Exploring the lived experiences of Grade 11 Geography Teachers regarding the feasibility of Fieldwork

by

Antonio Sikerete

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ETHICAL CLEARANCE CERTIFICATE

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DECLARATION

I, Antonio Sikerete, student number 11278006, thus declare that this dissertation, titled “Exploring the lived experiences of Grade 11 Geography Teachers regarding the feasibility of Fieldwork”, is my research project, and it has never been submitted for a degree at any other institution of higher learning, and all sources that I have used or quoted have been referenced. This dissertation complies with the requirements of the University of Pretoria.

Antonio Sikerete

4th January 2023

SUPERVISOR’S DECLARATION

I, Professor Clinton David van der Merwe, as the candidates’ supervisor, agree to the dissertation’s submission.

Prof. CD van der Merwe (Supervisor)

4th January 2023

DEDICATION

"For of him, and through him, and to him, are all things: to whom be glory for ever. Amen" Romans 11:36

This toil is a fruit of innumerable arduous sacrifices that my beautiful family and I have made to ultimately produce this masterpiece, it is therefore heartily dedicated to my beautiful wife, Emelia, and my son Bernardo Antonio Jnr, whom I cherish so dearly.

I dedicate this piece of work to my mother, who by the grace of God remained resilient in the midst of all the hardships and deprivations during my upbringing; ***'O ndi ku hole Meme'***. My brother Daniel, whose expression of brotherly affection, words of encouragement and prayers gave me strength throughout process, you are appreciated.

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Above all else, glory and honour to the Almighty God for gracing me with courage, strength, and wisdom for the realisation of this work.

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ABSTRACT

The South African national curriculum for school geography, the Curriculum Assessment Policy Statement (CAPS), lays emphasis on the requirement for all syllabus topics within the Geography Further Education and Training (FET) phase to be studied through an enquiry-based learning approach. This crucial emphasis on enquiry-based learning calls for fieldwork to be utilised as a significant and indispensable signature pedagogy, through which an enquiry-based learning approach is realised and made possible. A rich array of existing literature positively reckons fieldwork as a distinct learning strategy that enhances effective teaching and learning of geography education. However, despite all the acclaimed benefits concomitant to fieldwork as evidently laid in a myriad of literature, the application and implementation of fieldwork is crippled by various contextual barriers; causing fieldwork to be less applicable at school level. This study uses a qualitative and phenomenological philosophical approach to explore the lived experiences of Grade 11 geography teachers regarding the feasibility and applicability of fieldwork in their practice. The study used semi-structured interviews and focus groups to explore the experiences of the geography teachers regarding fieldwork. Geography teachers were asked to reflect on their fieldwork experiences and further share their perspectives about the feasible operationalisation of fieldwork in their practice. The findings of the study contribute significantly to the understanding of how geography fieldwork can be operationalised feasibly in the geography curriculum. The acquired understanding emanating from these research findings will further render an essential opportunity in informing the policymakers, curriculum developers, curriculum advisors and geography teachers regarding the applicability and efficacy of fieldwork in South Africa. The researcher endorses that an effective application of fieldwork creates a phenomenal opportunity for effective teaching and learning of geography.

Keywords: Fieldwork, enquiry-based learning, geography education, signature pedagogy, feasibility, operationalise, applicability, Curriculum Assessment Policy Statement (CAPS).

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EXPLORING THE LIVED EXPERIENCES OF GRADE 11 GEOGRAPHY TEACHERS REGARDING THE FEASIBILITY OF FIELDWORK

by

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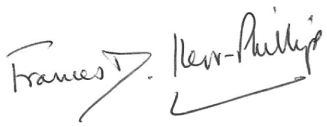
Supervisor: Prof. Clinton van der Merwe

This document certifies that I have edited the dissertation indicated above for English language, grammar, spelling, sentence construction, and clarity.



Frances Kerr-Phillips

List of abbreviations

DBE	Department of Basic Education
CAPS	Curriculum and Assessment Policy Statement
FET	Further Education and Training
GA	Geographical Association
MoE	Ministry of Education
NCS	National Curriculum Statement
HoD	Head of Department
IDT	Innovation Diffusion Theory
BEd	Bachelor of Education
ATP	Annual Teaching Plan
Ofsted	Office for Standards in Education
UK	United Kingdom

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CHAPTER 1: INTRODUCTION (GENERAL ORIENTATION)

1.1 INTRODUCTION AND BACKGROUND TO THE STUDY

The South African Curriculum Assessment Policy Statements (CAPS) advocates an 'enquiry-based approach' (DBE, 2011) to teaching and learning; allowing fieldwork as an indispensable signature pedagogy through which enquiry learning is made possible in the Geography Further Education and Training (FET) (Grades 10, 11 & 12) phase. Fundamentally, an 'enquiry-based approach' is typified as a core feature that lies at the heart of geography and evokes the discipline's tradition of discovery and exploration. Enquiry approaches and methods endow learners with an opportunity to think creatively and make meaning of objects observed in the surrounding environment (Ngcamu, 2000); it further enables learners to make significant connections between existing and new geographical knowledge. Margaret Roberts (2014) reinforced an enquiry-based approach in this regard:

> *"In school geography, the use of enquiry-based approaches to learning can give students access to powerful ways of geographical thinking, by helping students understand the nature of geographical knowledge and develop the skills needed to make sense of it", (Roberts, 2014:204).*

In the geography FET phase, fieldwork is embraced and adopted because it encapsulates enquiry learning; enabling learners to better comprehend their immediate environmental setting and the whole Earth at large. Fieldwork, which is simply defined as the medium that enables formal education outside the classroom to provide students with first-hand experience (Fuller et al. 2010; Lambert and Reiss, 2014); has been regarded by many, as a 'defining feature' and an important 'mode of learning' in geography (Hope, 2009; Fuller, 2006). In addition, prior research has positively reckoned fieldwork as an integral component to geography learning and teaching (Yang et al. 2014); and further advocating it in geography school curricula because it supports the geography curriculum by promoting geographical knowledge and understanding (Job, 1996) in a more practical and 'real' way.

According to Ofsted (2008), schools should therefore recognise the value of fieldwork for improving the standards and achievement in geography. Notwithstanding the recommendation, there is however little evidence as far as the application of geography fieldwork is concerned in the FET phase for the South African geography classroom. On the contrary, there is a diminishing trend of fieldwork application, with a negative connotation espoused by many geography teachers.

1.1.1 Definition of key terms/concepts

For the purpose of this dissertation, these terms and their meanings apply to the context of this study:

Fieldwork: There are various definitions given to fieldwork depending on the context of the discipline in which it is applied. In general, the term "fieldwork" refers to educational activities conducted in a field setting outside the normal classroom environment (Lai, 1999). Fieldwork denotes the educational endeavors that involve collection, recording and observation of data outside the classroom, specifically in the field setting. It could be in the school grounds, around neighboring areas or in a more distant locations (ACARA, 2016b). Fieldwork has long been defined as a learning process out of the doors of the classroom, which gives reality to the subject and saves it from being arid and too theoretical (Saarimen, 1969). All the above definitions complement the fact that fieldwork is an educational activity that must be done outside the walls of the classroom in order to create a sense of direct experience of reality.

Enquiry/Inquiry: Despite a considerable distinction between the two terms, in the context of this study, the terms will be used interchangeably and inextricably in relation to each other. The etymological sources regarding their prefixes 'en' and 'in' (Kumar, 2020) are however acknowledged in order to ensure their connotative meaning. Thus, for the purpose of this dissertation, the definition and meaning of these terms below apply to the context of this study.

