

**EFFECTIVENESS OF UNZA TRAINED DEGREE HOLDER GEOGRAPHY
TEACHERS IN EXECUTING THE FIELD PROJECT IN ZAMBIAN HIGH
SCHOOLS OF LUSAKA AND KAFUE DISTRICTS.**

By

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**A Dissertation Submitted to the University of Zambia in Partial Fulfillment of the
Requirements for the Degree of Master of Education in y Education**

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Declaration

I, Matilda KanyampaNakazwe, do hereby solemnly declare that this dissertation for the Master of Education in Geography Education is a product of my own field research work and that it has never been submitted to any other institution for the purpose of obtaining the same degree qualification.

Signed:

Date:

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Certificate of Approval

The University of Zambia approves this dissertation of MATILDA KANYAMPA NAKAZWE as fulfilling part of the requirements for the award of the Degree of Master of Education in Geography Education.

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Dedication

This dissertation is dedicated in precious memory to my dear sister

EdahMulengaNakazwe. Sis, Your belief in me has paid off and I greatly wish you were here to celebrate this work with me. Anyway, may you continue resting in eternal peace.

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ACRONOMYS

AIDS- Acquired Immune Deficiency Syndrome

AMSS -Assistant Masters in Secondary Schools

COSETCO- Copperbelt Secondary Teachers Training College

C.D.C –Curriculum Development Centre

ECZ- Examination Council of Zambia.

HIV- Human Immunodeficiency Virus

MoE- Ministry of Education

NRDC- Natural Resources Development College.

SPSS- Statistical Package for Social Sciences

TAAS- Texas Assessment of Academic Skills.

UNESCO- United Nations Educational, Scientific and Cultural Organization

UNZA- The University of Zambia.

Abstract

It has always been assumed that a person of higher qualification executes duties better than one with a lower qualification. The truth of this assumption remains a matter of debate.

The training of geography teachers in teaching field project was first done at the University of Zambia under the Department of Language and Social Science education (LSSE). The course was introduced at UNZA in collaboration with the needs of the Ministry of Education and Curriculum Development Centre.

According to a study conducted by Mundende (2007), one of the challenges faced in the then newly introduced geography field project was that a number of geography teachers teaching it were not trained to offer it. However, the study did not differentiate the work done by trained degree holder geography teachers and the untrained diploma holder geography teachers in their execution of the field project. The study merely pointed out that some teachers weren't trained in field project but did not mention as to whether those trained in fieldwork were better at executing the field project or not.

With the above background, the purpose of this study was to evaluate the effectiveness of degree holder geography teachers trained in field project in high schools of Lusaka and Kafue districts. The study investigated views, beliefs and challenges experienced by trained geography degree holder teachers, untrained diploma holder geography teachers and grade twelve geography pupils. It also sought the views of the lecturers training students in field project.

The study was largely qualitative and descriptive, and the use of research questions unlike the use of hypotheses was employed. The research questions posed were: (a) what is expected of degree holder geography teachers trained to teach the field project? (b) How are geography degree holder teachers trained to implement field project in high schools? (c) What are pupils' views on the effectiveness of degree holder geography teachers trained in field project?

The research aimed at establishing whether degree holder geography teachers trained in field project were fully equipped to enhance the smooth teaching of the field project in Zambian high schools or not. The study also aimed at establishing whether the initial training of student geography teachers in field project had any gaps or not. This was in order to equip relevant stakeholders with necessary solutions to each of these aims.

The specific objectives of this study were: (a) to find out what was expected of degree holder geography teachers regarding the field project. (b) To evaluate actual fieldwork activities undertaken by degree holder geography teachers trained in field project at high school. (c) Evaluate pupils' views on the effectiveness of degree holder teachers trained in field project in handling the field project.

Amongst the main findings were that the majority (58.1 percent) of the geography degree holder teachers trained in fieldwork did not take pupils for field experiences. The majority of the degree holder teachers also introduced their pupils to fieldwork in grades 11 and 12 and not the required grade 10. Degree holder teachers did not accompany their pupils for data collection all the times.

Lack of administrative support was the biggest reason why most teachers did not manage to execute fieldwork effectively. The majority (51.6 percent) of the degree holder teachers also

considered the training offered in fieldwork at the University of Zambia to have been inadequate because the period for the training was too short.

The problems encountered in fieldwork by pupils taught by trained degree holder teachers and those taught by teachers not trained in fieldwork (diploma holder teachers) slightly differ in certain instances while some of their experiences are similar.

It is recommended that in order to offer adequate training in field work, the University of Zambia should offer the field work course in two semesters. This will enable geography student teachers to have adequate time for field work experiences. The Ministry of Education should also embark on training school administrators so that they can better understand the significance of fieldwork in the geography curriculum so that they can help geography teachers execute the field project better.

CHAPTER 1

BACKGROUND TO THE STUDY

1.1 Introduction

Geography fieldwork mainly involves learners learning from practical experience. This entails that instead of pupils learning about soils or hills from text books, they learn from the actual hills or soils outside their classroom.

Ntalasha et al (2004) define a geography field project as the study of a significant topic or a problem in the field where the learner is actively involved in the collection of information, processing and the final analysis of the information before preparing a report. Ntalasha et al (2004:219) continue to state that, “any field project work can be done in the field or near the school or in some areas that are easily accessible.”

Fieldwork is a method of planned discovery, where the teacher prepares situations from which his/her pupils learn facts and ideas for themselves. Pupils only find out what their teacher already know and this can be done anywhere, in any kind of landscape, or townscape, and does not necessarily have to involve long journeys, or large amounts of time to make it worthwhile, (Chileshe,(personal communication).

Everson (1973) identifies two approaches to the planning of field work activities. The traditional approach also known as field teaching and the field research approach. The traditional approach involves the teacher in directing learners’ observations towards specific elements in a landscape at the expense of everything else. A mini lecture is delivered from which learners are expected to take notes. Little exists for learners input and reaction. On the positive side, this approach

involves careful observation and description of an environment and in suggesting possible explanations based upon previously acquired information. The field research approach also involves three elements namely: observation, description and explanation but it adopts a problem solving focus. It utilizes techniques that are similar to those used by geographers involved in scientific explanation.

Bland et al, (1996) classify styles and strategies in field work into three broad categories or approaches to fieldwork. The three approaches to field work includes: observational, investigative and enquiry based approaches. The observational method has the type of activity that involves eye balling cooks, tour talk and look guided tour field teaching.

Although Everson (1973) calls it field teaching approach and Bland et al, (1996) classify it as observational approach they all mean the same approach and it is characterized with passive transmission, observation oriented, information based and teacher centeredness. This approach can especially be used by a teacher to enhance a particular topic or an issue that was discussed in class.

The second approach identified by Bland et al, is the investigative approach which involves field study, field testing, investigating, process studies and model testing type of activity. This approach to fieldwork is characterized with active exploring, qualitative and quantitative measurement oriented, teacher led but pupil centered methodology, participatory and activity based research. This type of approach to fieldwork is equally similar to Everson's field research approach because they both adopt a scientific method of data collection and explanation.

The third approach to fieldwork explained by Bland et al, (1996) is the enquiry based, whose type of activity includes field discovery, hypothesis testing and problem solving. It is characterized

with interactive evaluation, pupil centeredness, interpretative, scientific and humanistic methods, outcome oriented and fully participatory discovery method. The enquiry based approach is similar to field research which is also a problem solving based approach which equally utilizes scientific method of enquiry.

According to Lambert and Balderstone (2000) pupils highly value fieldwork as it gives them the privilege to move out of the classroom, this allows them to work collaboratively on tasks that last for several hours. Fieldwork is learner centered as pupils are actively involved in the learning experience. The purpose of fieldwork is to engage pupils in learning directly, in the manner similar to experiential learning which is very motivating. Fieldwork, according to Ntalasha et al (2004) generates interest in pupils bringing about their awareness of resources and problems of the local area, and as such brings reality in the study of geography. Fieldwork further equips pupils with opportunities to acquire data collection and report writing skills. Furthermore, it turns keen geography teachers into seasoned professionals and provides them with opportunities to write local geography textbooks.

Long and Roberson (1966:128) explain that Geographies are written records of original field investigations. If there is any virtue in the study of the subject (of Geography), part of this is lost if the children do not themselves carry out some of its fundamental processes. Much if not most raw material of Geography is the surface of the land.

Although Zambia had inherited the British school curriculum at independence, the country did not embrace the much emphasized field project in the geography curriculum until the year 2000. As Lambert and Balderstone (2000) state, fieldwork is one of the distinctive attributes of geography and has a long tradition as an established component of geography education in Britain.

The Zambian Ministry of Education through the Curriculum Development Center launched the geography field project in 2000. Field project was specifically introduced in Zambian high school geography curriculum in order to move geography teaching from being too theoretical or textbook based to being practical and interesting. It felt that the addition of field project would help break the monotony and boredom that existed in the geography curriculum and thus add satisfaction to the teaching and learning of geography. (C.D.C 2000 and Ntalasha et al 2004)

While a sufficient number of geography teachers are trained at the University of Zambia and other institutions of higher learning, it is only the effectiveness of teachers in the classroom which will deliver the objectives of the education system. Quality education produces good learning outcomes and initial training and preparation of teachers contribute to this aim.

The objectives of introducing field project in Zambian High Schools can only be achieved if field project is carried out effectively by both the pupils and teachers. Therefore, it is imperative that the teachers of geography, who are core in the teaching and learning process, be trained effectively to enhance execution of field project.

High school teachers are expected to have a minimum qualification of a first degree. Hence, graduate geography teachers from the University of Zambia are supposed to teach geography inclusive of field project at high school level. According to the policy document Educating our Future, diploma holder teachers trained in teacher training colleges are supposed to teach grades 8 and 9 while graduate teachers trained from Universities are supposed to teach grade 10 to 12. Since field project work is supposed to be undertaken by pupils from grade 10 to 12, it is therefore the responsibility of graduate teachers to teach this component. However, due to the

shortage of graduate teachers, diploma holder teachers also find themselves teaching field project.

All the students training to be geography teachers at the University of Zambia are imparted with the skill of teaching and executing field project. Geography field project is supposed to be teacher led at all stages beginning with; problem identification, formulation of objectives, development of research instruments, data collection as well as data analysis, presentation of findings and finally report writing.

According to Barcelona Field Centre (2010), effective field work should:

- Be well planned, interesting, and cost-effective and represent an effective use of the available time.
- Target specific syllabus and topic outcomes to make it relevant.
- Provide opportunities for learners to develop a range of cognitive (application, analysis, synthesis, evaluation) and manipulative skills (drawing, measuring)
- Be integrated with the subject matter to ensure that learners take full advantage of enhanced understanding that is achieved through direct observation, data collection/ recording and inquiry learning.
- Be supported by pre and post excursion classroom activities that establish the context for learning and provide the necessary follow up and reinforcement.

Therefore, it is imperative that a geography teacher trained in fieldwork be aware of the above elements that make fieldwork execution effective and efficient.

1.2 Statement of the problem

From the time field project was introduced in Zambian high schools about eight years ago, it has continued to face challenges. A study by Mundende (2007) points out that most teachers who were conducting field project were not trained to teach this component. Mundende (2007) continues to explain that this undermined successful implementation of field project. In some instances, field project was not undertaken with the use of proper guidelines. Pupils engaged themselves in buying and using field projects that were done by other people. Without evaluation of work done by degree holders in this component of geography, Mundende's (2007) study on the above noted that challenges cannot be wholly concluded and the solutions might not be forthcoming. In order to be conclusive on the matter, there is need to investigate how degree holder geography teachers can be effective or ineffective in handling field project, hence the contexts for this present study.

1.3 Purpose of the study

The purpose of the study was to establish the performance of degree holder geography teachers who were trained to teach and execute the new geography component field project.

1.4 Objectives of the study

The objectives of the study were to:

- (a) Find out what was expected of degree holder geography teachers regarding field project.
- (b) Evaluate the actual fieldwork activities undertaken by degree holder geography teachers trained in field project.
- (c) Evaluate pupils' views on the effectiveness of degree holder teachers trained in field project
- (d) Find out if there was a difference in the way field project was executed by degree holder and diploma holder geography teachers.

1.5 General Research Question

The general research question was:

- (a) What is the performance of degree holder geography teachers trained to teach and execute field project?

1.6 Research Questions

The following research questions were posed:

- (1) What is expected of degree holder geography teachers trained to teach field project?
- (2) How effective are the activities geography degree teachers trained in field project undertake in teaching and implementing the component in high schools?
- (3) What are the pupils' views on the effectiveness of degree holder geography teachers trained in field project in handling the component?
- (4) Is there any difference in the way field project is executed by degree holder and diploma holder geography teachers.

1.7 Significance of the study

The geography field project has continued to face challenges which if not addressed pupils might lose interest in the subject which might have negative impact on the geography curriculum. This study is significant because it will establish the effectiveness of graduate teachers in executing field project. The findings of the study may help the teachers improve on the teaching of field project, which in turn will benefit the pupils. The study may also look at the challenges faced by geography teachers while learning to teach this component, therefore the findings in this study may provide guidance to the institutions offering training in field project.

The research findings may also be of substantial help to Curriculum Development as well as the Ministry of Education, in that, the challenges by graduate teachers are imposed by

the way curriculum or syllabus is planned. This study might therefore help geography planners to register appropriate contents in the curriculum or syllabus.

1.8 Limitations of the study

The research intended to interview school managers but it was not possible because some were too busy and most were incapable of evaluating geography teachers in field project due to lack of adequate knowledge in field project. Most HoDs could not participate too because some of them were not geographers and as such had little knowledge in field project; the researcher ended up not interviewing HoDs but treated those HoDs who were present as geography teacher respondents depending on their qualification. The researcher did not manage to retrieve some questionnaires from six pupils and 3 teachers. The study was restricted to only degree holder geography teachers in government high schools in two districts in the same province thus, the findings may not give a clear picture of effectiveness of degree holders in private schools. However, the samples selected to larger extent represent the type of teachers and high schools found in Zambia.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Many geographers, at a global level (especially from the developed countries) are engaged in researching and writing on the teaching and execution of fieldwork. However, very few geographers are engaged in researching and writing on the teaching and execution of fieldwork in Zambian High Schools. Generally, there are various ways in which fieldwork ought to be taught and executed in Zambian high schools, for it is not any different with what the literature provided by geographers worldwide entail. This chapter endeavors to look at the teaching and execution of fieldwork under four broad areas :(a) rationale for the inclusion of fieldwork in the geography syllabus, (b) teacher qualification and expectations of education system, (c) phases in the process of conducting fieldwork project, (d) problems and constraints faced in teaching and executing field project.

2.2 Rationale for inclusion of field work in the geography syllabus

There are many educational justifications for doing fieldwork. Different authors' have written on the importance of field work in geography.

According to Job et al, (1999) Fieldwork provides an opportunity for students to develop their sensitivity to and appreciation of a wide range of different environments (Fieldwork can therefore help to develop a respect for the environment and facilitate experiential learning (Hall, et al, 2002). Enabling students to visit environments that they might not otherwise visit provides an important means of facilitating social inclusion. Job,) asserts that, some fieldwork strategies also place a strong emphasis on affective learning, such as those which are designed to

develop a sense of wonder about an environment. The concept of 'awe and wonder' is about "feelings, impressions and experiences, about 'being' in a landscape and feeling a part of it" (Ross 2001, 86). Such approaches may encourage students to explore their emotional responses to environments and help them to develop a sense of place (Job, et al, 1999)

Affective learning also entails an appreciation of values and as such through fieldwork students are enabled with a chance to develop their understanding of different perspectives on social, political or ecological issues. Students can clarify and justify their own values whilst learning to acknowledge and respect other people's values. Fieldwork may also allow students to see the wider social and ecological effects of environmental changes, thereby contributing to education for sustainable development. (Job et al, 1999),

According to Hall et al (2002) fieldwork has the potential to contribute widely to students' personal and social development. Fieldwork can facilitate more relaxed social contact between students and their peers and between students and staff. Students are able to learn how to take responsibility for their own learning while getting the opportunity to experience 'real' research and visit places they would not normally experience. Job et al (1999) explains that students can learn the importance of taking personal responsibility for their learning whilst the challenges provided by fieldwork can help to build their confidence and resilience. Hall et al (2002) further explains that fieldwork can also help to break down barriers between students and their peers and between students and staff. The opportunity to develop soft skills, such as leadership, teamwork and communication skills, further contributes to students' personal and social development.

