachers should encourage some of their pupils to do group project studies involving data collection, processing and interpretation, but write individually when it comes to the final reports |
| **4** | Need to Time-Table geography field work project periods on the Master Time - Table. | **4**. Individual schools should fix such separate periods on the school master time-table, so that all teachers will be duty bound |
| **5** | Pupil-teacher ratio | **5.** The MoESTVEE to standardise the ratio |

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## REFERENCE

[1] Curriculum Development Centre (C.D.C) (2000). *Zambian High School Education: Geography High School Syllabus*, Curriculum Development Centre: Lusaka.

[2] Ntalasha, S.L.,Mweene, C.B., Silumesi, P., Phiri, N., Solami, K.G., Manda, H.P., Shabukali, D., Simukoko, R., and Phiri, C., (2004). *A High School Geography Text-Book of Zambia and the Sub-Region*, Ndola: Times Printpark (z) Limited.

[3] Habowa, G.M.,(2006). "Evaluation of the implementation of the New Zambian High School Geography Syllabus in Rural High Schools: The case of Mkushi District". Un published. Dissertation. UNZA, Zambia.

[4] Taylor, G., (ed), (1951). *Geography in the 20th Century*, London: Methuen.

[5] Assistant Masters in Secondary Schools (AMSS), (1958). *The Teaching of Geography in Secondary Schools*, London: Cambridge University Press.

[6] Lambert, D., and Balderstone, D., (2000). *Learning to teach geography in the Secondary School: A Companion to School experience*, London and New York: Routledge Falmer.

[7] Archer, E.J., (1972). *Projects in geography for the secondary school*, London: B.T. Batsford LTD.

[8] Long, M., (1964). *Handbook for Geography Teachers*, London: Methuen Educational Ltd.

[9] Ministry of Education (MoE), (1996). *Educating our future: National Policy on Education*, Lusaka: Zambia Educational Publishing House.

[10] Tilbury, D and Williams, M., (eds)(1997). *Teaching and Learning Geography*, London and New York: Routledge.

[11] Examinations Council of Zambia (ECZ), (2003). Geography Field Project Teacher's Guide. Lusaka.