I. **Inquiry:** In the Oxford dictionary, 'inquiry' is defined as *'an official process to find out the cause of something or to find out information about something'*. It is defined as a quest for truth, information or knowledge; seeking information by questioning (Exline and Costa, 2004). According to Alberta Learning (2004), inquiry is traditionally known as a dynamic process of being open to wonder and puzzlements and coming to know and understand the world. It is fundamentally embedded upon 'asking questions. As a systematic process,0 it aims to obtain scientific knowledge, resolving doubt or solving problems (Galileo Education Network, 2004).

II. **Enquiry:** The action of seeking truth, knowledge or information concerning something; search, research, investigation, examination (Simpson and Weiner, 1989). Enquiry is therefore an action of asking questions about something; in which answers are multiple, or provisional or both (Hutchings, 2007).

III. **Inquiry/Enquiry-based learning:** It is a process where students are involved in their learning, formulate questions, investigate widely and then build new understandings, meaning and knowledge (Clifford et al. 2004). Thus, it is a learning approach driven by a process of 'inquiry', ensuring that learners acquire an in-depth knowledgebase of the subject matter. Through inquiry-based learning; student inquirers are encouraged to explore new ideas and understandings through personal discoveries and explorations as well as interactions with objects and with other people (Ismail et al. 2006). Thus, inquiry-based learning is a multifaceted learning approach that encourages students to generate subject-matter related questions in order to direct them towards new relevant subject knowledge. Through this learning process, students become active participants rather than just passive recipients of content. Through this learning approach, students' questions, ideas and observations are of paramount importance and at the centre of their learning (Alberta Learning, 2004).

Signature pedagogy: A term coined by LS Shulman (2005) which refers to the characteristic form of teaching/learning in a given professional field that organises the fundamental ways in which future practitioners are educated for their profession

(Shulman, 2005). Fundamentally, signature pedagogy denotes a teaching style, approach, or form that is commonly utilised in a specific discipline. It implicitly describes what constitutes knowledge in a particular field and indispensably defines how certain things, ideas, phenomena, and processes become known in a particular discipline. Signature pedagogy is therefore an essential measure for teacher educators seeking to improve teaching and teacher education (Parker et al. 2016).

Feasibility: The state or degree of being easily or conveniently done (Simpson and Weiner, 1989). Essentially, it describes the easiness and difficultness of executing something. When applied to a particular context, 'feasibility' allows one to examine the state of whether something can be done and effectively executed.

Geography Education: Geographical education can be understood by explaining its relationship to the discipline of geography, detailing its aims, explaining its place in both formal and non-formal education, and considering what its essential components are (Khatiwada, 2021). Thus, the International Charter on Geographical Education identifies the aims of geographical education in terms of the knowledge, skills, attitudes, and values people will develop through its study and practice (CGE, 1992). According to a new review on 'The Commission on Geographical Education of the International Geographical Union' (IGU.CGE) by Graves and Stoltman (2015); the knowledge and understanding people and/or learners develop through geographical education are as follows:

i. *Develop a positive international worldview among learners; a positive worldview including knowledge about the physical environment, the diversity of cultural groups who inhabit those environments;*
ii. *Enables people to develop a worldview that incorporates physical and human information, concepts and skills;*
iii. *Enables students to critically analyse the world about them; and*
iv. *Acquire meaningful knowledge that enables people to make important decisions about the immediate and long human and environmental conditions on Earth.*

Curriculum Assessment Policy Statement (CAPS): A single, comprehensive, and concise policy document introduced by the Department of Basic Education (DBE) for all the subjects listed in the National Curriculum Statement (NCS) for Grades R – 12 (Du Plessis and Marais, 2015). The fundamental aim of the CAPS document is to provide educators with comprehensive guidance regarding how they ought to teach subject matter and finally provide quality assured assessment. Given the necessity to constantly amend and improve the country's quality of the curriculum and its implementation in order to improve the education system; as a result of 2009 findings, the NCS was reviewed in 2011 and amended to CAPS (Du Plessis and Marais, 2015). The amended NCS was called CAPS; the Curriculum Assessment Policy Statement (Du Plessis and Marais, 2015). Accordingly, CAPS stipulate the aim, scope, content, and assessment for each subject listed in the NCS Grades R-12 (Du Toit and Booyse, 2015).

1.1.2 Why fieldwork?

> *"Geography is fortunate in that places may be experienced at first hand. A significant emphasis of fieldwork is often on developing 'a sense of place' in pupils, an elusive holy grail in much geographical work" (Department of Education and Science, 1990:85).*

Fieldwork is widely embraced as an essential constituent in various academic disciplines as well as school subjects (particularly geography) across the world. It is widely endorsed because it offers a multiplicity of opportunities for students to better understand their surrounding environment. It is seen as the most powerful way to develop an understanding of the environment (Gerber, 1996). Significantly, the opportunities it renders for students to undergo direct and first-hand experience is particularly adored in the academic mainstream (Lai, 1999).

Owing to the acclaimed benefits concomitant with fieldwork towards geography education, fieldwork has been reckoned as an integral component in geography over the years because it has a long history and tradition (Yang et al. 2014; Fuller et al. 2010; Foskett, 1999). Fieldwork has been affectionately esteemed due to its capacity to aid learners with integrating theoretical and practical concepts, forming an experiential bridge between the classroom learning and the real world (France

and Haigh, 2018); and is therefore highly beneficial in bridging the divide between the classroom and the real world (Fuller, 2006). Lambert and Jones (2018) further asserted that its sense of freedom, of breaking out from the constraints of the regular classroom environment, exposes both teachers and learners to the possibility of discovery and, perhaps, the opportunity to recover something of the spirit of exploration that helped to create the discipline we call 'geography'. In reference to the benefits of fieldwork, this is how (Bland et al. 1996: 65) the greatest eulogy signify fieldwork as a signature pedagogy of geography education:

> *"Geography without fieldwork is like science without experiments; the 'field' is the geographic laboratory where young people experience first-hand landscapes, places, people, and issues, and where they can learn and practise geographical skills in real environments. Above all, fieldwork is enjoyable." (Bland et al. 1996).*

Stokes et al. (2011) presented a concise summary of the fundamental educational objectives regarding fieldwork as being to:

i. *Deepening conceptual understanding of the world and make sense of it.*
ii. *Reinforce ideas put forward in class (application and consolidation of learning [Lai, 1999]).*
iii. *Get a better understanding of theories.*
iv. *Experience what is being learned in class first-hand, aiding the learning process.*
v. *Learn or apply a particular approach, method, or skills.*
vi. *Enhance personal development and prepare for the future.*

1.1.3 The need for research on the feasibility of fieldwork

Despite all the acclaimed benefits associated with fieldwork, making it a pivotal signature pedagogy to geography education; there are several contextual constraints impeding its efficacy in geography education globally. Barriers to geography fieldwork have consequently led to diminishing trends regarding the implementation and integration of fieldwork with geography curriculum across the world. For instance, in the case of China, reportedly, findings established that

although geographical fieldwork can be viewed as an integral component of geographical education, it fell out of favour in Chinese secondary schools in the recent past (Yang et al. 2014). This downfall and disregard of fieldwork in Chinese secondary schools has been attributed to the following reasons: fieldwork is not included in the examinations and therefore learners deem it useless to improve their scores (Yang et al. 2014); some skills or knowledge resulting from conducting fieldwork are less applicable or transferrable in the real world (Yang et al. 2014); development of fieldwork has been affected by constraining factors such as limited budgets (Salter, 2001).