According to Long and Roberson (1966), training in fieldwork offers children a deeper understanding of their cultural heritage and opportunity to obtain later richer experiences during their leisure time. Namafe (1986:23) explains that, “fieldwork in local issues can provide active learning experiences for pupils who may be given the opportunity to experience and record the feelings held by others for the environment”.According to Ntalasha et al (2004) field research approach attempts to provide answers or solutions to problems encountered in the local area. This approach to field work corrects misconceptions by providing up to date information on a situation, and also helps to improve conceptual understanding.

Long and Roberson (1966) further explain that, the main argument for inclusion of fieldwork in the school syllabus is that, it is nowadays an integral part of the subject. Much if not most of the raw material of geography is the surfaces of the land. Geographies are actually written records of field investigations.

Fieldwork supports the geography curriculum by promoting geographical knowledge and understanding. It helps to bridge the divide between the classroom and the real world and as such helps to reinforce students’ understanding of geographical terminology and processes (Job et al, 1999).They further explain that,fieldwork enables students to examine the way the theories and the practical experiences of a particular discipline interact. It provides opportunities for observation and participation which are not ordinarily available in class work.

Smith (1987:209) in the context of the aim of fieldwork in both geography education and environmental education concludes that, “field based outdoor activity, either residential or not is a critically important approach to learning.” Specifically he identifies the value of fieldwork in

terms of three broad categories of experience outdoor studies, outdoor pursuits, personal and social development.

Smith (1999) demonstrates the view from many teachers that fieldwork pushes young people towards higher order cognitive skills. On the basis of school inspection in the United Kingdom, Smith (1987) suggests that students benefit through cognitive development, physical challenge and personal development. More recently, Ofsted inspection has suggested a strong link between high achievement in geography in schools and a high profile for fieldwork in the curriculum. Smith (1997)

UNESCO (1965:39) observes that, “field or outdoor work is now considered an essential part of any geography course”. Fieldwork as a direct observation method, has a value of showing pupils how to accurately observe various facts, thus makes them critical of sweeping generalization such as may sometimes be found in certain text books. UNESCO (1965) emphasize that, no teacher of geography can afford to dispense with the fieldwork technique, because geographical information collected by direct observation is fundamental to the subject.

As UNESCO (1965) has clearly pointed out that fieldwork is supposed to be fundamental to the teaching and learning of geography, it does not make sense to teach pupils in a class about hills when the schools location is right on the hills. Pupils can observe the hills directly instead of using a text book.

The value of the field research approach in geography lies in its emphasis on problem solving. Fieldwork in this case helps to solve society’s social, economic and political problems. Solutions found through geography field projects thus enhance the development of society and the world. As such the significance of fieldwork in geography cannot be overlooked.

Fieldwork gives students the opportunity to experience “real” research that promotes the development of a wide range of different skills, many of which are transferable (Hall et al, 2002, 214). These include enquiry skills such as observational skills, data collection, data analysis, map work and investigative skills. Students may have the opportunity to practice and apply technical skills, including ICT skills (Job, et al, 1999). According to Nowick (1999), teachers have also praised geography fieldwork for its contribution to the teaching of other key skills, including communication and numerical skills. By appealing to different learning styles fieldwork can also enable students to become better all round learners.

Fieldwork’s focus on the real world, in which a real life example can be compared with idealized examples in textbooks, can help to develop a respect for the environment and facilitate ‘experiential learning’. Despite the fact that some of these educational objectives can be achieved through other means of teaching, they argue that ‘it is the combination of them that makes fieldwork a potentially effective method of learning’ (Hall, et al 2002, 214).

Fieldwork is frequently valued for its ability to fulfil such a wide range of roles, many of which link to the wider curriculum. Crucially, it’s fieldwork’s ability to combine different educational objectives that makes it a potentially effective method of learning (Hall et al 2002). However, there are other reasons why fieldwork is valued. For example, fieldwork may be valued for its ability to raise the profile of geography within a school. For others, fieldwork is simply integral to the discipline’s ethos, culture and pedagogy (Holmes and Walker 2006). Sauer’s (1956, p. 296) assertion that: “the principal training of the geographer should come, wherever possible, by doing fieldwork” is a true reflection of the significant role that fieldwork plays in the geography curriculum.

2.3 Teacher qualification and expectation of the education system

The quality and effectiveness of an education system depends heavily on the quality of its teachers. They are the key persons in determining success in meeting the systems goals. The education and personal wellbeing of children in schools hinges crucially on their competence, commitment and resourcefulness.

Teacher characteristics such as certification, years of education, content knowledge, and years of teaching experience have been investigated to determine their effect on student outcomes (Sanders and Rivers, 1996; Wright, Horn et al., 1997).

In a study of the Tennessee Assessment System, William Sanders (1998: 27) found that the “single largest factor affecting academic growth of populations of students is differences in effectiveness of individual classroom teachers”.

According to a study in mathematics done by Celester and Fuller (2004) the major findings indicate that compared to students with untrained non-certified teachers, the students with trained certified teachers, on average, performed better on the 1999 Texas Assessment of Academic Skills (TAAS) math assessment. TAAS is a criterion-referenced test mandated by the state to be taken by all students in grades three through eight and grade ten.

According to the policy document *Educating Our Future*, diploma holder teachers trained in teacher training colleges are supposed to teach grades 8 and 9 while graduate teachers trained at the University of Zambia are supposed to teach grades 10 to 12 (MoE, 1996). Although this is what the policy document stipulates, the document continues to explain that:

In theory, Nkrumah and Copper-belt (COSECTO) graduates teach grades 8 and 9, University graduates teach in grades 10 to 12, and graduates from N.R.D.C and Evelyn Hone grades 8 to 12. In practice, because of the 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 grades 10 to 12 classes. (MoE, 1996, 111).

According to Mundende's (2007) study, it is not only in Mathematics, sciences and English where diploma holder teachers are requested to teach at senior level, but they are also requested to teach in Geography. The picture being portrayed in high schools is contrary to the guidelines provided by the Ministry of Education in the policy document educating our Future.

Since fieldwork is supposed to be undertaken by pupils in grades 12, it is the responsibility of graduate teachers to teach this component. Although teacher training in fieldwork is offered at the University of Zambia, the shortage of teachers has led to college trained teachers having to teach fieldwork without training.

It is argued that teachers trained at teacher training colleges cannot teach at high school level because they have been handicapped in their accomplishment of mission by the inability to bring the quality of their output to the level they would have desired. The Education Policy document Focus on Learning (1992) highlighted the following quality related problems in the colleges:

- Overloaded and inappropriate curriculum
- Promotion of rigid teacher centered methodology.
- An excessively demanding examination system.
- Staff with inadequate or unsuitable educational and professional qualification and,
- Shortage of educational resources of all kinds.

The quality of teaching affects the participation and performance of pupils. On the one hand, unprepared lessons and monotonous teaching methods which lack pupil activities are likely to discourage pupils from attending lessons and from participating actively, yet, on the other hand, the use of a variety of teaching methods and teaching aids and well planned lessons would inspire pupils and encourage them to participate more actively.

The rationale for inclusion of field project in the high school syllabus is rendered useless if the teaching of field project does not achieve its aims. Pupils are capable of writing field project reports that are done by other people, especially if they do not get the help they need from the teachers and the community.

2.4 Phases in the process of conducting field work and teacher competency

Fieldwork teaching and execution process involves several stages these include pre- fieldwork phase (before fieldwork), fieldwork phase (during fieldwork), and post- fieldwork phase (after fieldwork).

2.4.1 Pre- fieldwork phase

This phase as the name suggest entails fieldwork preparations before actual fieldwork execution and this involves work done in the classroom. This phase involves determination of purpose of the fieldwork and also an outline of the activities to be undertaken by the learners. It should also involve search for primary information, for instance, elementary materials such as: books, articles, maps, and photographs for background information. Formulation of hypothesis, data collection instruments and necessary skills needed in the field are discussed in class before actual fieldwork execution,(Fien et al, 1984).

UNESCO (1965:50), further explains on Taylors (1951) observation that, “the teacher must be absolutely clear as to what he wants to do and as to the use of the exercise.” This means that the teacher must set his or her objectives right at school before undertaking any fieldwork. This can be done by conducting a prior visit to the study area.

According to Lambert and Balderstone (2000), the geography teacher in teaching and executing fieldwork usually has to apply high level geographical skill of interpretation, even before starting to address the question of how to arrange activities so that young and inexperienced geographers can learn to do the same. Geography teachers need to begin with a personal heightening of awareness, sharpening of perceptions and critical analysis before they can reasonably hope to support pupils attempting to do the same.

According to Bailey (1974) a teacher of geography needs to be aware of the age and maturity of the pupils, the cost, means of transport, size of the school, the willingness of the head teacher and fellow teachers to cooperate and the attitude of the parents. He further explains that the geography teacher should ensure that the trip is not so long as to exhaust himself/herself and the pupils nor should much be attempted, he/she should prepare clear instructions and explanations for the class to make observation by the pupils easier and acquisition of permission from the owner of the premises to be visited is a necessity.

Different education authorities have different special pre- requisites which have to be met before fieldwork can be approved. Fien et al (1984) however provide 1 principles as follows:

- Fieldwork should be directly relevant to the course being studied so that it makes a worthwhile contribution to the learners.
- Fieldwork needs to be integrated into specific units of work.

- The effect of fieldwork upon the school routine and the remainder of the staff must be considered.
- The precise study area should be selected and a reconnaissance carried out.
- Statement of objectives and planned learning experiences, the teacher should consult the school manager to make formal application for approval to do the fieldwork.

In the pre-fieldwork phase communication at all levels is very important. Commenting on organizing fieldwork away from home, Lambert and Balderstone, (2000) advise that the purpose of the trip, a reply slip where the parent or guardian gives consent should be communicated. They further advise that the mode of transport, the time of going and returning, the cost, and any special equipment should be communicated. All the planning of fieldwork execution should be done in accordance with the school policy regarding school journeys.

According to Long(1964) there should also be a provision of a detailed set of administrative instructions about clothing, food, equipment, passport requirements, foreign exchange journey times and the meeting points. He further says, communication with various parties especially those who will play a part in the field execution is very important.

From the administrative point of view, Gospill (1966) that before venturing into fieldwork execution, the teacher needs to sort out issues pertaining to insurance, travelling as well as catering.

According to Foskett in (1997:195-6) “The field work location and task must be pre visit and tested to assess the practical aspects of the task, safety, and organizational arrangements activities.” The individual fieldwork task itself fits into a broader organizational framework. He considers the importance of communicating with the school manager and the head of department.

All financial and logistics of fieldwork execution must be planned in the context of a full budget analysis.

Ntalasha et al (2004) refers to this phase as the planning stage which involves the teacher initiating a class discussion with the pupils so as to find a suitable study topic. He continues to explain that, formulation of purpose of fieldwork with every pupil participating should be done after selection of study topic. The teacher also needs to carry out a prior visit to the fieldwork site in order to have sufficient knowledge before actual field execution. Lastly, data collection instruments should be developed.

2.4.2 Fieldwork phase

This is the phase when the actual fieldwork execution is done. According to Fine, et al (1984) it involves the collection and recording of information obtained through direct observation of phenomena, patterns and processes in the field. Observation skills can be developed through use of searching question by the teacher. Planning for fieldwork involve activities aimed towards a holistic view as well as detailed study of specific elements.

During fieldwork execution, the leader who is the teacher must be in mind what features pupils should look for and the duration of this fieldwork. This should have been done during the preparations in the pre-fieldwork phase during the reconnaissance visit. AMSS (1967) Long and Roberson,(1966) consider the teacher to be the pupils' mentor and guide rather than their instructor.

Ntalasha et al (2004) consider this phase as the planning work in the field, and this is where the teacher should ensure that all pupils have a task to undertake once in the field. In order to

maximize learning big groups should be divided into smaller groups. Pupils should have data collecting instruments as well as note books for recording their data.

2.4.3 Post fieldwork phase

Ntalasha et al (2004), consider this stage as the planning work in class stage. This phase involves processing the data by reporting and tallying them, co and summarizing them and presenting them in a form that is easily understandable such as tables, graphs, diagrams, modes and means. The data is further interpreted and analyzed and conclusions drawn. After all the above is done, there is need to write the report which is a documentary proof that fieldwork was carried out.

On returning to school after fieldwork execution, the leader in this case the teacher and the pupils together should in a constructive manner emphasize the findings during their fieldwork. This may include maps and diagrams and photographs taken. Gospill (1966) is in agreement with Long (1964).

According to Fien et al (1984), ideas, techniques and ications used in the field are evaluated. To clarify aspects of the fieldwork which are unfamiliar or unclear, further searching and reading maybe necessary.

Ntalasha et al (2004) could have written the stages in a better way. They have written the first stage as the planning stage, which involves discussions done in class and has also considered the third stage as work in class. Both these stages involve work being done in the class and so to reduce ambiguity: It would have been better to consider it as work before field work, and the third stage as work after the fieldwork. It is inappropriate to call the first one as planning stage when all the stages consider elements of planning. All the work that has been considered as part

of the planning stage is actually done in class before fieldwork execution. Even the last phase involves planning on how the report will be written.

2.5 Problems and constraints faced in teaching and executing field work

There are many problems and challenges faced in teaching and executing field project. The constraints will be discussed separately under: (a) Developed World, (b) Zambian context

2.5.1 Fieldwork constraints in Developed World

Fien et al (1984), observes that fieldwork constraints are associated with organizational factors such as: the difficulty of supervising a large group of learners and providing assistance they may need, the lessons missed by the teachers when conducting the fieldwork, lessons missed by the students and alterations which have to be made to the school timetable.

Long and Roberson (1966) observe that, the geography teacher in addition to considerable organizational work has to persuade the head and that the work is justified.

The organization of fieldwork takes up a lot of time. According to Gospill, (1966) to get the maximum educational return, much time, trouble and expense is involved.

AMSS (1967) observes that fieldwork is considered as time consuming, some geography masters feel that they cannot conscientiously afford adequate time for fieldwork. This is because it demands much careful study and even research on their part as well as room in a syllabus already strained to the limit.

According to Lambert and Balderstone (2000), geography teachers find it a challenging demand to introduce pupils to fieldwork as it is not quite the same as planning and organizing classroom learning. They further advise that introducing pupils to fieldwork is better done in teams and the

geography teacher should be knowledgeable. UNESCO (1965) advises that what is required is for the teacher to convince his pupils about the purpose and meaning involved in their fieldwork.

One of the challenges faced in fieldwork in Britain is that it is expensive and not always fully understood by colleagues and senior management. Fieldwork is always under threat because it is mistakenly considered to be an unnecessary luxury which disrupts pupils progress in other subjects missed when learners have gone for fieldwork execution. (Lambert and Balderstone, 2000). They further explain that it is difficult to encourage and enable pupils respond individually, to the field experience.

Foskett (1997:200) stated that “fieldwork in the geography curriculum has been under external threat during the decade as issues of safety, cost and internal managerial and curriculum pressures in school militate against it.” However, on the same page he advises that, “with effective planning and management and commitment to the educational and personal benefits to the of fieldwork, geography teachers can ensure that it remains as one of the most significant learning experiences that pupils have during their school career.”

2.5.2 Fieldwork constraints inZambian context

In the Zambian context, according to Mundende’s (2007) study in the Southern province, pupils and teachers indicated that there were no fixed time factors to the project exercise. Fieldwork experiences and executions are not separately time-tabled from the three or four geography periods per week. Both the teachers and pupils explained that it had become difficult to create extra time for fieldwork.

In the case of rural high schools of Mkushi district, Habowa (2006) explains that fieldwork was also challenged by the lack of adequate time to teach the field project due to few periods being allocated to geography on the time table, that is, four (4) periods per week.

Mundende's (2007) study points out that most teachers in the Zambian high schools have actually resorted to using the same time allocated for the subject to teach field project.

The two studies thus, concluded that the Zambian Education system was not providing enough time to the geography field projects. Archer (1972) recommends that from the normal time-table periods allocated to the geography lessons one double period should be allocated to be utilized for topic discussion. In the case of British schools, Archer further observes that, the most appropriate period for each topic is the six to seven week period before or after half term.