In Taiwan, findings revealed that the position of fieldwork within the geography curriculum is relatively underdeveloped in contrast with many other countries (Han and Foskett, 2007). Teachers in particular feel discouraged and demotivated to conduct fieldwork because it is not part of the formal examination, and therefore not compulsory (Yang et al. 2014). Additionally, concerns over size of class, safety and impacts on other classes of taking teachers and pupils out of schools are major constraints that are difficult to overcome (Han and Foskett, 2007).

Whereas in the case of Singapore, Chew (2008) affirms that despite the acknowledgement and appreciation of fieldwork by teachers, a call for elevation to the status of geography fieldwork is still required. Constraints such as a lack of time to plan, organise and implement fieldwork; size of classes and insufficient staffing to handle the number of students participating in fieldwork are amongst the reasons that discouraged teachers from conducting fieldwork (Chew, 2008) and further tarnish the status of fieldwork in Singapore.

In the United Kingdom (UK), despite the educational benefits ascribed to fieldwork, teachers have become increasingly reluctant to take to the field in recent years (Cook et al. 2006). The Education and Skills Committee (2005) has substantially reported that many schools in the UK attempting to conduct fieldwork were deterred by several contextual factors related to fieldwork. A false perception that a high degree of risk attaches to fieldwork, cumbersome bureaucracy, issues of funding,

time, and resources (Education and Skills Committee, 2005); were amongst the hindrances that made teachers to be reluctant to conduct fieldwork.

Premised from the aforementioned considerations, this study therefore calls for an in-depth exploration of the lived experiences of Grade 11 geography teachers regarding the application of fieldwork in their practice (with specific reference to Grade 11) to determine the degree of feasibility between 'fieldwork' and 'Geography curriculum' at high school level in South Africa. The study will use a qualitative and phenomenological philosophical approach to investigate the lived experiences of Grade 11 geography teachers in 5 high schools around the Waterberg District in Limpopo Province regarding the feasible operationalisation of fieldwork in the Grade 11 geography curriculum. For the purpose of this study, taking into account the constructed experiences, perspectives and self-narrated claims of geography teachers when integrating fieldwork in their practice; the researcher will endeavor to closely scrutinise how does the high school geography curriculum feasibly operationalises fieldwork.

In the next section, the researcher has given attention to articulating the background of the study in order to provide context to the discussion throughout this research. The background and context of the study will then lead to the problem statement, which is in general, the feasibility of fieldwork as manifested by the lived experiences of geography teachers in their practice.

1.2 BACKGROUND AND CONTEXT OF THE STUDY

Fieldwork has been widely acknowledged as an integral component of experiential learning and thus it occupies a central place in various academic disciplines and discourses (Chew, 2008; Oost et al. 2011; Hsu and Chen, 2010). Prior research has signified an opportunity for cognitive and affective learning development deriving from fieldwork. With such positive acclamations attributed to fieldwork, geographers regard fieldwork as a vital instrument for understanding our world through direct experience, for gathering basic data about this world, and as a fundamental method for enacting geographical education (Gerber and Chuan, 2000). It is the very heartbeat of teaching and learning (Fuller, 2012). Fieldwork plays an integral role in

geography education, distinctly marked as a signature pedagogy for teaching and learning. Fieldwork therefore functions as an experiential viaduct, which closes the chasm between geography taught and learned in classroom settings and the real world. A fresh look at the pedagogic implications for fieldwork in formal education offers ideas both for promoting it in geographical education and for maintaining its place in the geography curriculum (Gerber and Chuan, 2000).

Fundamental to geography education, the ancillary of fieldwork for geography education has been advocated and fostered in the geography FET phase curriculum in South Africa, with an inherent value in that it is capable of developing subject knowledge and a wide range of skills that cannot easily be acquired within the classroom environment. Although the position of fieldwork is highly variable globally (Foskett, 1999); prior studies, however, have shown that fieldwork impacts students' achievement and motivation positively. For instance, in England, post 1980, when the use of fieldwork in geography was commonplace in British secondary schools (Foskett, 1999); reportedly, high achievement in geography in schools was evinced due to a high profile for fieldwork in the curriculum (Ofsted, 2011).

In South Africa, the CAPS (2011) geography curriculum aims to exploit fieldwork by embodying skills such as:

> *"Practising field observation and mapping, interviewing people, interpreting sources, working with statistics" (DBE, 2011:9).*

Throughout, the geography CAPS (DBE, 2011), it admonishes the utilisation of fieldwork as a signature pedagogy for teaching and learning geography content throughout the three FET syllabi (Grade 10, 11 and 12). The inception of fieldwork in these curricula (as well as in various parts of the world) is largely underpinned by its ability to positively enhance the teaching and learning of geography. At all levels, including Higher Education, there is a widespread agreement that fieldwork at its best can raise motivation, reduce anxiety about learning and encourage a deeper rather than more superficial approach to learning (Lambert and Reiss, 2014).

Despite implementation within school curricula, the application of fieldwork has been crippled by various constraints, consequently impeding its efficient administration in the teaching and learning of geography at secondary school level. In various parts of the world, fieldwork is largely constrained by barriers, limiting its full-scale implementation and application. In a study conducted by Mohammed (2016), findings revealed that much is still yet to be expected as far as the use of fieldwork as a method of teaching is concerned. Teachers indicated that the use of fieldwork as a method of teaching geography is impinged upon by a number of challenges such as insufficient time allocated to fieldwork and inadequate funding (Mohammed, 2016). The same can be said in the UK; where a study conducted by Cook et al. (2006) revealed that fieldwork provision had declined over the years at four of the six schools (Ashgate, Bramley, Grange, and Rushton schools) due to risk factors, student behaviour, cost, social inclusion and red tape. Substantial evidence from various countries has proven declining trends of fieldwork as instigated by the contextual barriers such as lack of time, students' ill-behaviour, inadequate funding, and poor fieldwork expertise.

Conversely, much has been said and researched regarding the inherent value that fieldwork brings to the discipline, as well as the contextual constraints that may jeopardize the application of fieldwork; but little research has been sought and explored regarding the feasibility of fieldwork in the geography curriculum, as rendered from the perspectives of the lived experiences of geography teachers as the curators of this approach in their practice. Premised from this background, there is a much-needed call to explore the 'lived experiences' of Geography teachers regarding the application of fieldwork in order to ultimately determine the degree of feasibility of said fieldwork within the geography curriculum.

In the following section, attention is drawn to rationale and motivation of the study, which will warrant a systematic investigation in order to establish new conclusions.

1.3 RATIONALE AND MOTIVATION OF THE STUDY

1.3.1 Rationale of the study:

The rationale of the research was underpinned by the researcher's quest to explore and investigate the feasible operationalisation of fieldwork in the geography FET curriculum in Grade 11; considering the contextual constraints and barriers impeding the effective implementation of fieldwork in high schools.

Fieldwork encourages active learning and student engagement through direct experience with course material, enhances student understanding of geographical features and concepts, promotes skill development, reinforces course material, and increases student recall, comprehension, and application (Leydon and Turner, 2013; Kent and Foskett, 2000; Lai and Lam, 2013). Premised from the abovementioned insight, notwithstanding the inherent value and centrality of fieldwork to geography education, a dwindling decline and less application of geography fieldwork thereof at schools coupled with lethargic perception of geography teachers towards conducting fieldwork in their practice poses serious suspicions if fieldwork is feasibly operationalised within geography curricular.

As much as fieldwork is compellingly advocated in the CAPS (DBE, 2011), the diminishing frequency of geography fieldwork coupled with a lethargic experience of geography teachers aroused a keen interest in exploring the 'lived experiences' of geography teachers regarding the feasibility of fieldwork in the geography high school curriculum.

1.3.2 Personal motivation of the study:

The study is largely influenced by the researcher's personal motivation as a geography teacher, stirred by my reflective teaching experience as a teacher in the concerned subject. According to Oost et al. (2014), significant evidence shows that well-conceived, planned, taught, and followed up fieldwork gives learners the chance to develop their knowledge and skills essential to the experiences in the classroom. In the same way, as a geography teacher, the researcher is of the view that fieldwork clearly reinforce classroom content acquisition. However, on the contrary, it is unfortunately a sad reality that I have never witnessed geography fieldwork being conducted within my school circuit; nor when I was still a geography

learner, despite the substantiated inherent value that fieldwork brings to the geography discipline. It should also be noted that I as a researcher and also as a geography teacher; have never personally conducted a fieldwork lesson in my practice. Thus, I am personally intrigued to find out how and why geography teachers fail to apply fieldwork in their practice, as a signature pedagogy for developing learners' geographical understanding.

In the next section, the purpose and focus of the study is provided, including the principal research question; a succinct synopsis of the significance of the study; as well as the limitations of the study.

1.4 PURPOSE OF THE STUDY

1.4.1 Purpose and focus of the research

The purpose of this research is grounded upon exploring the lived experiences of geography teachers regarding the feasibility of fieldwork in the Grade 11 geography curriculum, in 5 high schools based in the Waterberg district in Limpopo province. Geography teachers in South Africa encounter various barriers when attempting to integrate fieldwork in their practice as per the subject-specific skills embodied in the CAPS (DBE, 2011; Wilmot and Dube, 2016; Ngcamu, 2000). In this regard, the research will ultimately be able to determine the extent of feasibility regarding the practicality and applicability of fieldwork within the geography high school curriculum, as per the constructed experiences that would be rendered by the research participants (geography teachers). In light of this problem, the primary purpose of this research is to gain insight into the 'lived experiences' of geography teachers with a specific focus on fieldwork as utilised by teachers in their practice.

1.4.2 Research question

This study will be guided and directed by the following principal question:

- What are the lived experiences of Grade 11 geography teachers pertaining to the implementation of fieldwork?

1.4.2.1. Research sub-questions

The following is the associated sub-questions in an attempt to answer the above principal questions:

- What are the factors that impede the application of fieldwork in teachers' practice?
- How much expertise do teachers possess to conduct fieldwork in their practice?
- How often do teachers undertake fieldwork in their lessons?
- What should be done to effectively integrate fieldwork into teaching and learning of geography?

1.4.3 Significance of the study

This is one of the first studies attempting to explore the lived experiences of geography teachers regarding the feasibility of fieldwork in the geography curriculum, particularly in the South African context. Owing to the scant and rare application of fieldwork, the ongoing difficulties of conducting fieldwork in the high school geography curriculum calls for a rigorous review regarding the adoption and implementation of fieldwork in the CAPS (DBE, 2011) in order to alleviate factors impinging on the feasibility of fieldwork in the geography curriculum. The ultimate findings of this study will play a pivotal role in informing the policy makers, curriculum developers, curriculum advisors and geography teachers regarding the applicability and efficacy of fieldwork in South Africa. It will also contribute immensely to a new body of knowledge regarding the significance of 'enquiry' in the context of geography education.

The ultimate findings of this study may be employed for:

1. Contributing to the understanding of how geography fieldwork is feasibly operationalised in the geography curriculum

This study intends to acquire a thorough and a detailed comprehension by critically investigating the lived experiences of geography teachers regarding the feasible operationalisation of fieldwork in their own practice. The researcher is of the understanding that an effective application of fieldwork endows a phenomenal opportunity for effective teaching and learning of geography. Therefore, the interpretation of meanings as rendered from the perspectives of the research

participants will contribute meaningfully to developing a theory of feasible operationalisation of fieldwork in geography education.

2. An opportunity to bridge the rhetoric-reality gap (Rice and Bulman, 2001) between the need and the practicability of geography fieldwork

As discussed earlier, fieldwork is constrained by various contextual factors which ultimately impinge upon its efficacy within the geography curriculum. By its in-depth qualitative-phenomenological approach, it is hoped that this study will contribute immensely to alleviating the discrepancy that exists between the declared need for fieldwork and its practicability and also provide recommendations for improvement.

3. Reinforce and inform fieldwork practice in geography education

This study envisages to generate valuable information that can be used to make informed decisions about fieldwork and promote its place in the geography education. The information can be used to improve fieldwork application at schools in particular. The rigorous emphasis and derivations on enquiry learning throughout this study will deem it necessary to uphold a robust need for fieldwork in geography education.

1.4.4 Limitations of the study

The homogeneity of the sample is often impossible due to the fact that the respondents (research participants) have varying levels of experience (years of teaching the subject) as well as differing qualifications levels. In the worst-case scenario, some of the geography teachers have not majored in geography at higher institutions of learning.

Other identified limiting factors:

1. A lack of schools due to the fact that fieldwork is rarely undertaken in South Africa, in some case, it is not undertaken at all.
2. A scarcity of scholarly literature regarding fieldwork undertaken in the context of South Africa.
3. The advent of Covid-19 has negatively hampered the application of fieldwork at schools to a greater extent. It has largely reduced applicability of fieldwork due to

the susceptibility of contracting the virus amongst learners and teachers. It has also impeded the researcher's ability to conduct fieldwork observations in order to acquire a heightened insight regarding how geography teachers feasibly operationalise fieldwork in their practice.

1.5 DISSERTATION OUTLINE

To assure a well-structured research report in which the content flows in a logical order and in which the research aims, and questions are addressed, this study is structured into seven main chapters as follows:

Chapter 1 briefly outlines the introduction and background to the study, further presenting the rationale and motivation of the study, including the main research question, purpose, significance of the study as well as the limitations of the study.

Chapter 2 extensively synthesizes the literature used in the context of this study regarding fieldwork, its role, constraints impeding its efficacy, international review regarding geography fieldwork as well as teachers' perspectives regarding the application of fieldwork in their practice. Furthermore, the position of fieldwork in the South African geography school curriculum is also reviewed.

Chapter 3 outlines the methods the researcher has chosen to research the problem understudy. It specifically addresses all the components related to the research design and methodology in detail, as well as the procedures and instruments undertaken to collect data in order to generate and present the findings of the research.

Chapter 4 presents findings emanating from the study. The chapter presents a final product of the analytic process.

Chapter 5 extensively analyses and interprets the presented data and ultimately discusses the findings in an attempt to elucidate the central and primary research question driving this study.

Chapter 6 hypothetically presents the established experiences of the participating geography teachers in relation to the theoretical framework espoused for this study.

Chapter 7 presents an overall reflection of the study, rendering key findings of the study, proposing, and suggesting approaches for future recommendations and finally concluding the study by recommending focus areas for further research.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

The centrality of fieldwork in geography education has widely been acknowledged by a myriad of geographers and researchers over the years. Its relevance to the discipline could well be fathomed from the following ancient Chinese adage:

> *"Tell me and I will forget. Show me and I may remember. Involve me and I will understand."* – Confucius

The facet of the significance of fieldwork across many disciplines in general has been probed by various academic scholars accordingly due to its intrinsic contributions to many disciplines. Rice and Bulman (2001) positively reckon that fieldwork constitutes an inherent role and appears to be an important component of the geography curriculum. Similarly, Phillips and Johns (2012) echo that the centrality of fieldwork to the discipline is as intrinsic to geographers as clinical practice is to medicine. Positive acclamations and acclaimed benefits concomitant to fieldwork endorse fieldwork as a distinctive approach within academic and professional geography discourses.