According to Habowa (2006), the biggest challenge faced by the teachers of rural high schools was that of inadequate administrative support for instance 33.3 percent of the teacher respondents cited non-payment of lunch allowance and they also expressed their dissatisfaction with non-payment of marking allowance for the projects, which they likened to other practical subjects such as Home economics and Industrial arts where teachers who marked these subjects were paid.

In the case rural high schools in Mkushi district, Habowa's (2006) study explains that teachers were also challenged by the lack of equipment to enable them undertake serious fieldwork. Some of the equipment cited, include soil augurs, measuring tapes, compass and chemicals for testing soil samples.

Mundende's (2007) study equally indicates that Zambian High schools did not have enough appropriate geography field project resources.

Although Habowa's (2006) and Mundende's(2007) studies explain that field project is challenged by the lack of equipment and lack of appropriate resources respectively they have not listed what they consider to be appropriate equipment or field project resources.

According to Mundende's (2007) study,in Zambian high schools, some school managers experienced problems such as: local community prohibiting pupils to carry out so studies especially on HIV/AIDS and prostitution, local communities attitude of not easily accommodating the pupils on the field project, complaints by geography teachers that they were not paid any allowance for marking the field project reports by Ministry of Education, Geography teachers insufficient skills in teaching the field project, and lack of full knowledge by the local community on the importance of the field projects.

Although Mundende's (2007)study points out that on the qualification of geography teachers to handle field project, only technical and private schools had appropriate personnel as per the Zambian Educational Policy, Educating Our Future which advises that unless or otherwise, University graduates should teach grades 10 to12(MoE, 1996). His study points out that most teachers were not qualified to teach field project. He did not conclude to explain as to whether the schools with appropriate personnel were experiencing fewer problems in teaching and executing field project. His study did not explain as to whether the managers of schools without appropriate personnel were challenged by the teacher's insufficient skills in teaching the field project or even the managers with appropriate personnel had the same challenge.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the following: (a) study design, (b) research instruments, (c) target population, (d) sample and sampling procedure, and (e) data processing and administration of research instruments. Each component is discussed separately below.

3.2 Study Design

The study was a survey which employed both quantitative (evaluative) and qualitative (descriptive) design approaches. The study was mainly qualitative as the use of research questions was employed unlike the use of hypotheses. The quantitative research design was also employed because some of the data collected needed to be quantified or analyzed using the Statistical Package for Social Sciences. (SPSS).

A survey was preferred by the researcher. According to Cohen et al (2004), surveys gather data at a particular point with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events.

Surveys generate numerical data, provide descriptive, statistical and explanatory information which can be used to make generalizations about the findings. They also gather standardized information.

3.3 Target Population

The study targeted degree holder geography teachers who had been trained to teach field project, Grade twelve (12) geography pupils taught by both degree holder geography teachers and

diploma holder geography teachers, University of Zambia lecturers offering training in field project(teaching and execution), school managers and Heads of Departments.

The study used Lusaka and Kafue because of easy accessibility to primary data in different libraries and also because the institution (University of Zambia) in charge of training degree holder geography students is in Lusaka. The two districts were purposively selected because they had appropriate schools needed for the study and also because the financial resources available could not accommodate very far places.

3.4 Sample and Sampling Procedure

Eleven (11) high schools were purposively chosen out of 25 high schools. Three (3) high schools were chosen from the five (5) government high schools in Kafue district and the other eight (8) high schools were selected from the twenty (20) government high schools in Lusaka district.

The high and secondary schools selected from Kafue district were Naboye, Kafue day and Kafue boys. From Lusaka district, the high schools selected were Munali girls, Munali boys, Kabulonga girls, and Kabulonga boys, David Kaunda Technical, Libala, Kamwala and Lusaka G.R.Z.

The researcher was only interested in evaluating degree holders' effectiveness in field project execution in Government schools owing to the fact that such schools have the largest number of pupils. The other reason was that the government schools are easily accessed by the middle and poor class who are the majority in the two districts.

girls and Munali girls were selected to represent girls high schools, while Munali boys, Kabulonga boys, and Kafue boys' high schools were selected to represent boys high schools. David Kaunda technical, Naboye, Kafue day, Libala, Kamwala and Lusaka GRZ high school selected to represent co-

education schools which are the majority in the two districts. Since this was a survey, eleven (11) high schools from two districts were deemed adequate.

The sampling exercise was done in the following manner:

Thirty-one (31) geography degree holder teachers trained in field project were selected, and considering the number of geography teachers needed for the study; the researcher targeted all the geography teachers available at each school. The number of diploma holder geography teacher respondents was twenty-five (25), owing to the small number of diploma holders in high schools as well, the researcher targeted all those available at each school.

In selecting the pupil respondents, twelve (12) pupils were selected from each school. Two (2) grade 12 geography classes were selected from each school of which six (6) pupils were selected from each class. Only classes whose geography teacher had participated in the study were selected and this was done using random sampling method. For schools that had grade twelve geography classes taught by degree and diploma holder teachers, six (6) pupils were selected from a class taught by a degree holder and another six (6) from a class taught by a diploma holder teacher. Twelve (12) pupils from each school were deemed adequate for the study by the researcher considering the available resources at the time of data collection.

In order to collect the required number of pupils from each class, the researcher assigned numbers to pupils in the entire class. To come up with the six (6) respondents from each class, the researcher decided to use all the pupils that had picked numbers at 5th interval. That is, the pupils who picked numbers 5, 10, 15, 20, 25, and 30. The technique was ideal especially that no

geography class at the time of data collection had pupils less than 30 in a class. The pupils selected were then called out in a separate room to be administered with questionnaires.

With the help of the Heads of social sciences Department, the degree holder geography teachers trained in field project and the diploma holder teachers were selected for the study. The teachers selected were those active in teaching field project. A total number of thirty-one (31) degree holder teachers and twenty-five (25) diploma holder teachers participated in this study.

No school manager participated in the study as some were too busy and most were incapable of evaluating geography teachers in field project due to lack of adequate knowledge in field project. Most HoDs could not participate too because some of them were not geographers and as such had little knowledge in field project; the researcher ended up not interviewing HoDs but treated those HoDs who were geographers as geography teacher respondents depending on their qualification. Geography section heads were treated as geography teachers according to their qualification. University of Zambia lecturers were purposively sampled from the department of Language and Social Sciences Education where courses in geography methods are offered. The selection depended on the qualification and experience of the respondent in lecturing the geography teaching methods which includes fieldwork.

A semi-structured questionnaire was administered to pupils as well as teachers. The types of questions used were closed questions and open ended. Subjective questions were used to gather information displaying the cognitive and affective skills. The sample of the research instrument being referred to is in Appendix 3. In order to enhance the data collected using questionnaires, the study employed a focus group discussion with the twelve (12) pupils and teachers from each school. The pupils' questionnaires were collected after an average of (one) 1 hour. The

researcher administered the questionnaire, in order to avoid teacher intimidation and improve clarity. Six (6) questionnaires were not recovered from Kafue boy's high school. The table below shows the pupil respondents according to gender qualification of the geography teacher taking them in field project

Table 1: Gender of pupils according to their teachers' qualification

	Pupils taught by				Total	
	Diploma holder		Degree holder			
Gender Male	25	19.8%	33	26.2%	58	46%
Female	22	17.5%	46	36.5%	68	54%
Total	47	37.3%	79	62.7%	126	100%

Another semi-structured questionnaire was administered to degree and diploma holders, an interview schedule for lecturers. (See appendix 1, 4, and 3 respectively).

3.5 Research Instruments

The study used four different research instruments as reflected in Appendices 1-4. A semi structured questionnaire (check Appendix 1) was administered to the geography degree holder teachers; another semi structured questionnaire (check Appendix 2) was administered to the geography grade 12 pupils. An interview schedule shown in Appendix 3 was administered to the University of Zambia Geography methods lecturers and lastly a semi structured questionnaire (check appendix 4) was administered to teachers not trained in field project (diploma holders).

3.6 DATA COLLECTION

Data was collected using both primary and secondary sources of information. Questionnaires were administered to grade 12 geography pupils and to the quality of data collected, a focus group discussion was conducted with twelve(12) pupils from each school, the discussion was tape recorded. In cases where pupils were learning field project at the time the researcher was in the field, data was collected using lesson observation entries in form of descriptions of observed activities and comments from the observer based on what was expected.

3.7 DATA PROCESSING

Data was analyzed qualitatively under different themes. The information that was collected from the University of Zambia lecturers on the skills and knowledge that a teacher trained to teach and execute field project should have, was compared to what the geography teachers trained in field project were doing in Zambian high schools in the 2 districts. The information from the lecturers was also enhanced by guidelines provided in various literatures written by various geography scholars. Questionnaire derived data was quantified using Statistical Package for Social Sciences. (SPSS). The descriptive data was then presented in frequencies and percentages. The data collected was later on presented in form of tables, charts and graphs.

CHAPTER 4

PRESENTATION OF FINDINGS

4.1 Introduction

The chapter presents the findings on the effectiveness of degree holder geography teachers in executing the field project in *Zambian high schools of Lusaka and Kafue districts*. The respondents to this study included geography methods lecturers, grade twelve (12) geography pupils and both degree and diploma holder geography teachers. The findings were obtained from compiled data obtained from the field using questionnaires, interview schedules and focus group discussions.

In analyzing the effectiveness of degree holder geography teachers' execution in field project, the study first sought the information from university of Zambia lectures trained in teaching fieldwork. The lecturer respondents were three (3) of whom two (2) were male and one (1) female. One aspect of field project the researcher wanted to find out was the requirements that a geography teacher should have for him/ her to be eligible to take children for fieldwork

execution. These requirements will be presented under five different headings being; teacher requirements before fieldwork, during fieldwork, after fieldwork and general requirements. Lastly, the challenges faced by lecturers when training teachers for fieldwork project will be analyzed.

4.2 Teacher requirements before fieldwork experience according to lecturers' response

The findings of this study indicate that for a geography teacher to take pupils for field work execution, it is important that they are trained. According to the 3 lecturer respondents, it is imperative that a geography teacher is trained in fieldwork execution before teaching and executing it in high schools.

In looking at the requirements for teachers before fieldwork, the study also found out that teachers are expected to have knowledge and skills in problem identification, literature review, data collection, data analysis and report writing. The knowledge and skills in geographical phenomena and concepts is also cardinal in fieldwork execution.

The study further established from the lecturers' response that before fieldwork, it is also imperative that the teacher is aware of the following:

- a. Potential fieldwork sites
- b. Fieldwork financial costs and means of transport.
- c. School administrative procedures
- d. Safety measures for the pupils.
- e. Age and maturity of pupils.

f. Parental concerns and pupils allergies.

The study also found out that the geography teacher should also ensure that before fieldwork a prior visit or reconnaissance trip to the supposed research site is undertaken so that he /she is fully knowledgeable of what pupils will need to find out. Geography teachers are trained to take care of the above requirements before going in the field with the pupils.

4.3 Geography teacher's requirements during fieldwork execution.

In the case of geography teacher's requirements during the fieldwork experience, the study established from the response of the lecturers that teachers are trained in acquisition of knowledge and skills in data collection. The teacher needs to train pupils in observing the intended geographical phenomena or concept by asking learners searching questions during fieldwork experience. According to the response by one of the lecturers, ask questions can be done by the use of worksheets, maps and diagrams or questionnaires or interview guides.

During data collection in the field, the teacher is expected to train pupils to record data accurately. Recording of data can be done in form of n taking, taking pictures, tape recording, and sketch drawing. The teacher needs to guide pupils in order to achieve best learning outcomes.

The teacher needs to provide safety regulations for pupils in the field one lecturer respondent advised that the teacher needs to ensure that a fully stocked first aid box is available.

Another respondent said, "Pupils should be divided into smaller groups in order to enhance understanding and security."

4.4 Geography teacher's requirements after fieldwork execution

The study established from the lecturers' responses that teachers need to devise a fieldwork report writing style for the pupils. This means that a geography teacher should be knowledgeable in report writing skills. Some other responses that came out include:

- a. Teacher having a thorough post fieldwork class discussion with the pupils.
- b. Briefing the school administration.
- c. Making an evaluation of the trip in terms of information gained and social values.

4.5 General requirements

The responses from lecturers enabled the researcher to establish general requirements which include:

- a. Geography pupils are required to go for at least three(3) field trips before writing their final field report for examination.
- b. A teacher should be a guide throughout the field project.
- c. A teacher should be a guide for pupils before, during and after fieldwork at all times even though the research being done is meant for examination purposes.
- d. A teacher should be well informed with the stipulation of the examination council of Zambia regarding fieldwork.

4.6 Challenges faced by lecturers when training teachers in fieldwork.

One of the challenges faced in fieldwork teaching is the lack of administrative support. The administration takes too long or sometimes fails to fund and provide transport for students going for trips. Trips are sometimes done in a hurry making it difficult for students to comprehend sufficient information.

The section in the department offering geography methods was challenged by inadequate staff, which led to one lecturer handling big classes making field experiences difficult to undertake.

Another challenge, according to one respondent was the lack of communication between the Ministry of Education and University of Zambia.

One of the lecturer respondents also indicated that the course meant for training geography teachers in field project needed to be revised because, there was need to include certain topics in order to enhance its effectiveness. The course was usually taught in a hurry due to lack of time with few or none field experiences. The course was taught in just a semester and as such this made fieldwork execution difficult, as a result, no meaningful projects were written within the minimal time available. In order for course to be undertaken by students in a better way, it was suggested by one of the respondents that the course should run for two semesters.

4.7 Geography Teachers Execution of Fieldwork in Zambian High Schools of Lusaka and Kafue District

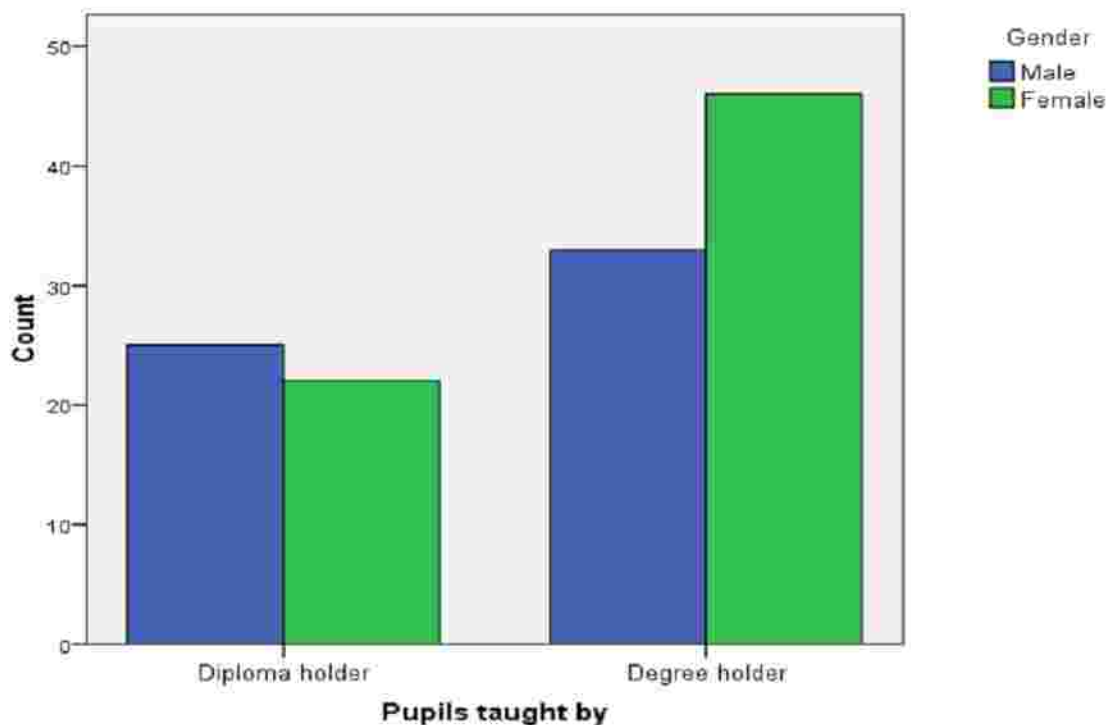
This section presents the information on the activities that were undertaken by geography teachers in fieldwork execution in the high schools of Lusaka and Kafue district. The section includes responses that were collected from the degree holder teachers and diploma holder teachers. The section also presents the findings that were collected from both pupils taught by degree holder and diploma holder teachers.

4.7.1 Gender of pupil and teacher respondents

In trying to find out the effectiveness of geography degree holders in executing fieldwork, the views of geography pupils were regarded as important considering that they were the recipient of

this knowledge. Information on the gender of pupil respondents was significant in this study because in research there is need to establish the number of females and males involved. Figure 1 shows a bar graph representation of male and female pupils in accordance with their teachers' qualification in the study.

Fig 1 Gender of geography pupils according to their teachers qualification



Source: Field data (2010)

Out of the 126 pupils in this study 68 representing 54 percent of the pupil respondents were females of whom 22 representing 17.46 percent were taught by diploma holder geography teachers and 46 representing 36.51 percent being in geography classes taught by degree holder teachers trained in execution of field project. The total number of male respondents who participated in this study was 58 representing 46 percent of whom 25 representing 19.84 percent were taught by diploma holder geography teachers and 33 representing 26.19 percent pupils were

taught by degree holder geography teachers trained in field project. The difference in the number of males and females does not have an effect on the results obtained because the respondents were selected using random sampling which is unbiased each member of the class had an equal chance of being selected. The total number of pupils both females and males taught by diploma holder geography teachers was 47 representing 37.30 percent while the total number of pupils taught by degree holder geography pupils was 79 representing 62.70 percent of the 126 pupil respondents.

The study also wanted to find out the gender of the teacher respondents. The gender of teacher respondents is divided into two groups being degree holder trained in field project and diploma holders not trained in field project and these are shown in table 2 and 3 below respectively.

Table 2: Gender of degree holder teachers

Response	Frequency	Percent
Male	12	38.7
Female	19	61.3
Total	31	100.0

Source: Field Data

The total number of degree holder geography teachers that participated in the research was 31 of whom 38.7 percent representing 12 were male and 61.3 percent representing 19 were female.

Table 3: Gender of Diploma holder teachers

Response	Frequency	Percent
Male	6	24.0
Female	19	76.0
Total	25	100.0

Source: Field Data (2010)

The total number of diploma holder teachers that participated in the study was 25 of which 6 were male representing 24 percent while the females that participated were 19 representing 76 percent of the diploma holders.

The total number of geography teachers (both degree and diploma holders) that participated in the study out of the 185 total number of respondents in this study was 56 of which 38 were females and 18 were male.

4.7.2 Teacher general requirements in fieldwork

This section presents data on the general fieldwork requirements that geography teachers are expected to possess. Knowledge of general fieldwork requirements is cardinal to the successful fieldwork execution.

It is a general requirement that pupils should be taken for field investigation before writing their final field reports. It was thus, imperative that the study finds out from pupils if they are taken for fieldwork experience before submitting their final fieldwork report for examination. The results obtained are shown in table 4.

Table 4: TAKEN OUT FOR FIELD WORK INVESTIGATIONS BEFORE SUBMISSION OF FINAL REPORT.

		Takenout for field excursion		Total
		Yes	No	
Pupils taught By :-	Diploma holder	20 (42.6%)	27 (57.4%)	47
	Degree holder	33 (41.8%)	46 (58.2%)	79
Total		53	73	126

Source: Field Data (2010)

As the results are shown in table 4, out of the 126 pupils who participated in the study only 53 pupils were taken out for fieldwork investigations. This involved 20 pupils (42.6%) taught by diploma holder teachers and 33 pupils (41.8%) taught by degree holder teacher. In the same study out 126 pupils who participated in the study only 73 pupils had never gone for field investigation with the teachers. This involved 27 pupils (57.4%) were taught by diploma holder teachers and 46 (58.2%) by degree holder teachers.

Table 4: Number of times pupils had been taken for field investigations.

		Number of times been out				Total
		Once	Twice	Thrice	None	
Pupils taught by	Diploma holder	15 (32%)	5 (10.6%)	0	27 (57.4%)	47
	Degree holder	23 (29.1%)	4 (5.1%)	6 (7.6%)	46 (58.2%)	79
Total		38	9	6	73	126

Source: Field Data (2010)

In table 4, out of the 33 pupils who were taught by degree holders trained in field project who accepted having had gone for field investigation only 6 pupils (7.6 %) had gone for field experience at least 3 times which is the required number of times according to the lecturer respondents. 23 pupils (29.1 %) had only been taken out once and 4 pupils (5.1 %) had only been out twice.

For the pupils taught by diploma holders, out of the 20 that accepted having had gone for field investigation, no pupil registered to have had gone for field execution three times. 5 pupils (10.6%) had gone twice and 15 pupils (32 %) had only been taken out once.

In order to find out as to whether pupils are taken for field investigation before submitting their final reports as per requirement, the study also wanted to find out this aspect from the degree

holder teachers as well as the diploma holders. The tables 6 and 7 show the response obtained from degree holders and diploma holders respectively.

Table 5: Number of times degree holder teachers took their pupils for field investigations

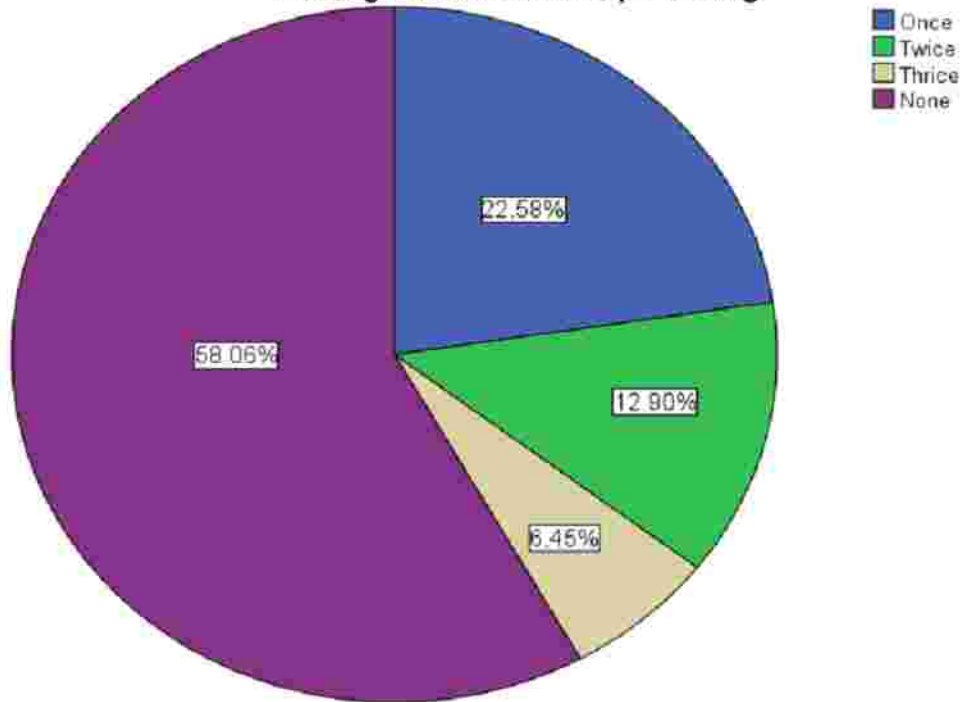
Response	Frequency	Percent
Once	7	22.6
Twice	4	12.9
Thrice	2	6.5
None	18	58.1
Total	31	100.0

Source: Field Data (2010)

In table 6 representing degree holders response, Out of the 31 degree holder geography teachers that participated in the study only 7 representing 22.6 percent teachers had indicated that they had taken their pupils for field experience once, while 4 representing 12.9 percent indicated having carried out field investigations, 2 representing 6.5 percent indicated having had taken their pupils for field experience thrice and finally a total of 18 representing 58.1 percent teachers representing more than half of the degree holder teachers in this study indicated that they had never taken their pupils for fieldwork experience.

The number of times pupils went for field excursions before writing their final report has been illustrated in form of a pie chart as shown in figure 2 below.

Fig. 2 Number of times degree holder teachers took their pupils for field investigation before final report writing



Source: Field Data (2010)

The study also established the number of times that diploma holder teachers took their pupils for field investigation. The information that was obtained is shown in table 7 below.

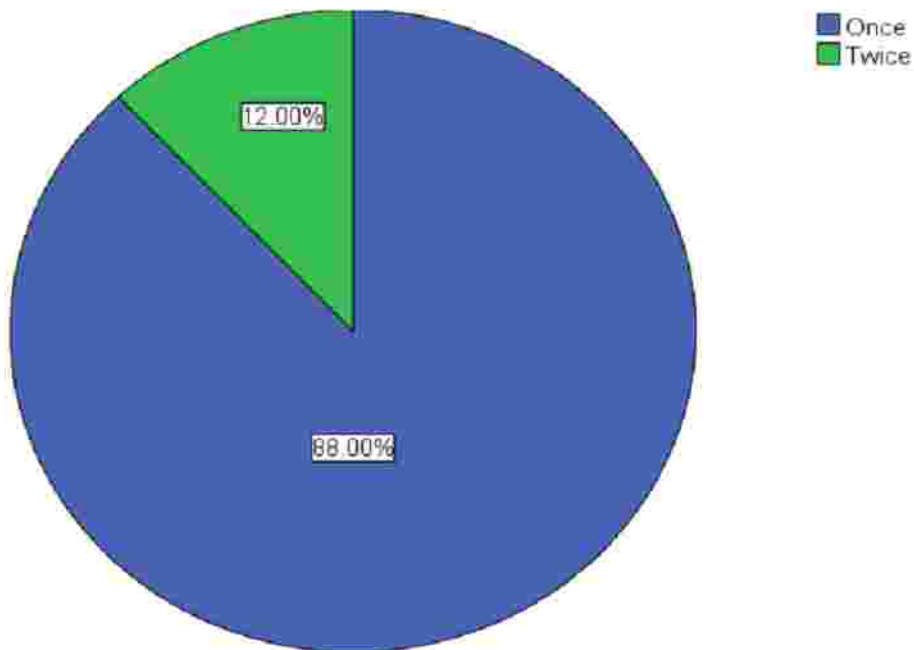
Table 6: Number of times diploma holder teachers took their pupils for field investigations

Response	Frequency	Percent	Valid Percent
Once	22	88.0	88.0
Twice	3	12.0	12.0
Total	25	100.0	100.0

Source: Field Data (2010)

Out of the 25 diploma holders who were selected, 22 representing 88 percent indicated having had taken their pupils for field excursions once while 3 indicated having had taken their pupils twice. The results indicate that all the diploma holder teachers had at least taken their pupils for field experience. This information is also represented in pie chart in figure 3 below.

Fig. 3 Number of times diploma holder teachers took their pupils for field investigation before final report writing



Source: Field Data (2010)

Results of the comparison between teachers response and pupils response reveal that 14 degree holder trained teachers indicated having had taken their pupils for fieldwork outside school, while 33 out of 79 pupils taught by trained geography indicated having had gone for fieldwork, total of 46 pupils indicated that they had never been out for fieldwork and these are represented by the 18 trained teachers that had never taken their pupils out.

The results also show that although all the 25 diploma holder teachers indicated having taken their pupils out for fieldwork, only 20 pupils out of the 47 confirmed to that while a total of 27 pupils indicated that they had never gone out for fieldwork experience.

The study also wanted to establish from pupils taught by degree holder teachers how they managed to write field reports without having been taken for fieldwork experience. A number of responses came out; 25 pupils said they used the help of school leavers and geography teachers' guidelines. 10 pupils attributed the success of their field reports to their individual efforts. Some other responses that came out include:

- a) "I wrote the report with the help of friends".
- b) "I managed through self investigation which was very difficult such that my brothers had to help me finish writing the report."
- c) "I have not even written my field project, because I do not have any idea, although I am interested to write".
- d) Another wrote "I got help from geography text books."

According to the lecturer respondents, pupils are supposed to be introduced to fieldwork in grade 10 so that they are exposed to field experiences before writing their final fieldwork reports in grade 12. It is for this reason that the study wanted to find out from geography pupils in which grade they were introduced to fieldwork and also find out from the teachers in which grade they introduced their pupils to fieldwork. Table 8 shows the response from geography pupils.

Table 7: Grade in which pupils were introduced to field project according to pupils' response.

		Grade introduced to field project			Total
		Grade 10	Grade 11	Grade 12	
Pupils taught by:-	Diploma holder	0	6(12.8%)	41(87.2%)	47
	Degree holder	4(5.06%)	5(6.33%)	70(88.6%)	79
Total		4	11	111	126

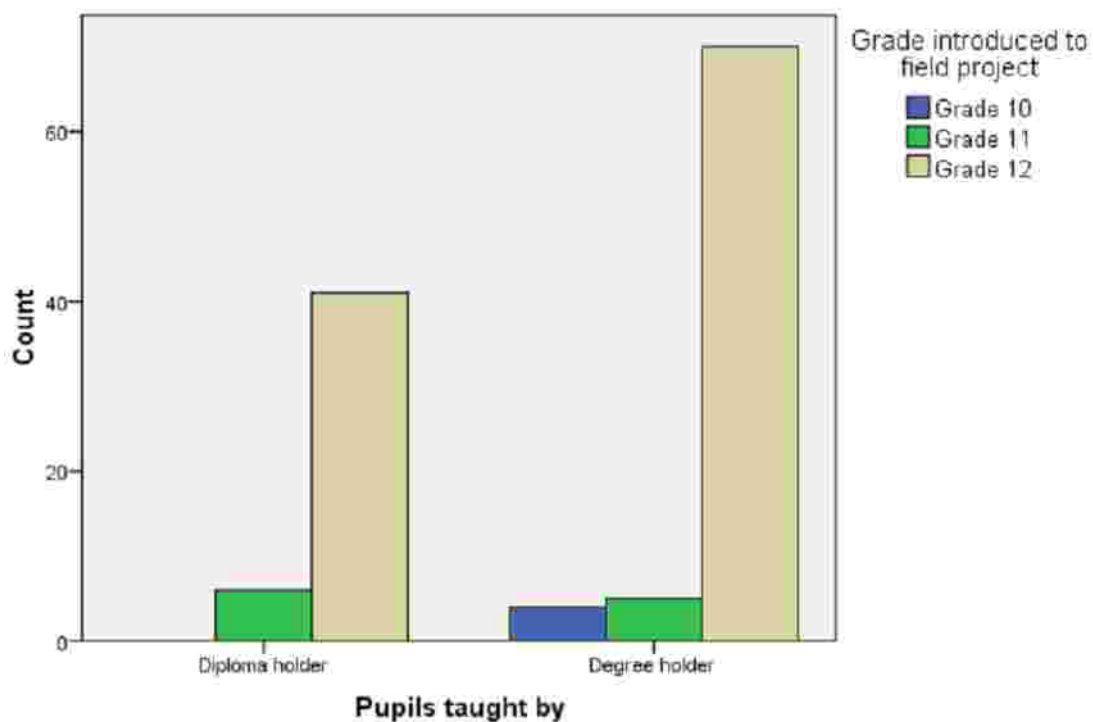
Source: Field Data (2010)

From the results obtained in table 8, out of the 79 pupils taught by trained degree holder teachers, 4(5.01%) were introduced to field project in grade 10, 5(6.33%) in grade 11 and 70(88.6%) in grade 12 respectively.

For the pupils taught by diploma holder teachers, Out of the total 47, no pupil was introduced to fieldwork in grade 10, 6(12.8%) were introduced in grade 11 and 41(87.2%) pupils were introduced to fieldwork in grade 12.

Figure 4 shows the grade in which pupils were introduced to fieldwork according to pupils' response in form of a bar graph.

Fig 4: Grade in which pupils were introduced to field work according to pupils response



Source: Field Data (2010)

The grade in which degree holder teachers introduced their pupils to fieldwork is shown in table 9 below.