Yet despite all the acclaimed benefits concomitant to fieldwork, its implementation and feasibility within geography school curricula across the world are largely constrained. Its application is virtually ignored by various geography teachers in their practice due to apparent constraints impeding its efficacy. Rice and Bulman (2001) state the rhetoric-reality gap between the declared need for fieldwork and doing fieldwork is striking. Convincingly, prior research has widely acknowledged the importance of fieldwork; however, its methodology within geography school curricula has largely been neglected. This inertia could be the result of numerous constraints, past negative experiences, a lack of exposure, pressure of external examinations or subject focus changes (Ngcamu, 2000).

Therefore, the purpose of this chapter is to review literature regarding fieldwork extensively, and to consider its role and the constraints impeding its efficacy in the context of geography education. Imperatively for this study, it will also review

literature on the international perspective regarding geography fieldwork, teachers' perspectives on the application of fieldwork in their practice and the position of fieldwork in the South African geography school curriculum. Literature is reviewed for the purpose of providing a theoretical background for subsequent research; learning the breadth of research on the topic of interest; and answering practical questions by understanding what existing research has to say on the matter (Okoli and Schabram, 2010).

This chapter therefore presents seven main sections:

2.2: Fieldwork and geography education

2.3: Epistemology of fieldwork in the context of geography education

2.4: Pedagogical underpinnings of fieldwork in geography education

2.5: International perspectives on the implementation of geography fieldwork

2.6: Diminishing trends of fieldwork in geography education

2.7: Perceptions of geography teachers towards fieldwork

2.8: Status of fieldwork in the geography curriculum in South Africa

2.9: Conclusion

2.2. FIELDWORK IN GEOGRAPHY EDUCATION

This section will examine the practical links between fieldwork and geographical/experiential education. It will outline the potential purposes of fieldwork towards geography education; and furthermore, examine the contribution of fieldwork towards experiential learning in the context of geography education.

2.2.1. Fieldwork and geography education

Fieldwork is regarded by many as a key element of geography's heritage, and an expression of its contemporary power in education because it embodies exploration and enquiry (Lambert, 2011). Fieldwork has long been inextricably attached to the geography discipline, widely respected, and applauded as an important approach to the study of geography at both school level and higher institutions of learning.

Considering the central role of fieldwork to the discipline of geography, the Geographical Association (GA, UK) declared in its 2009 'manifesto' regarding geography as a 'discovery subject' and 'fieldwork' as an indispensable pillar of the geography subject (Hammond, 2017). The GA's manifesto, in conjunction with the Royal Geographical Society's (RGS) steadfast support for geographical fieldwork; casts off all the aspersions regarding the importance of 'real world' learning as essentially necessary for geography's identity as a subject discipline. Fieldwork is fundamental to the very nature of the discipline, beginning with the elementary level and subsequently research level. Kent et al. (1997) further affirm this inextricability by stating that fieldwork is as intrinsic to geography as clinical practice is to medicine. The rationale for fieldwork in geography education lies within both the educational and social gains for students when conducting fieldwork, but also as a method of developing and maintaining student and teacher identities as geographers (Lambert and Reiss, 2014).

Fieldwork has always been a definite embodiment of and the epitome of direct experience, necessitating the practice of exploration, discoveries and unravelling the secret natures of the Earth. According to Garipağaoğlu (2001), 'the field' is the laboratory of geographical research; therefore, the utilisation of this laboratory is only possible through undertaking geographical fieldwork trips (Kent et al. 1997). Fieldwork is widely adopted into the discipline because it can inspire a deep approach to learning by endowing formative experiences (Herrick, 2010). It is a feature that has been traditionally significant for geographers because it is concerned with the extraction of geographical data around the world (Hope, 2009; Lai, 1999). Stemming from a traditional/historical relevance and an inextricable relationship that fieldwork had towards the discipline, fieldwork is deemed highly important and indispensable for geography education. It is a unique feature that illumines the art of extrapolating geography education.

> *"Geography wants to take children outside the school and into the streets and fields; it wants to take the keyboard tapper out of their gloomy offices and into the rain or the sunshine" (Bonnet, 2008:80).*

Bonnet's (2008) assertion encapsulates the significant role that fieldwork denotes as an essential component of geography education; on the flip side, it is also raising a serious concern and rather posing a challenging question for geography teachers. Why should geography teachers deem it necessary "*to take children outside the school and into the streets and fields?'; 'What do we want children to do when they get there and what do we want them to bring back?"* (Kinder, 2013). The attempt to answering the above questions implicitly reveals the positive effects that fieldwork has on learning geography. The table below succinctly outlines the pivotal inextricability of fieldwork from geography education, the significant purpose of its introduction to geography education and the potential positive effects that it bequeaths to the discipline.

Table 2.1. The potential purposes of geographical fieldwork

Broad educational purpose	Geographical fieldwork aim	Outcomes for learners (from the Learning Outside the Classroom Manifesto) Job, 1996.
Conceptual	Developing knowledge and understanding of geographical processes, landforms, and issues	• Improved academic achievement • A bridge to higher-order learning • Opportunities for informal learning
Skills related	Developing skills in data collection, presentation, and analysis with real data	• Skills and independence in a widening range of environments • The ability to deal with uncertainty
Aesthetic	Developing sensitivity and appreciation of built and natural environments	• Stimulation, inspiration, and improved motivation • Nurturing of creativity
Values related	Developing empathy with views of others and care about/for the environment	• Development of active citizens and stewards of the environment
Social and personal development	Personal, learning and thinking skills such as independent	• Engaging and relevant learning for young people

	enquiry, critical thinking, decision-making and teamwork	• Challenge and the opportunity to take acceptable levels of risk • Improved attitude to learning • Reduced behavior problems and improved attendance

(Source adapted from Job, 1996)

2.2.2. Fieldwork as experiential learning

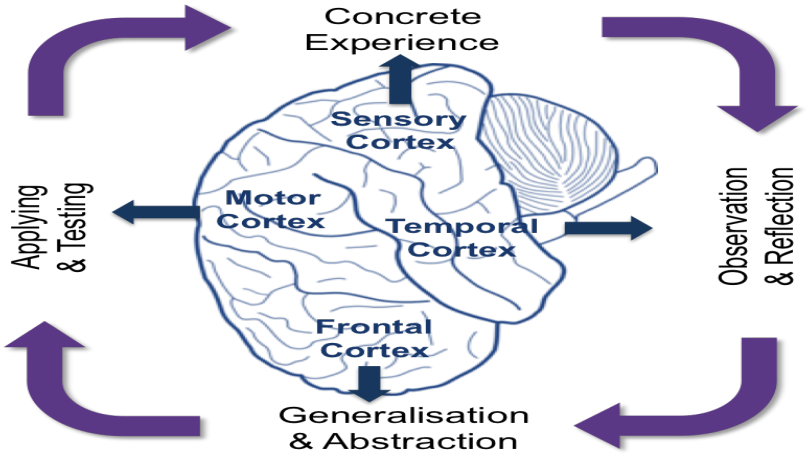
> *"Education must be conceived as a continuing reconstruction of experience: … the process and goal of education are one and the same thing" (Dewey 1897: 79).*

Premised from the definition of fieldwork as already established in the opening chapter, fieldwork is a pedagogic strategy which enhances students' capacity to learn through the direct and first-hand experience of phenomena and processes in and out of the classroom setting (Lai, 1999). It is therefore undoubtedly an experiential learning encounter that is sometimes equated to 'learning by doing' (Jenkins, 1994).