Table 8: Grade in which degree holder teachers introduced their pupils to fieldwork

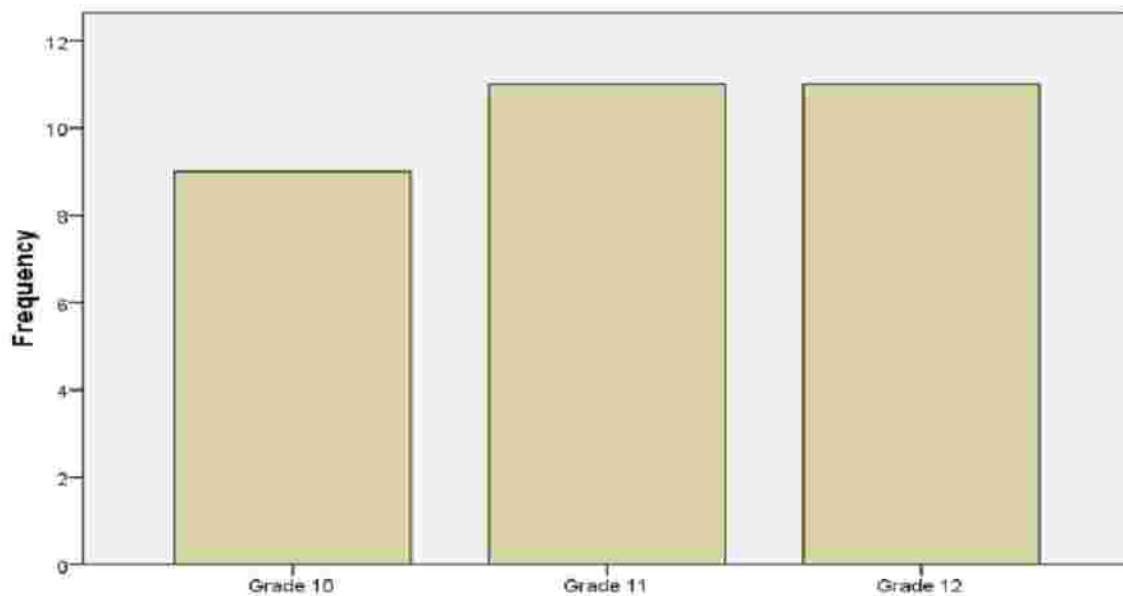
Response	Frequency	Percent
Grade 10	9	29.0
Grade 11	11	35.5
Grade 12	11	35.5
Total	31	100.0

Source: Field Data (2010)

In table 8, Out of the 31 degree holder teachers 29.0 percent representing 9 introduced their pupils to field project in grade 10, 35.5 percent representing 11 introduced their pupils to fieldwork in grade 11 and another 35.5 percent representing 11 introduced their pupils to fieldwork in grade 12.

The grade in which degree holder teachers introduced their pupils to fieldwork has also been shown in form of a bar graph in figure 5.

Fig 5: Grade in which degree holder teachers introduced their pupils to field work



Source: Field Data (2010)

4.7.3 Teacher requirements Before Fieldwork

This section present information on the fieldwork requirements that a geography teacher is supposed to undertake before taking pupils for actual fieldwork investigations.

In trying to find out about the effectiveness of degree holder teachers in executing fieldwork, the study wanted to find out if the teachers got permission from parents before taking pupils out for field investigations. The table below shows the response from degree holder teachers

Table 9:Acquisition of parents’ permission before taking pupils for field investigations.

Response	Frequency	Percent
Yes	14	45.2
No	17	54.8
Total	31	100.0

Source: Field Data (2010)

From the study, it was established that out of the 31 trained teachers in fieldwork, only 14 representing 45.2 percent took the responsibility of getting permission from parents before taking pupils for fieldwork while 17 representing 54.8 percent teachers did not get permission from parents before taking pupils for field work. The study, established that those who let pupils go alone for data collection did not bother to get permission from parents except for one.

In order to establish the effectiveness of degree holder teachers in executing fieldwork, the study wanted to find out from pupils if at all they got help from the geography teacher before going in the field for data collection. Table 11 shows the response from pupils.

Table 10: Teacher assistance before field work investigation.

	Teacher assistance before actual fieldwork execution		Total
	Yes	No	

Pupils taught by:-	Diploma holder	45(95.7%)	2(4.3%)	47
	Degree holder	71(89.9%)	8(10.1%)	79
Total		116	10	126

Source: Field Data (2010)

The table above represents 126 pupils; only 116 pupils got help from their teachers before going for field executions. This involved 45 pupils (95.7%) were taught by diploma holders and 71(89.9%) by degree holders. On the other hand, 10 pupils from the same study did not get any help from their geography teachers. This involved 2 pupils (4.3%) taught by diploma holders and 8 pupils (10.1%) taught by degree holders. It is clear that almost all the pupils got help from their teachers before fieldwork except 10.

The study went on to establish the type of help pupils got from their teachers before fieldwork. The 71 pupils taught by degree holder teachers said that their teachers helped them in the following ways:

- a) Taught on how to approach people and how to write what people say.
- b) Taught on how to prepare clear and chronological questions so as not to confuse respondents.
- c) Guided on how to come up with objectives and aims of the field project.
- d) Given guidance on which areas to investigate.
- e) Given encouragement when asking questions in class.
- f) Given guidelines on fieldwork undertaking and language to use.

One of the pupils said “our teacher advises us on what topic to choose with regards to what we have understood”. Another said “our teacher gives us questionnaires on a particular topic, thereby making it easier for us to collect the necessary data”.

The response from degree holder geography teachers recorded a 100 percent confirmation of having had helped their pupils before data collection.

According to the responses that were obtained from the degree holder teachers, pupils are helped before data collection and some of the help that was given include:

- a) Giving pupils a number of problem statements to choose from.
- b) Giving pupils guidelines before going in the field.
- c) Giving examples of other field reports.
- d) Explaining in totality on how to formulate a problem statement.
- e) Giving pupils guidelines stated in text books.
- f) Proof reading their research instruments.

4.7.4 Teacher requirements During Fieldwork

This section presents information on the fieldwork requirements that a geography teacher is supposed to fulfill during actual field investigations. Responsibilities the geography teacher during data collection have a bearing on the success of the field project.

The study also aimed at finding out from the geography pupils if at all, geography teachers accompanied them all the times when they went for data collection. This means that only those who had earlier agreed to have had gone for a field trip would answer this question. The table below shows the response that was obtained from geography pupils.

Table 11: Teacher accompaniment for data collection.

		Teacher escort for data collection		Total
		Yes	No	
Pupils taught by:-	Diploma holder	15(31.9%)	32(68.1%)	47
	Degree holder	25(31.7%)	54(68.4%)	79
Total		40	86	126

Source: Field Data (2010)

Out of 47 pupils taught by diploma teachers 15(31.9%) as compared to the 25(31.7%) out of the 79 pupils taught by degree holder teachers indicated that they were accompanied by their teachers for data collection all the times they went out.

On the other hand, out of the 47 pupils taught by diploma teachers 32(68.1%) as compared to the 54(68.4%) out of the 79 pupils taught by degree holder teachers indicated that they were never accompanied by their teachers for data collection all the times they went out.

As the research earlier established, 53pupilsof whom20 were taught by diploma holder teacher and 33whowere taught by degree holder teacher indicated that they had been taken out by their teachers for field investigations while 73 pupils of whom 27 were taught by diploma holder and 46 by degree holders indicated never having gone for field excursions with their teachers.

This simply means that out of the 20 pupils taught by holders that said that they had gone for field work before only 15 had been accompanied by their teacher all the times and this accounts for those that went out once.

On the other hand, out of the 33 pupils taught by degree holders who confirmed to have been taken out for field excursions, only 25 confirmed to have been accompanied by the teacher all the times. This means that 8 pupils were accompanied by the teacher for data collection but not all the times. According to the response from the 8 pupils, they were accompanied by the teacher once or twice but went alone when it was time for the final fieldwork meant for examination. The case with 5 pupils taught by diploma holder teachers is the same with the 8 pupils taught by degree holder teacher, they equally confirmed having had gone with their teacher once but not the other times. The pupils were given introductory letters to enable them undertake their data collection.

In order to find out the effectiveness of degree holder teachers in conducting fieldwork, it was imperative that the study establishes the safety measures that were put in place during fieldwork execution. It is important that a teacher should carry a first aid box in case of any accidents. Thus, the study wanted to find out from those geography pupils who had gone out before, if at all their teachers had carried a first aid box.

According to the response obtained from the 53 pupils whom 20 were taught by diploma holders and 33 taught by degree holder teachers who had gone for field excursions before, no teacher ever carried a first aid box. This means a 100 percent record of teachers not carrying a first aid box in preparation for any accidents or sickness was recorded in this study.

The study also wanted find out the safety measures that teachers put in place for pupils while in the field. From the 31 trained teachers that participated in the study 20 indicated that they did not have any safety measures for their pupils during field investigations. 11 indicated that they had safety measures which include the ones below:

- a) Pupils were put in groups and taught how to handle people.
- b) Pupils were given permission slips or official letters.
- c) Ensuring that pupils did not play with dangerous things.
- d) Ensuring pupils' wearing of school uniforms.
- e) Giving strict rules.
- f) Informing the pupils of the dangers of the place.

The study also wanted to establish as to what type of help trained degree holder teachers gave to their pupils during field investigation. According to the findings of the study, out of the 31 degree holder teachers, 5 indicated that they did not help their pupils in any way as they did not escort them for data collection. Most teachers said they helped their pupils by guiding them in observation of geographical phenomena and giving guidelines, others said they helped their pupils come up with data collecting instruments. Even teachers who did not accompany their pupils for data collection considered giving of to pupils in class as help given during data collection.

The study also wanted to find out from pupils if at all they were given help during data collection and what type of help they got from their trained geography teachers. Table 13 below shows the response from pupils.

Table 12: Teacher assistance before field work excursion.

	Received help during data collection		Total
	Yes	No	

Pupils taught by:-	Diploma holder	20(42.6%)	27(57.4%)	47
	Degree holder	33(41.8%)	46(58.2%)	79
	Total	53	73	126

Source: Field Data (2010)

Out of the 79 pupils taught by degree holder teachers, 46 pupils (58.2%) indicated not to have received any help from their teachers during data collection while 33(41.8%) indicated to have received help from their teacher. It was also established that out of the 47 pupils taught by diploma holder teachers, 20(42.6%) indicated to have received help from their teacher during data collection as compared to the 27(57.4%) who did not. The above result indicates that those who did not get any help from the geography teacher had gone for data collection without their teachers.

Some of the help that pupils indicated to have received from their trained geography teachers include:

- a) Given guidelines by the teacher.
- b) Given questions that needed to be asked.
- c) Given directions for movements.

4.7.5 Teacher requirements after Fieldwork

This section presents information on the fieldwork requirements that a geography teacher is supposed to undertake after actual fieldwork investigations.

According to the lecturers' responses and confirmation by different authors, the teacher needs to help pupils in various ways even after the data has been collected from the field.

The study wanted to establish as to whether or not pupils were given help or not after data collection. Table 14 shows the responses from pupils.

Table 13: Received help from the teacher after data collection.

		Received help during data collection		Total
		Yes	No	
Pupils taught by:-	Diploma holder	28(59.6%)	19(40.4%)	47
	Degree holder	43(54.4%)	36(45.6%)	79
Total		71	55	126

Source: Field Data (2010)

As the results show in table 14 above, out of 126 pupils that participated in the study 71 of whom 28(59.6%) were taught by diploma holder teachers and 43(54.4%) taught by degree holder teacher indicated that they had received assistance from their geography teachers after data collection (during report writing), while out of 55 pupils of whom 19(40.4%) were taught by diploma holder teachers and 36(45.6%) by degree holder teachers did not receive any help from their geography teachers after collecting data.

The 55 pupils who confirmed not to have received help from their geography teachers said they got help from their family members, friends and school leavers who had done geography. Asked as to why they did not ask the geography teacher, one pupil responded by saying, "our teacher is very busy and it is difficult to find her". This was confirmed by many who equally confirmed that their teachers did not have enough time for them to consult. Most said they were only given

guidelines on how to write the report before data collection and these guidelines were not easy to understand.

The study went ahead to find out what type of help pupils got from their teachers after data collection. The responses from pupils include help in terms of:

- a) How to write the main aims and objectives.
- b) How to present data.
- c) How to put data collected in an orderly and presentable manner.
- d) How to write the project.
- e) How to present data in tables, graphs and pie-charts.
- f) Making corrections.
- g) How to arrange the topics.
- h) Given more points apart from what had been researched by pupils.

It was also imperative for the study to establish the of help that trained degree holder geography teachers gave their pupils after data collection. According to the responses from the degree holder teachers established in this study help after data collection was rendered in terms of:

- a) Corrections of draft project reports.
- b) Consultation
- c) Given guidelines on report writing.
- d) Notes and text books were lent to pupils.
- e) Continuous supervision.

One of the respondents said “I check draft reports and grade them before the final report is presented to examination council of Zambia.”

All the 31 trained teachers confirmed going through the draft reports for editing only except for 1 who went as far as to grade the draft. The 31 teachers also confirmed being available for consultation and continuously supervising pupils’ field project reports.

4.7.6 General information

The study also wanted to establish as to whether pupils enjoyed learning geography as a subject.

The responses established are indicated in table 15 below.

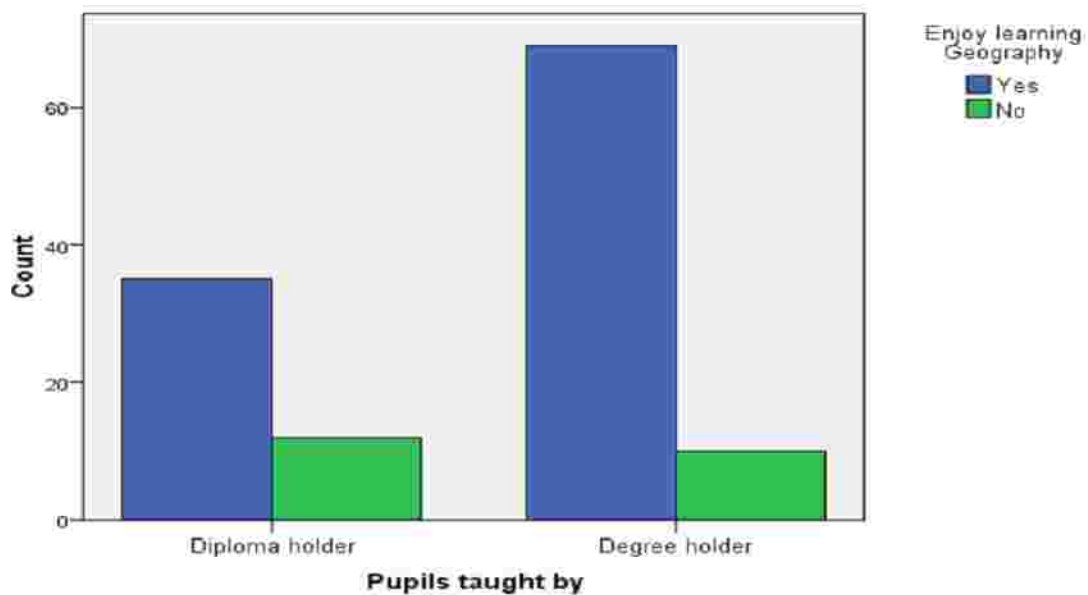
Table 14: Pupil’s enjoyment of learning geography

		Enjoy learning Geography		Total
		Yes	No	
Pupils taught by:-	Diploma holder	35(74.5%)	12(25.5%)	47
	Degree holder	69(87.3%)	10(12.7%)	79
Total		104	22	126

Source: Field Data (2010)

As the results are shown in table 15, out of 126 pupils who participated in the study 104 of whom 35(74.5%) were taught by diploma holder teachers and 69 (87.3%) were taught by degree holder teachers indicated that they enjoyed learning geography, while out 22 of whom 12(25.5%) were taught by diploma holder teachers and 10(12.7%) by degree holder teachers indicated that they did not enjoy learning geography.

Fig 6: Pupils enjoyment of learning geography



Source: Field Data (2010)

It was later established during the group discussion that the 22 pupils who did not enjoy learning geography mainly did not enjoy because it was bulky. 6 pupils taught by degree holders and 9 pupils taught by diploma holders indicated that they did not enjoy it because they have to write the field project report which is a lot of work.