Experiential learning is fundamentally rooted in philosophy of education that was referred to by Dewey (1938) as a "theory of experience". Experiential learning theory draws on the work of the prominent 20th century scholars notably John Dewey and Jean Piaget; who handed experience a central role in their theories of learning and human development (Kolb and Kolb, 2005). According to Kolb (1984), experiential learning is a process whereby knowledge is created through transformation of experience. Students therefore interact and reflect upon these experiences in order to construct new experiences and thereafter translate them to knowledge. Lai (1999) affirms that various experiential educators define experiential learning as a sequence of stages. These sequences of stages are best portrayed in a well-known model developed by Kolb (1984) which depicts a cycle of four main stages that students undergo in order to grasp experience. The students sequentially undergo the following stages as a basis of knowledge construction; first, concrete experience; second, observation; third, formulation and generalisations of abstract concepts; fourth, active experimentation (Kolb and Kolb, 2012; Lai, 1999; Kolb, 1984). The

experiential learning cycle is illustrated in the figure below, which arises from the structure of the brain, according to Zull (2002):

Figure 2.1: Experiential learning cycle



Experiential Learning Cycle and regions of the cerebral cortex (Zull, 2002:18-19).

The experiential learning theory as meticulously expounded by Kolb's (1984) model which stresses that the heart of learning fundamentally lies in the manner in which experience is sensibly processed and the critical reflection that ultimately springs forth from the experiences. Healey and Jenkins (2000) assert that the core of Kolb's four-stage model is a simple description of a learning cycle that shows how experience is translated through reflection into concepts, which in turn are used as guides for active experimentation and the choice of new experiences.

Even though a review of literature on geographical fieldwork has revealed a sporadic attempt to mention fieldwork as providing an opportunity for experiential learning (Lai, 1999); however, with reference to experiential learning theories, literature notes and affirms the inextricable correlation and parallelism that exist between experiential learning and fieldwork. The theory parallels, in part, the (scientific) research method of observation, hypothesis-building, theory and testing. Therefore, experience parallels observation and reflection parallels hypothesis-building (Healey and Jenkins, 2000). On account of these aforementioned grounds, the experiential learning theory supplements the theoretical rationale for the importance of experiential learning through fieldwork. The application of fieldwork therefore

provides the opportunity for experiential learning, which fundamentally emphasizes the importance of acquiring knowledge through experiences that are constructed through the processes of fieldwork activities. The connection between fieldwork and experiential learning is therefore widely recognised and acknowledged by geographers. This connection describes how students get in the process of learning by doing, and thereafter become engaged in the process of knowledge construction through their critical reflection upon their endeavors on fieldwork activities.

2.3. EPISTEMOLOGY OF FIELDWORK IN THE CONTEXT OF GEOGRAPHY EDUCATION

> *"Fieldwork is not a separate teaching style to be adopted in geographical education, but a sine qua non of all good education through geography" (Lidstone, 1988:59).*

There are various definitions and meanings attributed to fieldwork depending on which in discipline it is being undertaken. Geography, however, espouses a distinct and autonomous delineation on fieldwork as opposed to other disciplines. Arguably, questions concerning the world outside the classroom are so important in geography, geology, ecology, and archaeology that they are inherently subject fields (Clark, 1997). Such questions provide the raison d'etre (the important reason or purpose for existence) for these disciplines and fieldwork is therefore intrinsic to becoming a practitioner in these areas (Clark, 1997). In the context of geography, fieldwork is rather defined distinctively and exclusively due to the following rationalisations (fundamental to the discipline):

i. Firstly, it is an important attribute that defines geography as a discipline (Phillips and Johns, 2012); through which famous, impressive discoveries and advancement in geography have been made by geographers and researchers through their attachment to the field. It is a definitive component of geographical endeavours which allows the discipline to maintain its distinctiveness from other branches of science (Pawson and Teather, 2002).
ii. Secondly, fieldwork is the best and most immediate means of bringing the two aspects of the subject (i.e. a body of knowledge and a distinctive method of study)

together in the experience of a pupil. Therefore, fieldwork is a necessary part of geography education; it is not an optional extra (Bailey, 1974:184).

iii. Thirdly, geography without fieldwork is like science without experiments; the 'field' is the geographic laboratory where young people experience at first hand landscapes, places, people, and issues, and where they can learn and practise geographical skills in a real environment (Bland et al., 1996:165).

2.3.1. Conceptualising 'geography fieldwork'

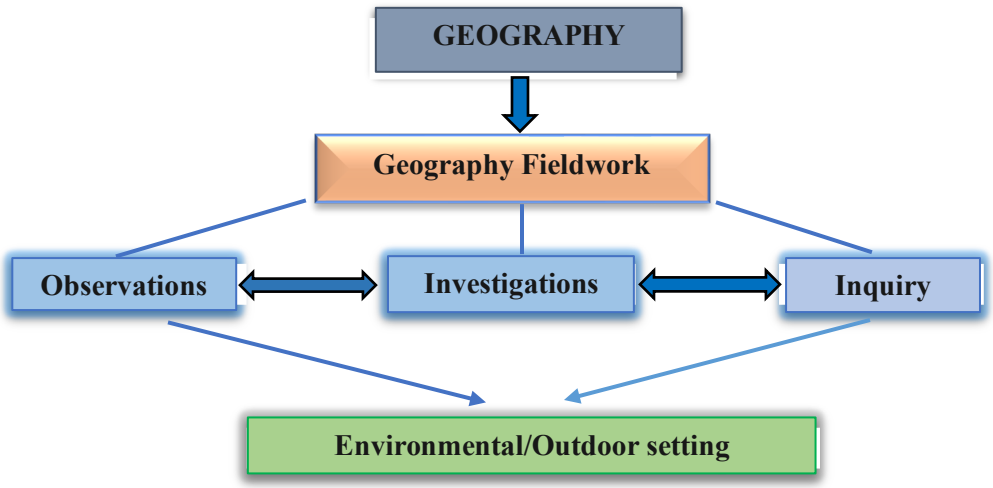
Lonergan and Andresen (1988) define 'the field' as any place where supervised learning can take place via first-hand experience, outside the constraints of the four-wall classroom setting. Similarly, in their insightful review, Oost et al (2001) defined fieldwork as an act of undertaking learning activities in outdoor settings, linked with particular curriculum subjects. In the Australian curriculum of geography education, fieldwork is defined as any activity involving observation and recording of information outside a classroom (Preston, 2016).

Premised from the abovementioned definitions, unlike other disciplines, fieldwork in geography is inextricably attached to the environmental setting. Defining fieldwork in geography education should be substantiated upon the environmental and outdoor setting that is somehow linked to the geography syllabus, as geography and 'the field' are completely intertwined. Robertson (2003) adds that geographical fieldwork is an active process through which learners construct knowledge about the work in order to learn and make connections between what they already know and new information and ways of seeing things. The principal rationale behind such a viscous attachment to the environmental or outdoor setting is to maximise the full capacity of developing geographical inquiry which necessitates a complete reinforcement of theoretical knowledge acquired in class. Geography fieldwork, through which learners extensively engage in observations and experiments, allows them to grasp the correlation of the physical and human aspects of their own environments (Ngcamu, 2000).

Geography fieldwork is a fundamental constituent of geography teaching and learning. It is an integral and indispensable learning approach fundamental to

geography teaching and learning, and therefore remains an essential component to geography curriculum (Rice and Bulman, 2001). Central to geography education is the conceptual framework of geography fieldwork developed by Bland et al. (1996) which comprises of three inter-linked approaches – observations, investigations, and inquiry; encapsulates a profound way through which knowledge and geographic skills are acquired through fieldwork, which is seen as the most powerful way to develop understanding of the environment (Gerber, 1996). The processes outlined in the sketch below exemplify the interdependence of these three approaches and provide an excellent way through which learners use the five geographic skills: asking geographic questions, acquiring geographic information, organising geographic information, analysing geographic information, and answering geographic questions (Rice and Bulman, 2001):

Figure 2.2: Conceptualising Geography fieldwork



Conceptualising Geography fieldwork (Author, 2022)

The above sketch therefore clearly demonstrates the central role that fieldwork plays as a defining feature of geography. Fieldwork is therefore a mechanism that enhances the acquisition of 'real' geographical knowledge that takes place in the field as a result of an interaction of physical, mental and emotional experiences (Stoddart, 1986). Consequently, in the context of geography education, fieldwork is defined as that formal process of the study of the environment that takes place

outside the classroom and that uses the environment as a learning resource (Scott et al, 2006).

2.3.2. Approaches to fieldwork in geography education

A rich array of geography literature continually affirms and asserts the importance of fieldwork in the learning of geography across the world. Fieldwork continues to be asserted and recognised as a vital mode of teaching in geography studies and it remains a central element at GCSE (General Certificate of Secondary Education), A-level and in higher education in UK (Rynne, 1998; Kent et al. 1997). Reckoning its centrality to geography education, numerous geographers have thus postulated various methodologies and approaches over the past years in pursuit of effective ways in order to make the best out of fieldwork. The subsequent section or discussion reviews various developments and/or approaches to geography fieldwork overtime.

i. **Traditional fieldwork (Cook's Tour approach)**

In the mid-nineteenth century, Thomas Cook was at the forefront of conducting school outings for public excursions in England, the success of which prompted him to pioneer tours of extended regions (Fuller and France, 2015). The Cook's tour fieldtrip was named after Thomas Cook, who was the first to arrange a privately chartered train for a public excursion in 1841 (Cook, 2014); subsequently, an increasing number of residential field trips to unfamiliar environments in distant localities were organised and started to gain momentum (Lai, 1999). According to Kent et al. (1997), the Cook's Tour approach is the simplest and most traditional form of observational fieldwork, it was the predominant mode of field teaching in the 1950s and 1960s. Subject matter content/knowledge generation through fieldwork was initially built upon the 'Cook's Tour' approach (Kent et al. 1997), which was traditionally associated with teacher-learner centered learning and minimal student motivation and collaboration (Fuller et al. 2000). Fundamental to Cook's approach, the teacher usurps the essential role of being the sole provider of subject knowledge, (where teachers virtually ignore the role of students being active inquirers) because the origin and tradition of this approach is largely underpinned by observations and recording of environmental information. Observations and recordings were the core

component and at the heart of this approach; in this stage the children explore an area so that they can then look at the landscape with greater insight and with a fresh eye (Everson, 1973).

The traditional fieldtrip approach was primarily characterised as 'field teaching' (Board, 1965): inherent in this approach was a degree of diametrical didacticism, in which students were guided and channelled in their observations. Learning was reduced and largely confined to visible landscapes with the exclusion of processes which were invisible (Board, 1965).

The Cook's Tour or 'Look-see' as it was affectionately called (Butler, 2000) however came under serious scrutiny and was quickly recognised as the most boring mode of fieldwork due to its sense of disengagement with the students (Brown, 1969). Given its essentially non-participatory approach which required students to be passive, students later resorted to labelling it as being non-interactive and boring (Kent et al. 1997). Despite its lack of student engagement, Cook's Tours still enabled observational fieldtrips (or at least as a component part of a fieldtrip), essentially worth the praise because such trips have significantly fostered students' engagement in their awe and appreciation for geographical education (Fuller and France, 2015). Couch (1985) argued that carefully directed observation can be a useful learning method, especially if reinforced by on-site tutorial-style discussion.

ii. **Hypothesis-testing fieldwork (problem-orientated/project-based fieldwork)**

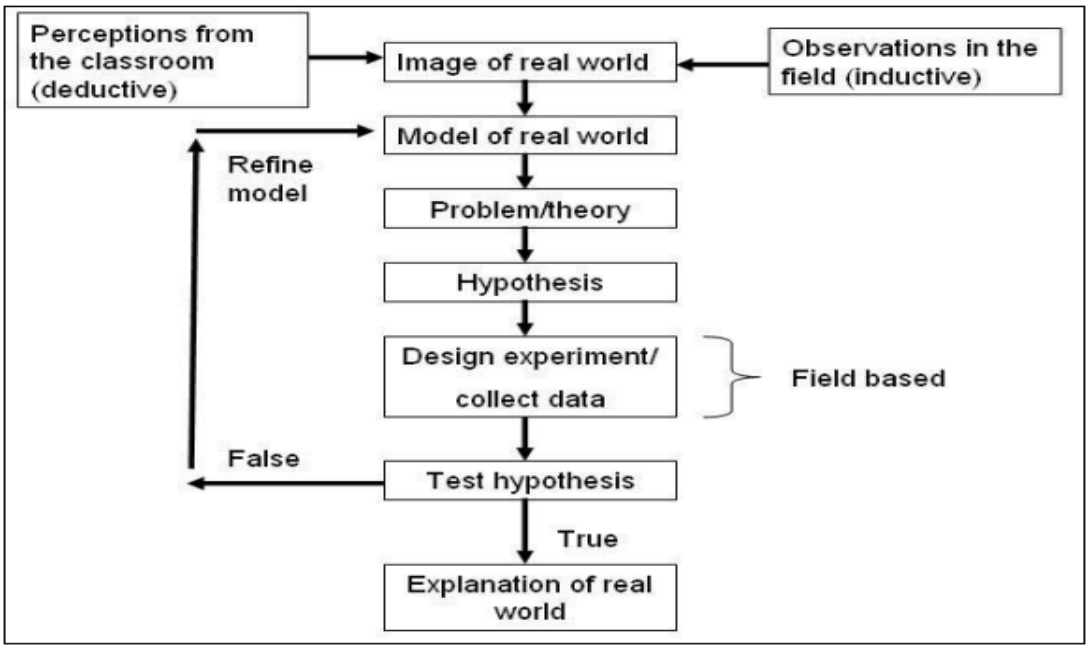
Methodological alterations in both school and academic geography in the 1960s made an essential transition from a regional approach to the positivist approach; which contributed immensely and made a significant impact on school geography in the early 1970s (Smit, 1994). That methodological transition resulted in significant changes in approaches to geographical fieldwork in schools as well (Blachford, 1971). As a result, the initial traditional fieldwork approach was brought into dispute. Lai (1999) asserted that the value of observational fieldwork was brought into question and as a result a need to adopt a fieldwork approach with scientific vigor and a more active role for students was called for. The latter was then adopted and labelled the 'hypothesis-testing fieldwork' approach; inherently rooted in hypothesis

generation and testing, data collection, statistical analysis, interpretation, and report writing (Kent et al. 1997).

The hypothesis testing approach was regarded as a 'scientific' approach to geography fieldwork, which gained a formidable momentum during the quantitative revolution of the 1960s and 1970s: thenceforth, it remained the mainstay of geographical fieldwork (Kinder, 2013). Hypothesis testing fieldwork is also labelled as 'field investigation' (Lai, 1999); it was regarded as a 'method of testing preconceived theories' or 'systematic survey methods' (Board, 1965). In this setting, geographical theory is then consulted to generate and formulate a hypothesis, from which appropriate field data will be gathered and further analysed using statistical techniques to determine the acceptance or rejection of the hypothesis.