The study also wanted to establish as to whether pupils found learning through fieldwork exciting. The results obtained are shown in table 16

Table 15: Pupils finding fieldwork exciting

	Fieldwork being exciting		Total
	Yes	No	

Pupils taught by :-	Diploma holder	45(95.7%)	2(4.3%)	47
	Degree holder	67(84.8%)	12(15.2%)	79
Total		112	14	126

Source: Field Data (2010)

As the results show in table 16, out of 126 pupils that participated in the study 112 of whom 45(95.7%) were taught by diploma holder teacher and 67(84.8%) by degree holder teachers indicated that they found learning through fieldwork exciting, while 14 of whom 2(4.3%) were taught by diploma holder teachers and 12(15.2%) by degree holder teachers indicated that they did not find learning through fieldwork exciting.

Pupils found learning through fieldwork exciting for different reasons, the responses which were established in terms of the benefits of learning through fieldwork include:

- a) One learns on how to report on different issues.
- b) Brings reality in the study of geography.
- c) Equips us with opportunities to acquire report writing skills.
- d) It helps us understand the problems of our local communities.
- e) It makes us understand the environment we live in.
- f) The lessons are interesting as we are able to express ourselves by asking questions freely.
- g) Field work is easy to understand since we see the real things than imagining things written in text books.
- h) It increases our self confidence since we are left in charge of our own learning.
- i) We learn a lot by interacting with different people.

Pupils who did not find learning through fieldwork exciting gave reasons such as, it was too noisy, some of the pupils were misbehaving and it was difficult to concentrate as there were many attractive things outside that was not part of the lesson.

This study also wanted to establish whether degree holder teachers enjoyed teaching and executing field project. The response that was established from the trained teachers is shown in the table below.

Table 16: Degree holder teacher’s enjoyment of fieldwork execution

Response	Frequency	Percent
Yes	27	87.1
No	4	12.9
Total	31	100.0

Source: Field Data (2010)

From the results obtained in table 17 above, 27 representing 87.1 percent degree holder teachers indicated that they enjoyed teaching and executing fieldwork, while 4 representing 12.9 percent showed that they did not enjoy teaching and executing fieldwork in high schools.

Table 17: Diploma holder teachers’ enjoyment of fieldwork execution.

Response	Frequency	Percent
Yes	21	84.0
No	4	16.0
Total	25	100.0

Source: Field Data (2010)

In the case of diploma holder teachers who participated in the study, 21 representing 84 percent indicated that they enjoyed teaching and executing fieldwork while 4 representing 16 percent did not enjoy teaching and executing fieldwork.

The study went on to establish as to whether or not diploma holder teachers felt their lack of training affected the way they executed fieldwork. The results obtained are shown in table 19.

Table 18: Lack of training in fieldwork affects the way you execute it.

Response	Frequency	Percent
Yes	6	24.0
No	19	76.0
Total	25	100.0

Source: Field Data (2010)

Out of the 25 diploma holder teachers that participated in the study, 24.0 percent representing 6 indicated that their lack of training in fieldwork affected the way they executed it, while 76.0 percent representing 19 indicated that their lack of training in fieldwork did not affect the way they executed it.

The study further wanted to establish from both the pupils and teachers at which stage of fieldwork pupils experienced difficulties. The responses from pupils are indicated in the table below

Table 19: Difficult part of field project.

	Difficult part of field project	Total
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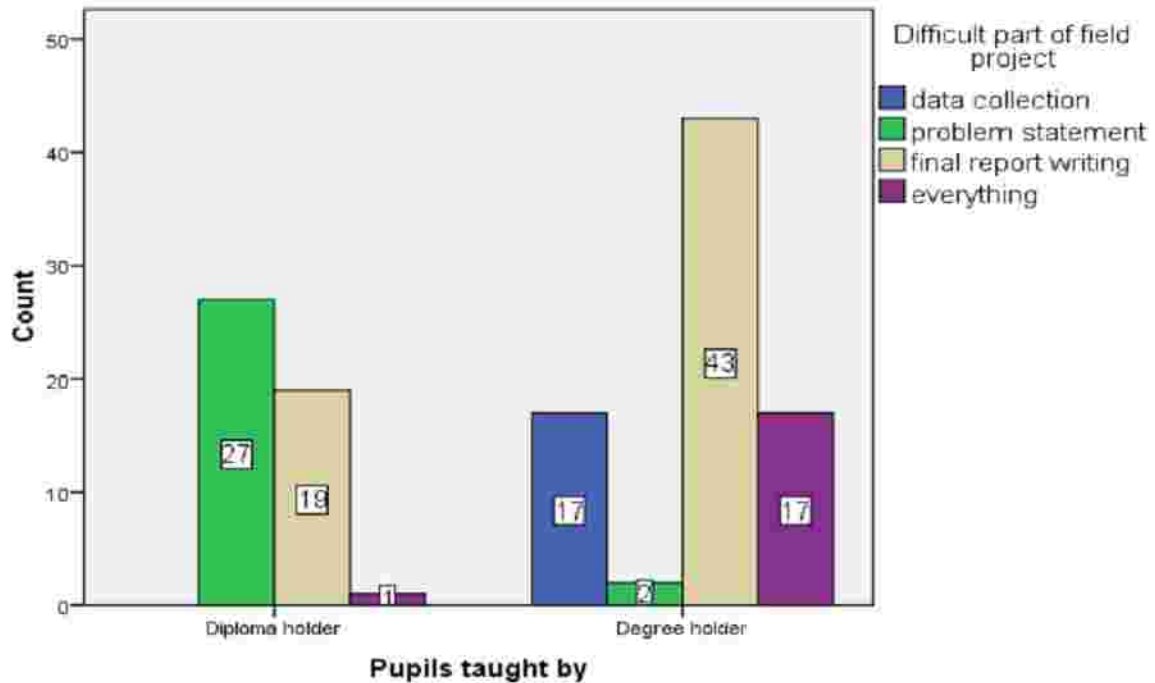
		data collection	problem statement	final report writing	All the stages.	
Pupils taught by:-	Diploma holder	0	27(57.5%)	19(40.4%)	1(2.1%)	47
	Degree holder	17 (21.5%)	2(2.5%)	43(54.4%)	17(21.5%)	79
Total		17	29	62	18	126

Source: Field Data (2010)

The study established that out of 126 pupils that participated in the study, 17 pupils all taught by degree holders indicated that they had difficulties at the stage of data collection, 29 of whom 27(57.5%) were taught by diploma holders and 2(2.5%) taught by degree holder indicated that they had the most difficulties in fieldwork project at the stage of stating the problem. The study further established that out of 126 pupils, 62 representing 19(40.4%) taught by diploma holders and 43(54.4%) taught by degree holders indicated that they had difficulties at the stage of report writing while 18 pupils 1(2.1%) taught by diploma holder and 17(21.5%) taught by degree holders indicated having difficulties at all the stages of field project.

For illustration, the results above have also been presented in form of bar graph in figure 7 below.

Fig 7: Difficult part of field project according to pupils response



Source: Field Data (2010)

The responses obtained from geography teachers in terms of the stage at which pupils experienced difficulties in field project were also established in the study. Table 21 shows the response from degree holder teachers and Table 22 shows the response from diploma holder teachers.

Table 20: Stages at which pupils experienced difficulties in field project.

Fieldwork stage	Frequency	Percent
Data collection	3	9.7
Report writing	12	38.7
All the stages	16	51.6
Total	31	100.0

Source: Field Data (2010)

According to the responses from degree holder teachers, most pupils had problems at all the stages of field project. Out of the 31 degree holder teachers that participated in the study, 3 representing 9.7 percent indicated that pupils encountered problems at the stage of data collection, 12 representing 38.7 percent indicated that pupils encountered difficulties at the stage of report writing while 16 representing 51.6 indicated that pupils had problems in all the stages of field project.

Table 21: Stage at which pupils had difficulties in field project.

Fieldwork stage	Frequency	Percent
Problem statement	6	24.0
Report writing	6	24.0
Data collection	9	36.0
All the stages	4	16.0
Total	25	100.0

Source: Field Data (2010)

Out of the 25 diploma holder teachers that participated in the study, 6 representing 24.0 percent indicated that their pupils had difficulties at the stage of stating the problem, 6 representing 24.0 percent indicated that pupils had difficulties at the stage of report writing while 9 representing 36.0 percent indicated that pupils had difficulties at the stage of data collection, another 4 indicated that pupils had difficulties in all the stages of field project.

With regards to the many difficulties that pupils encounter in field project, the study wanted to find out whether the challenges would encourage pupils to have their projects written by other people. Hence, the study wanted to find out from pupils if they had knowledge of any pupil who had their field project report written by other people. The response obtained is shown in table 23.

Table 22: Knowledge of pupils who had their field work reports written by other people.

		Pupils using other people to write their projects.		Total
		Yes	No	
Pupils taught by:-	Diploma holder	9(19.1%)	38(80.9%)	47
	Degree holder	13(16.5%)	66(83.5%)	79
Total		22	104	126

Source: Field Data (2010)

It was established that out of 126 pupils that participated in the study, only 22 pupils of whom 9(19.1%) were taught by diploma holder teachers and 13(16.5%) taught by degree holder teachers indicated that they had knowledge of pupils that used other people to write their project report, while 104 pupils of whom 38(80.9%) were taught by diploma holders and 66(83.5%) taught by degree holders indicated having no knowledge of pupils who had their work done by other people.

It was also imperative to find out what pupils thought could lead their friends into having their field reports written by other people. The responses varied, out of the 22, 7 pupils identified such type of cheating as being caused by pupils' laziness, 11 said it was caused by lack of understanding of what is required of them to do in the field project and 5 said it was caused by the teacher inadequacies.

In order to find out the effectiveness of degree holder geography teachers in executing field project in Zambian high schools, the research also wanted to establish if at all the training done in geography methods (for field project training) at the University of Zambia was considered adequate or not adequate or very adequate by the degree holder geography teachers who were former students of the institution.

Table 23: Adequacy of fieldwork training at UNZA.

Response	Frequency	Percent
Adequate	13	41.9
Inadequate	16	51.6
Very inadequate	1	3.2
Total	30	96.8
No response	1	3.2
Total	31	100.0

Source: Field Data (2010)

It was established that out of the 31 degree holders that participated in the study, 13 representing 41.9 percent considered the training as adequate, 16 representing 51.6 percent considered the training as inadequate, while 1 representing 3.2 percent considered the training as very adequate and another person did not respond to this particular question.

More than half of the degree holder teacher respondents in this study considered the training as inadequate. This prompted the researcher to find out the challenges the teachers faced while being trained in field project at the University of Zambia.

4.7.7 Challenges faced in field project training by geography teachers.

The study wanted to find out the challenges that teachers faced in fieldwork. This section presents the challenges that were faced by the trained degree holder teachers at the time they were being trained in fieldwork at UNZA and challenges faced in high schools.

The study firstly wanted to establish the challenges that were faced by degree holder teachers during their training in field project. The responses that were established are listed below:

- a) The lectures were not clear enough.
- b) Lack of time.
- c) Inadequate literature for the project and lack of funds since some were self sponsored.
- d) Field projects undertaken by the school were too few with a lot of unpreparedness.
- e) Inadequate staff in the department.
- f) The component of data analysis was not clear.
- g) Lack of transport facilities
- h) Lack of adequate research instruments for example GPS.
- i) Resistance from respondents in certain cases.

The study also established the challenges that geography degree holder teachers were faced with in their execution of field project in Zambian high schools. The challenges include issues such as:

- a) Lack of time for carrying out field investigations
- b) Large number of classes.

- c) No marking allowances.
- d) Lack of proper teaching and learning materials.
- e) Field project not considered important by some pupils.
- f) Limited areas of geographical interest.
- g) Lack of administrative support.
- h) Lack of transport.
- i) Difficulties in reading some pupil's handwriting.

According to one of the respondents, field project reports were difficult to approve since ls were not taken for trips for data collection. Another dent said, "Field project is slightly advanced and pupils do not understand the essence of research such that some have their field project reports written by college or university student".

CHAPTER 5:

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter presents discussion of findings based on the evaluation on the effectiveness of degree holder geography teachers in executing fieldwork in selected Zambian high schools of Lusaka and Kafue districts. The chapter aims to discuss how effective degree holder geography teachers were in executing field project in Zambian high schools after receiving training from the University of Zambia.

5.2 Gender of Respondents

This section discusses the gender of geography and pupil respondents. The difference between the number of pupils taught by diploma holders and degree holders depends on the numbers of teachers in high schools. Since high schools are supposed to be taught by degree holders, this clearly explains why there were few geography diploma holder teachers in high schools. Therefore, there is a lesser number of pupils taught by diploma holders who were available for this study.

The total number of geography teachers (both degree and diploma holders) that participated in the study was 56 of whom 38 were females and 18 were male. It was established during the study that most schools selected had more female geography teachers as compared to males. The disparity also represents the availability and willingness of individual teachers to participate in the study. Data collection was done in the third term, which is the time when pupils write examinations. Hence, some teachers claimed to be busy with revisions for examinations and could not manage to participate in the study.

The study also established that in some schools sampled, geography was treated as a compulsory subject as a result they were more geography teachers in such schools than in others, for example, Libala high school had only seven geography teachers at the time of the study.

5.3 General fieldwork information

This section discusses general fieldwork information and some fieldwork requirements that are not either requirement for fieldwork before, during or after excursion. Knowledge of general fieldwork requirements by the geography teacher is important for successful fieldwork execution.

The study established that although some teachers had taken their pupils out for fieldwork experience, more than half 58.1 of the total 31 degree holder respondents had never taken their pupils for data collection. Equally 46 (58.2) pupils representing more than half of the pupils taught by degree holders and 57.4 percent of the pupils taught by diploma holder teachers had never been taken for research by their trained geography teachers. Although the majority 88 percent of the diploma holder teachers indicated having had taken their pupils at least once, such results were not depicted from the pupils response. The results from the teachers thus indicate that diploma holder teachers were better off since the majority managed to take their pupils out at least once while the majority of the degree holders did not take their pupils out. The pupils response does not show any difference considering that regardless of the teachers qualification, the majority of the pupils indicated not to have been taken for field investigation.

This is contrary to the lecturer's indication that a geography teacher is required to take pupils for at least 3 field investigations before writing their final reports. ECZ recommends at least one excursion per term which translates into 3 excursions per year (E.C.Z. 2003). Since field work

begins in grade 10, it means then that pupils according to ECZ should have gone for at least excursions by the time they are in grade 12.

According to the results, only 3 trained teachers had managed to take their pupils at least 3 times and are represented by 6 pupils who had equally gone for excursions. This is the required number of excursion times according to the lecturer's responses. It was evident in this study that trained teachers did not manage to take pupils for excursions at least 6 times as required by the Examination Council of Zambia.

The study was done in third term when the pupils were already handing in their written field projects, the question then is, how does a teacher mark work written by pupils when he/she has never gone to the study area? This makes it difficult to determine whether the work was written by someone else or not. The pupils were given freedom to write on what they wanted in certain instances which made it even more difficult for the teacher to establish the truth of the information presented.

Although the degree holder geography teachers are aware of the requirements for fieldwork, they were not undertaking it seriously. The pupils cannot collect data in the field without teacher's guidance. According to the lecturers' response, a teacher is supposed to guide and be physically there for students throughout the fieldwork process. The presence of the teacher is not only to provide guidance, but it also shows the importance of the work that is being carried out.

With this type of result being obtained from trained teachers, the objectives that were used to include fieldwork in the geography curriculum will not be realized the component is undertaken as required. According to C.D.C (2000) and Ntalasha et al (2004) field project was mainly introduced in Zambian high school geography curriculum in order to move geography

teaching from being too theoretical or textbook based being practical and interesting. It was felt that addition of field project would help break the monotony and boredom that existed in the geography curriculum. But this objective will only remain a dream unless field project is dealt with in the context required. With fieldwork being undertaken like class work, there is little for pupils to appreciate and geography will be looked upon as the same old boring subject.

A comparison of responses obtained from teachers and pupils in terms of the grade in which pupils were introduced to field project as presented in tables 8 and 9 on page 45 and 46 respectively, indicate that although 9 teachers said they had introduced their pupils to fieldwork in grade 10, only 4 pupils confirmed to that. A total of 22 had introduced their pupils to fieldwork later than grade 10 making it difficult for pupils to gain enough fieldwork experience before writing the report.

The results prove that there is no difference between pupils taught by degree holder teachers and diploma holder teachers in terms of the grade they were introduced to fieldwork. Out of the 47 pupils taught by diploma holders 41(87.2%) were introduced to field project in grade 12 as compared to 70 (88.6%) out of 79 taught by degree holder teachers. This entails that most degree holder teachers though aware of the requirements still decide to introduce pupils to fieldwork in the final grade making it impossible for the pupils to have the required experience.

The final grade is the time when pupils are busy preparing for their examinations, thus, it is very difficult for them to find enough time to do proper field research worse still if it's their first time to undertake it. Fieldwork cannot excite the pupils if it's done in a hurry, soon enough it will only be perceived as being there in the geography curriculum for the sake of examination and not for purposes of making geography more practical and exciting.

The majority of the teachers enjoyed teaching and executing field project regardless of their academic qualifications. Refer to table 17 and 18 on pages 60 and 61 respectively. It is motivating to discover that even though the diploma holder teachers were not trained to teach field project, the majority actually enjoyed executing this component of geography. On the other hand, 4 teachers trained in fieldwork did not enjoy executing fieldwork, which makes it very likely that their execution of fieldwork was not with enthusiasm and motivation. The majority of pupils indicated that they enjoyed learning fieldwork because of different benefits they obtained.

From the study, pupils indicated that through fieldwork they learnt about the environment. It is very important for pupils to understand the environment so that they can help to improve it. Job et al (1999) explains that fieldwork provides an opportunity for students to develop their sensitivity to and appreciation of a wide range of different environments. Hall, et al (2002) adds that fieldwork can therefore help to develop respect for the environment and facilitate experiential learning. In this case, it is clear that inclusion of fieldwork in the geography curriculum to some extent is being achieved. In the study, some pupil respondents confirmed to have learnt about the environment.

According to Hall et al (2002) fieldwork has the potential to contribute widely to students' personal and social development. Fieldwork can facilitate more relaxed social contact between students and their peers and between students and staff. Hall's idea of using fieldwork to develop pupils' social and personal development was also established in this study by pupil respondents.

Pupils confirmed that they had learnt a lot by interacting with different people including their fellow pupils and teachers. Some pupils in this study also confirmed that interactions increased their self confidence as they were left in charge of their own learning. This is also confirmed by

Hall et al (2002) who explains that through fieldwork students are able to learn how to take responsibility for their own learning while getting the opportunity to experience 'real' research and visit places they would not normally experience. Job et al (1999) also explains that students can learn the importance of taking personal responsibility for their learning whilst the challenges provided by fieldwork can help to build their confidence and resilience. Hall et al (2002) further explains that fieldwork can also help to break down barriers between students and their peers and between students and staff.

The study also established that through fieldwork pupils improved their understanding of problems in their local communities. This is supported by Namafe (1986:23) who explains that, "fieldwork in local issues can provide active learning experiences for pupils who may be given the opportunity to experience and record the feelings by others for the environment". Long and Roberson (1966), also explain that training in fieldwork offers children a deeper understanding of their cultural heritage and opportunity to obtain later richer experiences during their leisure time. Ntalasha et al (2004) also explain that field research approach attempts to provide answers or solutions to problems encountered in the local area.

Fieldwork gives students the opportunity to experience "real" research that promotes the development of a wide range of different skills, many of which are transferable (Hall et al, 2002, 214). The pupils in this study equally confirmed that fieldwork made their understanding of geographical issues easy, because they could see the real things unlike the use of imagination of things written in text books.

According to Hall et al (2002) fieldwork's focus on the real world, in which a real life example can be compared with idealized examples in textbooks, help to develop a respect for the environment and facilitate 'experiential learning'.

It is clear that even though some pupils only went for field excursions once and others without their teachers, they were still able to benefit from learning through fieldwork. The objectives of fieldwork inclusion in the curriculum can be better achieved with more help and responsibility from geography teachers.

A comparison between pupils taught by degree holders and those taught by diploma holders in terms of experiencing difficulties at the stage of problem statement indicate that more than half pupils taught by diploma holders had difficulties at this stage as compared to those taught by degree holders. Although no degree holder teacher indicated that pupils had problems at the stage of problem statement, 6 diploma holder teachers confirmed that pupils had difficulties at this stage. The study established that most pupils taught by degree holder teachers experienced less difficulties at the stage of problem statement. This might be as a result of having trained teachers who knew the procedure on how to help pupils come up with a problem statement. The stage of problem statement is very sensitive because if it is not properly done, all the other stages will equally be affected.

Pupils taught by degree holder teachers experienced many challenges at the stage of data collection as compared to pupils taught by diploma holders who never experienced any challenges at this stage. Although pupils taught by diploma holders indicated having no difficulties at the stage of data collection, 9 representing 36.0 percent of their teachers indicated the opposite.

It was also established that most pupils had difficult the stage of report writing regardless of their teacher's academic qualification and this was confirmed by 12 out of 31 degree holder teachers and 6 out of 25 diploma holder teachers.

It was also established that more pupils taught by degree holder teachers experienced difficulties at all the stages of field project as compared to those taught by diploma holder teachers. This was confirmed by 16 representing half of the degree holder respondents and 4 representing 16.0 percent of the diploma holder teachers.

In this case, it might be possible that degree holders have the most difficulties all because they know the procedure and requirements and find it difficult to follow the proper guidelines while diploma holders feel they do not have difficulties all because they have nothing to measure their work against.

5.4 Teacher requirements Before Fieldwork

This section discusses the requirements that a geography teacher is expected to fulfill before fieldwork excursion. These are requirements done in preparation for a successful fieldwork experience.

According to the response from the University of Zambia lecturers, it is a mandate that a teacher should be trained in fieldwork before engaging in its execution, but due to the shortage of degree holder geography teachers in high schools, untrained geography teachers are engaged in executing it. The study found twenty-five (25) diploma holder teachers not trained in fieldwork handling grade 12 pupils in fieldwork.

According to table 19 on page 61, the majority (76 percent) of the diploma holder teachers indicated that their lack of training in field work did not affect the way they executed it. In the first place they were not aware of all the requirements that should be covered in the field project.

This became apparent when, one of the diploma holder teachers who felt that his lack of training in fieldwork did not affect the way he executed fieldwork was asked a question on how he helped

pupils come up with problem statement, the answer was, “I give pupils different questionnaires to choose from and come up with a problem statement”.

The response indicates that the teacher did not actually understand what is expected of him in coming up with a problem statement. This clearly indicates that although the majority of diploma holder teachers did not regard training in fieldwork as important, there were many fieldwork concepts and requirements that they might have not known.

It is impossible to come up with data collecting instruments before establishing the problem. Fieldwork cannot be done based on the questionnaires but should be based on the problem statement. Even though most people indicated they felt lack of training did not affect them, it was so only because they had no guidelines with which to measure their output with. It is for such reasons that the lecturers indicated and emphasized the mandate for a teacher to be trained in field project before they can execute it.

The idea of using teachers who are not trained in fieldwork to handle this geography component could have been perpetuated by the Ministry of Education's idea of introducing fieldwork in Zambian High schools before the University of Zambia was ready to offload its first trained graduates. The Ministry of Education should have waited for the University of Zambia to offload its first geography teacher trained in field project before introducing the component in high schools.

Field project was initially started by teachers who were not trained or had attended a workshop that was conducted by Dr Mwemba and the late Mr. Simukoko. It is clear that even those who attended the workshop did not have sufficient amount of time to learn everything. For a program to have been started by teachers who had very little knowledge of it, means there were high probabilities of it failing, hence the current situation.

With regards to preparation for fieldwork excursion, it is important for teachers to get permission from parents/ guardians before taking pupils out. In this case, the likelihood that most teachers did not bother to get permission from parents before field execution is very great, because in the first place 58.1 percent of the trained teacher respondents did not take their pupils out for field executions.

Pupils are left alone to do the work with little communication between their parents and teachers. If anything happened to unmonitored pupils in the field during data collection the teacher would have no answers and the parent would not be aware of anything.

It is an obligation for teachers to get permission from parents before fieldwork according to the University of Zambia lecturer respondents. This has also been supported by writers like, Long (1964) who explains that communication with all parties is very important before fieldwork. Bailey (1974) adds to this by explaining that a teacher of geography needs to be aware of the parents' attitude before undertaking fieldwork.

Communication with the parent is very important considering that they can also give more details of their children's allergies and if anything happened they would be able to assist.

In order for fieldwork to be successful, it is important that the teacher provides help to pupils before fieldwork. In this study, all the trained teachers gave help to their pupils before fieldwork in various forms. Many indicated helping pupils come up with problem statement and objectives using different ways. The best way to help pupils is to devise ideas together in class and not make them select what the teacher had done alone as some teachers did.

When pupils take part in problem formulation, they are given chance to choose what interests them, such that even when it is time for data collection and report writing pupils will work with

motivation. It is recommended according to the lecturer respondents that the pupils should be given chance to participate in problem formulation.

5.5 Teacher requirements During Fieldwork

This section discusses the geography teacher's requirement during the actual fieldwork excursion. It involves fieldwork requirements while in the field with the pupils.

It is a requirement that at the time of data collection the teacher should be there to guide the pupils. The study established that 58.2 percent of pupils taught by degree holder teachers and 57.4 percent of the pupils taught by diploma holder teachers were not accompanied for data collection by their teachers, Refer to table 4 on page 39. The results obtained indicate that there was no difference between pupils taught by degree holders and those taught by diploma holders in terms of teacher accompaniment for data collection.

Geography teachers attributed their failure to accompany pupils for data collection to lack of administrative support in terms of securing funds for Although this was a common answer, maybe what the teachers have forgotten is that fieldwork does not only mean being on a trip to a distant place. Even if fieldwork is done at a nearby community the teacher has to physically be there to guide pupils during data collection.

According to the lecturer respondents the teacher is supposed to accompany the pupils all the time they go for data collection, guiding them with the rel information on how to record and the geographical features to observe. It was emphasized that the teacher should go with the pupils for data collection all the time even though the data to be collected is for examination purposes.

With regard to the responses from the pupil respondents that had never gone for field execution, it is clear that the pupils are doing the work with little help from the teachers. In the first place pupils cannot gain entrance into certain areas without teachers and if they do who will control and provide safety. According to AMSS (1967) during fieldwork the teacher must be clear in mind as to what features pupils should look for and the duration of the execution and this should have been done during the reconnaissance visit.

Thus, it is impossible for a teacher to follow the procedures of fieldwork if he/she does not take pupils for execution. It is very saddening to realize one pupil who had interest in writing the report could not write all because he lacked guidance from the teacher. If this continues, soon pupils will not want to take geography as they will only liken it to a cumbersome subject. It is clear from this analysis that trained geography teachers are not undertaking fieldwork as they were trained, hence, making the objectives for inclusion of fieldwork in geography curriculum irrelevant. The success of every education system objectives lies on the quality of its teachers and the objectives of field project are far from being achieved if the geography teachers are not motivated to do their job.

The trained degree holder teachers in this case are not doing what they are supposed to, if the teacher does not accompany the pupils for data collection, how then will he/she verify whether the data collected is correct. All the problems experienced by pupils during data collection without their teachers are left unsolved without the teacher. In certain cases pupils are given chance to choose any topic on which to research, which makes it even worse for the teacher to verify whether what the pupils wrote was actually researched.

During actual fieldwork experience, the teacher should provide safety measures for pupils depending on the area. The study established that of the 31 trained teachers 19 indicated that the safety measure query was not applicable to them, which is against what some authors have advised. It was a common practice for teachers to indicate that the safety measure question was not applicable to them. It was however concluded that this aspect of fieldwork was not taken seriously by most of teachers.

According to Tilbury and Williams (ed) (1997) safety and a range of legal bureaucratic measures are important in the successful implementation of field project. The importance of appropriate leadership training for staff vigilance, risk avoidance and conservative decision making in the field have been stressed. According to the two authors, safety not only for the pupils but also for the teachers. They advise that to ensure safety, there is need to involve a local insurance company to help in dealing with compensation in case of loses, injuries or deaths. This could be done either by the school on behalf of every person on the trip or the associations to which teachers are affiliated.

Safety is very important for both pupils and teachers, even though most teachers did not regard it as important. Fieldwork is carried out in different areas of which some might be dangerous and as such pupils' safety should be taken serious by all geography teachers.

The study also wanted to establish whether all teachers carried a first aid box when going in the field with pupils. According to the response obtained from the 53 pupils of whom 20 were taught by diploma holders and 33 taught by degree holder teachers who had gone for field excursions before, no teacher ever carried a first aid box. This means 100 percent record of teachers did not have a first aid box in the field. It is a good practice to carry a first aid box in the field to ensure a

quick response to any short comings whilst in the field. Some pupils might be allergic to certain environments such that they might get sick or get injured, first aid medication would help.

It was realized from the study that most of the pupils who said they had received help from their teachers during field project, actually meant the help they got in class before going in the field. Pupils did not cite getting help in terms of teacher helping in asking questions during the actual fieldwork execution, which is contrary to Fine, et al (1984) explanation that, pupils' observation skills can be developed through use of searching question by the teacher during data collection.

Even though most geography teachers relied so much in giving instructions to pupils, AMSS (1967) Long and Roberson, (1966) consider the teacher to be the pupils' mentor and guide rather than their instructor. It is thus, impossible for the teacher to be a guide and mentor when he/she is not even around during data collection. The teacher is supposed to help pupils especially when there is something that is very important but not picked by pupils own observation.

From the above results, it can be concluded that the problems experienced by pupils during data collection are similar regardless of the professional qualification of their teachers. The help they got from their geography teachers was actually the same. It is clear that the activities that should be done in fieldwork are not taken to be serious by the majority of teachers regardless of qualification.

5.6 Teacher requirements After Fieldwork

This section discusses fieldwork requirements after actual field investigations or data collection.

A geography teacher should help pupils after data collection in order for the information collected to be successfully presented and analyzed.

The majority of pupils got help from their teachers after data collection. As shown in table 14, 43(54.4%) pupils taught by degree holders and 28(59.6%) pupils taught by diploma holders confirmed having received help from their geography teachers; while the remaining 55 pupils 19(40.4%) taught by diploma holders and 36 (45.6%) taught by degree holder said they got help from their family members, friends and school leavers who had done geography.

Asked why they did not ask the geography teacher, one responded by saying, “our teacher is very busy and it’s difficult to find her”. This was confirmed by many who equally confirmed that their teachers did not have enough time for them to consult. Most said they were only given guidelines on how to write the report before data collection and these guidelines were not easy to understand.

Pupils indicated that they were shown how to write their project reports by teachers. The help that was given to pupils in terms of showing them how to write corresponds with the lecturers’ advice which entails that, teachers need to devise a fieldwork report writing style for the pupils. This means that trained geography teachers are doing what is required in this aspect of field project.

No geography teacher confirmed having a post class discussion with pupils and briefing the school administration after the field execution though this is a requirement according to the response from the lecturers. From the look of things, most geography teachers were only interested in evaluating the field project reports that pupils wrote and did not emphasize on the knowledge and values that were obtained. The examination of project report is not as important as the knowledge obtained in terms of social values learnt to bring about change in behavior. No

trained teacher saw it important to help pupils gain the social values even by just having a post class discussion to evaluate the significance of the topic or project to pupils.

5.7 Challenges faced in fieldwork training and execution.

This section discusses the challenges that were faced by the trained degree holder teachers at the time they were being trained in fieldwork at UNZA and challenges faced in executing fieldwork in Zambian high schools.

There are many challenges faced in fieldwork execution, One of teacher respondents said that fieldwork has the challenge of being too advanced for the pupils; some of whom end up engaging other people to write reports for them. This was confirmed by 22 pupils who agreed to have had knowledge of pupils who had their work written by other people.

The pupils identified such type of cheating to have been caused by pupils' laziness; lack of understanding of what was required of them to do in the field project and teacher inadequacies.

If pupils are properly oriented and given enough time to do their projects there would be no or very few occurrences of cheating in field project. If, for instance, teachers exposed their pupils to fieldwork report writing at least 3 times before writing the final, they would have gained enough knowledge to write on their own. Pupils would not learn anything from field projects if they engaged themselves in cheating.

Field projects should not be seen as slightly advanced for pupils because it is also meant to lay a foundation for tertiary and university education. In this case UNESCO (1965) advises that what is required is for the teacher to convince his pupils of the purpose and meaning involved in their fieldwork.

The challenge of motivating pupils to have interest in fieldwork has not only hit Zambian high schools but has also been observed in European schools. According to Lambert and Balderstone (2000), it is difficult to encourage and enable pupils respond individually to the field experience.

Lecturers and geography teachers both pointed to the challenge of organizing big groups for fieldwork experience. Authors like Fien et al (1984), also observe that fieldwork constraints are associated with organizational factors such as: the difficulty of supervising a large group of learners and providing assistance they may need.

The lack of administrative support for field project has not only been pointed out by degree holder teachers in Zambian high school and the University of Zambia lecturers but it has also been listed as a challenge by Long and Roberson, (1966) who observe that the geography teacher in addition to considerable organizational work has to persuade the head that the work is justified. It is very important that the administration supports lecturers and teachers in fieldwork execution in order to achieve the objectives intended for field inclusion in the geography curriculum.

Although many trained teachers complained of not having enough time to teach and execute field project; the Examinations Council of Zambia in has recommended a minimum time allocation of three periods per term for grades 10 and 11 to it. Therefore, the time recommended by the Examinations Council of Zambia is enough for teachers to teach and field project effectively.

According to Gospill, (1966) to get the maximum educational return, much time, trouble and expense is involved. AMSS(1967) also observes that fieldwork is considered as time consuming, some geography masters feel that they cannot conscientiously afford adequate time for

fieldwork. This is because it demands much careful study and even research on their part, as well as room in a syllabus already strained to the limit.

Even with the challenges encountered in field project, Foskett (1997:200) advises that, “with effective planning and management and commitment to the educational and personal benefits of fieldwork, geography teachers can ensure that it remains as one of the most significant learning experiences that pupils have during their school career.”

With interest and perseverance, geography teachers can work more towards overcoming challenges that make field project uninteresting for both teachers and pupils. It is for this reason that academic gains of field project should be of paramount importance than the financial gains or allowances. It would be better to improve the idea of field project with the administration and after which allowances can be claimed especially after the good work is done and seen.

It is very important that the MoE and UNZA communicate in terms of what is expected from each other. It was realized in the study that the only guideline the MoE gives to teachers for field project is with regards to marking of projects and no guideline to teaching of the component. This shows a major weakness because the MoE in charge of setting guidelines for marking grade twelve (12) field reports are unaware of the guidelines for fieldwork teaching. As such this might cause a disparity in the way things are done.

5.8 REFLECTIONS ON EXTENT TO WHICH RESEARCH QUESTIONS WERE ADDRESSED

In order to evaluate the effectiveness of degree holder teachers in executing fieldwork in Zambian high schools of Lusaka and Kafue district, the study first sought to find out what is expected of degree holder geography teachers trained to teach field project. The respondents to the above research question were the geography methods lecturers. The different responses on

what is expected of the geography teacher before, during and after field project are explained in chapter 4 on page 33-35.

The study established that it is a requirement that a teacher takes his/her pupils out for field experiences at least 3 times before writing their final reports. It was also established from the lecturers' responses that it is a mandate for a teacher to guide pupils throughout the fieldwork experience.

The study also needed to establish the effectiveness of the activities that geography degree holder teachers trained in field project,undertook in teaching and implementing field project in high schools.The activities degree holder teachers undertook have been established in chapter 4 on pages 36-57. In response to the requirements outlined by lecturers, it was established for instance, 58.1 percent degree holder geography teachers did not take pupils for field experience and only 6.5 percent managed to take their pupils for at least 3 fieldwork experiences before writing their final reports.

The research also wanted to find out pupils' views on the effectiveness of the degree holder geography teachers trained in field projects as handling of the field project. This was done using activities done by the pupils both taught by degree holders and diploma holders in fieldwork. The pupils' responses were used in comparison with the geography teachers' responses. The responses are in chapter 4 on pages 35-65.

The research questions were addressed in this study. The responses from lecturers were used to establish the way fieldwork is expected to be executed by the geography teachers in high schools. The responses from geography teachers on how they were executing field work in High schools were compared with the proper guidelines proposed by lecturers and other geography

authors. The responses from geography pupils were used to evaluate and counter check responses from degree holder geography teachers.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

This study has established that the majority of the teachers both trained degree holders and the diploma holders enjoyed teaching and executing field project in High schools. This feeling was also shown by the majority of the pupils both taught by degree holder teachers and those taught by diploma holder teachers who indicated that they enjoyed learning geography and found fieldwork exciting.

The study has also established that even though degree holder teachers were aware of the importance and requirements of fieldwork prior their training from the University of Zambia, the majority of them did not accompany their pupils for field work executions. Those that did surely did not fulfill the required number of times as recommended, making the aims of field project irrelevant. It is almost impossible for pupils to learn fieldwork minus being accompanied by their teachers.

The study has also shown that even though some trained degree holder teachers had managed to accompany their pupils for fieldwork, still little assistance was provided to pupils as per requirement. For instance, the majority of pupils both taught by degree holder and diploma holder teachers indicated to have collected data individually, especially the information meant for the final field project for examination. The study has also shown that the problems experienced in field project by pupils taught by degree holder and diploma holder teachers in certain instances slightly differ while in most cases their fieldwork experiences were similar. The majority of pupils taught by diploma holder teachers experienced difficulties at the point of

problem statement, while the majority of pupils taught by degree holder teachers indicated having problems at the stage of report writing. The grade in which most pupils were introduced to field project and the number of times pupils had been accompanied for field work executions before writing the final report is similar between the two groups of pupils. The results from pupils thus, entail that the way field work is conducted by degree holder and diploma holder teachers is almost the same, implying that the training degree holder teachers receive is not util per requirement for fieldwork.

From the field project activities undertaken by geography teachers that were analyzed in this study, it is clear that degree holder teachers are not executing field project in high schools effectively. Degree holder teachers though aware of the field project requirements and guidelines did not adhere to them, thus rendering themselves ineffective.

The study has also established that about half of the degree holder teachers considered the training they received in field project from UNZA as inadequate. It was considered inadequate because of time constraints and lack of adequate number of field . These concerns were also indicated by the lecturer respondents.

The study continued to show that field project is not only challenged by t lack of trained geography teachers, but also by those trained geography degree holder teachers who do not execute field project in Zambian high schools as per requirement. The study has also established that majority of the degree holder teachers did not execute the field project effectively. For instance, the majority of them did not even take their pupils for field work executions which made field work look as good as class work. Fieldwork has been conducted more like home work for pupils with less teacher participation. Although many teachers blamed the school

administration for their failure, stating that administration failed to provide adequate resources for fieldwork executions. This reasoning is not tangible, because cheaper field projects could have been done in local areas without using any means of transportation.

The study has further shown that the majority of the diploma holder teachers felt that their lack of training in field project did not affect them. This maybe as a result that they have no guidelines of what should be done, and also because they might be learning from the degree holders who although trained were also ineffective in conducting fieldwork. The results obtained in this study that the majority of degree holder teachers are not executing field work as per requirement does not depict that training is irrelevant.

6.2 RECOMMENDATIONS

	Recommendation	How to achieve the recommendation
1	Training in fieldwork should be made to run for two complete semesters (1 year) in order to increase the field experiences for student teachers .This arises from the finding that both teachers and lecturers did not have adequate time to learn and teach fieldwork respectively.	This can be carried out by the University of Zambia by revising the field work course.
2	Fieldwork guidelines should be implemented in high schools. This will help guide teachers on what should be done at a particular stage. This addresses the finding that there were no proper guidelines given to teachers on the way fieldwork should be executed.	This can be done by MoE or CDC with the help of the geography Education lecturers.

3	<p>Improve school administrators understanding of the significance of field projects in the Geography curriculum. This arises from the finding that most teachers were not supported by the school administration in their execution of fieldwork.</p>	<p>MOE can organize provincial workshops for school administrators.</p>
4	<p>Introducing allowances for teachers marking field projects in order to motivate them. This is based on the finding that teachers were challenged by the lack of marking allowance.</p>	<p>This can be carried out by MoE, who equally give allowances to Teachers of home economics.</p>
5	<p>Field work safety rules should be implemented in Zambian high schools. This arises from the finding that teachers did not have any safety regulations for themselves and their pupils in their execution of fieldwork.</p>	<p>This can be done by the MoE or individual High schools.</p>
6	<p>Introduction of mandatory training programmes in fieldwork for teachers not trained in field project. This is based on the finding that some teachers not trained in fieldwork were participating in executing it, even though it is a mandate that one is trained before teaching doing so.</p>	<p>This can be done by UNZA and the MoE.</p>

6.3 Recommendations for Future Research

Further studies should be conducted to find solutions to issues which may include the following:

- a) The effect of field project on the geography syllabus.
- b) Evaluation of fieldwork training in higher institutions of learning.

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LIST OF APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR DEGREE HOLDER GEOGRAPHY TEACHERS.

I am a postgraduate student from the University of Zambia doing a Masters Programme in Geography Education. I am carrying out a research on the effectiveness of degree holder geography teachers in executing the field work in high schools in Lusaka.

You have been chosen to take part in this research. You are requested to take part through answering the questions below. This is an academic paper and all your responses will be used only for academic purposes and nothing else.

Thanking you in advance.

GENERAL AND PERSONAL INFORMATION

1. Date of interviews:
2. Name of school:
3. Sex: Male { } Female { }
4. Do you enjoy teaching and executing field project? Yes { } No { }

FIELD PROJECT INFORMATION

5. Has the inclusion of field project in the geography curriculum made the subject interesting? Yes { } No { }
6. In which grade do you introduce your pupils to field project?
[a] 10, { } [b] 11, { }, [c] 12 { }
7. Do you get permission from parents before going for field execution? Yes { } No { }

8. How many times do you take your pupils for field execution before they write their final project report?

9. How do your help pupils come up with a problem statement?

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10. How do you help your pupils during data collection in the field?

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11. What safety measures do you put in place for pupils sa ield?

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12. How do you help your pupils when they are writing the report?

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13. How accessible is the community to pupils during data collection?

[a] Easy{ }, [b] Difficult { }

14. At which stage in field project do pupils have problems? [a] Data collection{ }

[b] problem statement { } [c] Report writing,{ } [d] All the stages,{ }

15. If you have selected [d] in Question 14, what causes this?

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16. Is there any difference between what you are taught while being trained at the University

and what you find in schools?Yes { } No { }

17. How would you characterize the training in field work at the University?

[a] Adequate { },[b] very adequate{ },[c] inadequate{ }

18. What challenges did you face while being trained in field project?

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19. What challenges do you face in teaching and executing field project in High Schools?

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20. Do you have accessibility to research instruments in your school? Yes { }, No {

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APPENDIX 2: QUESTIONNAIRE FOR GRADE 12 GEOGRAPHY PUPILS

I am a postgraduate student from the University of Zambia doing a Masters Programme in Geography Education. I am carrying out a research on the effectiveness of degree holder geography teachers in executing the field work in high schools of Lusaka and Kafue District.

You have been chosen to take part in this research. You are requested to take part through answering the questions below. This is an academic paper and all your responses will be used only for academic purposes and nothing else. You are further requested to be free to provide the required responses to enhance this study. Where options are provided, please tick the right answer, fill in the blanks or give a brief explanation in the spaces provided.

Thanking you in advance.

1. Use a tick {v} to indicate your choice where you have a choice to make.
2. Where it is not applicable, indicate N/A.
3. Give brief but adequate information for questions that require explanations.

SECTION A: GENERAL AND PERSONAL INFORMATION

1. Date of interviews:

2. Name of school:

.....3. Grade:

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4. Sex: Male { } Female { }

5. Do you enjoy learning Geography: Yes { } No { }

GEOGRAPHY FIELD PROJECT TEACHING AND EXECUTION INFORMATION

6. Do you understand the field project in geography? Yes { } No { }

7.If yes to question 6, what is field project?

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8. In which grade did you first learn of field project work?

9. Have you ever been taken out for field project excursion? Yes { } No { }

10.If “No” to question 9, how have you managed to write a field project report?

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11. Have all your field project topics been related to the topics that you have learnt in Geography since grade 10? [a] Yes,{ } [b] No,{ } [c] Not really{ }

12. What do you think; you might be missing from not learning from the outside class?.....

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..... 13. If “Yes” to question 10, which grades were you in?

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14. How many times have you been taken for field project work since grade 10?

15. If “Yes” to question 10, did you find learning from outside the classroom exciting?

Yes { } No { }

16. If you found learning from outside the class exciting list down the benefits of learning from outside.....

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17. If “No” to question 15, write down why you did not enjoy learning from outside the classroom?.....

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18. Has the teacher accompanied you, all the times that you gone to collect information from the community, (outside school premises) for the field project? Yes { } No { }

19. Do you get any help from the geography teacher, while learning field project in class, before actual fieldwork execution? Yes { } No { }

20. If “Yes” to question 18, what help do you get?

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21. Do you get any help from the Geography teacher during data collection, even when the data is meant for the final report to be examined (while collecting information in the field?) Yes { } No { }

No { }

22. If “Yes” to question

20, what help do you get from the teacher while collect

in the field?

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23. Do you get any help from the geography teacher after the field execution? Yes { } No { }

24. If “Yes” to question 22, what help do you get from the teacher after the field execution?

(During data analysis, presentation of findings and Report writing.

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25. Do you know of any pupils who have their field projects written by other people?

Yes { } No { }

26.If “Yes” to question 25, what do you think causes

this?.....

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.....27.what part of field project do you think is difficult? [a] Data collection { } [b] Problem

Statement,{ },[c] Report writing{ }.

28. Do your teachers get permission from your parents in the field? Yes { }, No { }

29. Do you go in the field with a first Aid box? Yes { }, No { }

30. Does the teacher ask for information concerning your allergies before going in the field?

Yes { } No { }

APPENDIX 3: INTERVIEW SCHEDULE FOR LECTURERS TRAINING GEOGRAPHY TEACHERS IN FIELD PROJECT

I am a postgraduate student from the University of Zambia doing a Masters Programme in Geography Education. I am carrying out a research on the effectiveness of degree holder geography teachers in executing the field project in high schools in Lusaka.

You have been chosen to take part in this research. You are requested to take part through answering the questions below. This is an academic paper and all your responses will be used only for academic purposes and nothing else. You are further requested to be free to provide the required responses to enhance this study. Where options are provided, please tick the right answer, fill in the blanks or give a brief explanation in the spaces provided.

1. History of the course taught that is specifically for training geography teachers in field project work.
2. Time allocated for the training in field project.
3. Knowledge, skills and values that need to be acquired by students after training in field project.
4. Participation and performance of students in field project.
5. Geography teacher's duty before, during and after field project execution.
6. Challenges faced in training students in field project.
7. Solution to challenges faced in training students in field project

APPENDIX 4:QUESTIONNAIRE FOR GEOGRAPHY TEACHERS NOT TRAINED IN FIELD PROJECT

I am a postgraduate student from the University of Zambia doing a Masters Programme in Geography Education. I am carrying out a research on the effectiveness of degree holder geography teachers in executing the field work in high schools in Lusaka.

You have been chosen to take part in this research. You are requested to take part through answering the questions below. This is an academic paper and all your responses will be used only for academic purposes and nothing else.

Thanking you in advance.

GENERAL AND PERSONAL INFORMATION

1. Date of interviews:
2. Name of school:
3. Sex: Male { } Female { }
4. Do you enjoy teaching and executing field project? Yes { } No { }

FIELD PROJECT INFORMATION

5. Has the inclusion of field project in the geography curriculum made the subject interesting? Yes { } No { }
6. In which grade do you introduce your pupils to field project?
[a] 10, { } [b] 11, { }, [c] 12 { }
7. Do you get permission from parents before going for field execution? Yes { } No { }

8. How many times do you take your pupils for field execution before they write their final project report?

9. How do you help pupils come up with a problem statement?

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10. How do you help your pupils during data collection in the field?

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11. What safety measures do you put in place for pupils safety in the field?

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12. How do you help your pupils when they are writing the report?

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13. How accessible is the community to pupils during data collection?

[a] Easy{ }, [b] Difficult { }

14. At which stage in field project do pupils have problems? [a] Data collection{ }

[b] problem statement { } [c] Report writing,{ } [d] All the stages,{ }

15. If you have selected [d] in Question 14, what causes this?

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16. What challenges do you face in teaching and executing field project in High Schools?

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17. Do you have access to research instruments in your school? Yes { }, No { }

18. Does your not being trained in field project affect the way you execute it? Yes {} No {}

19. If yes to question 18, what would you want to learn more

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