According to Ferguson et al. (1981), the major transition in the school curriculum diverging from field teaching or traditional field trip towards a positivist dimension was widely acclaimed and received wide support, particularly in the senior secondary levels. Fieldwork promotes a logical and sequential approach to investigation, allowing students to make sense of highly complex situations through the careful examination of evidence (Kinder, 2013). On that basis, it was widely accepted as most beneficial due to multiple valuable experiences that students acquire. According to the Royal Geographical Society, the hypothesis testing approach promotes a logical and sequential approach to investigation, allowing students to make sense of highly complex situations just as outlined in Job's (1999) hypothesis testing framework below:

Figure 2.3: A sequential framework for hypothesis testing



(Adapted from Job, 1999).

Unfortunately, from a methodological viewpoint, several shortcomings and criticisms were levelled against the hypothesis testing fieldwork approach based on its positivist standpoints as follows:

1. The narrow focus of work which can limit a holistic appreciation of a place and the limited use made of the students' prior understanding or experience (Caton, 2006).
2. The approach may be seen as relatively narrow and over simplistic, ignoring as it does the 'cultural turn' of geography at university level and the move towards more participatory approaches which attempt to take account of the complexity of the real-world situations (Powell, 2002).
3. The nomothetic, law-seeking approach leads people away from any sense of the uniqueness of the place (Job, 1996).
4. Only quantifiable forms of evidence were considered valid. Feelings, emotions, sensations, and opinions were negated (Job, 1996).

5. Inquiry-based investigation is highly advocated, which is an extremely tightly structured investigation; with the problem and the method defined by the teacher and the rules of scientific investigation tightly applied (Hall, 1976).

iii. **Enquiry driven fieldwork (introduction of transferable skills)**

> *"The value of an academic subject lies in the extent to which it answers questions we are interested in" (Roberts, 2009:181).*

As the name suggests, this fieldwork approach is largely concerned with posing questions that are worth finding answers and solutions to. An enquiry fieldwork approach is inherently rooted in the principles of 'geographical enquiry': a process that involves the active participation of students (Foley, 2010). It is essentially concerned with posing and investigating questions (Kinder, 2013). This approach is centred around the investigation of first-hand data through fieldwork to necessitate a robust engagement by students which may result in meaningful outcomes.

A systematic approach is therefore employed when undertaking enquiry-driven fieldwork whether local or distant; which involves a framework to structure enquiry by getting students to ask geographical questions, and to select and collect data to help answer questions (Foley, 2010). Herewith are the 'well-conceived questions' as proposed by Job (1999), which underpin the strategic design and or/goals of a good enquiry-driven fieldwork:

- What is this place like?
- What distinguishes this place from other places I know?
- What does it mean to me? What does it mean to other people who live here?
- How did it used to be? How might it change?
- How is it related to other places?
- Are there different views about the change in locality? How would we prefer to change it?
- Can it go on like this?

Although these questions are generic, and not in themselves 'fieldwork strategies', they do draw on some powerful thinking and seem likely to unlock the curiosity of our students in the field (Kinder, 2013). Students' engagement is of paramount

importance in this approach. Kinder (2013) conscientises the pitfalls of not involving students (for instance; the teacher posing questions without reference to students' needs and interests) and posing questions that limit the possibilities of geographical thinking as a barrier to enquiry itself. It is therefore important that the manner in which questions are posed and phrased is at the forefront of ensuring that they promote geographical thinking among the students. Riley (2000) asserts that the quality of questions posed is crucial to the success of the enquiry approach.

iv. **Discovery fieldwork approach**

A discovery fieldwork approach involves the teacher taking a calculated risk (Kinder, 2013). It endows a significant platform for students to discover their own focus by exploring the environmental landscape for themselves while being assisted and guided throughout the process by the teacher, who according to Preston (2016) assumes the role of being the fieldwork guide; who acts as animateur (Job, 1996).

The principle of exploration and discovery is at the heart of this approach, which creates opportunities for new personal discoveries and observations by students. The emphasis of discovery fieldwork is on exploration and the development of independent learning skills by students (Kinder, 2013). It is aimed at fostering the influential abilities of observations and critical thoughtfulness towards the environment while simultaneously contributing to the development and honing of essential learning skills. Driven by their own curiosity in the environment/field, students are granted the opportunity to use generic tools and techniques such as taking photographs, making observations or collecting objects (Kinder, 2013). As they discover features in an environment, they develop a sense of where they are and begin to generate ideas and questions for further discovery (Royal Geographical Society). A range of arguments levelled for and against the use of discovery fieldwork approach is succinctly laid out in the table below:

Table 2. 2 Arguments for and against the use of discovery approaches

Arguments against/Concerns	Arguments for/Benefits
Requires good standards of students' discipline and behavior	Promotes good behaviour by transferring responsibility to students
Causes concerns over safety as locations not as clearly specified	Promotes responsible approach to identifying and managing risk
Allows students to focus on issues/aspects that are not related to the curriculum	Builds on students' prior experience and understanding
Difficult for the teacher to 'plan for' – limited activity structure	Engages students in learning and develops personal, learning and thinking skills

(Adapted from the Royal Geographical Society)

v. Earth education (Sensory fieldwork approach)

Over time, various methodologies and approaches that have been previously postulated and developed gradually started falling out of favour as they fail to heighten students' awareness and fostering their personal responses towards the environments. Rynne (1998) remarked that these methodologies and approaches have yet to make an impact at the secondary school level. Given the ineffectiveness of these approaches and methodologies, geography teachers have thus proposed new approaches to field investigation to encourage students to engage themselves in the environment, to respond and to express themselves (Lai, 1999). Thus, proponents of environmental education started advocating 'earth education', which profoundly and objectively aims to create concern and prompt action on environmental social issues (Kinder, 2013).

Earth education which is synonymously espoused as 'sensory fieldwork', it is more value-laden as 'earth-education'; which is an approach that is most often aimed at re-establishing the somewhat fractured connections between the people and nature (Job, 1999). A sensory approach is designed to affect a deep emotional response to environments by enabling students to connect with their sense of smell, touch, sight, hearing and even taste, as opposed to undertaking ordinary tasks (Kinder, 2013).

According to Preston (2016), a sensory fieldwork approach encourages students to use all their senses to develop *new sensitivities*, a sense of place and a care of place. Practically, it contributes significantly to a broader range of visualisation and exploration, while deepening and extending a range of other possible sensory aspects such as touch, sound, and taste.

Hawkins (1987) hypothesised a model for 'outdoor education' that provides a structured route through the earth education approach which explicitly advances students' acclimatisation towards the environment. According to Hawkins (1987), the earth education approach heightens students' awareness and equips them with relevant knowledge and understanding, develop in them a feeling of personal concern and responsibility and leads them ultimately to participate in social and environmental decision-making. Job (1996) further argued that an earth education approach could achieve the elusive balance between learning activities which engage the emotions and the sense on the one hand and understanding of ecological and geographical principles on the other hand.

2.4. PEDAGOGICAL UNDERPINNINGS OF FIELDWORK IN GEOGRAPHY EDUCATION

Fieldwork – that is, learning directly in the untidy world outside the classroom – is an essential component of geography education (Geographical Association, 2009). Fieldwork has a long valuable and effectual tradition as a distinct learning strategy in geography education (Stokes et al. 2011), thus making it a heartbeat of teaching and learning of physical geography (Fuller, 2012). Fieldwork played a fundamental role in the development and advancement of the geography discipline. Stoddart (1986) equally argues that fieldwork has long been regarded as fundamental to the subject of geography at the elementary level as well as the research level. A rich array of prior research and literature has accentuated the central role of fieldwork in geography education.

Geography fieldwork is a distinctive approach in both the disciplinary tradition and in the teaching and learning of the subject at school level (Bland et al. 1996; Foskett, 1997). On the basis of this substantial evidence, Ministries of Education (MoE) in

various countries went on to adopt and integrated fieldwork in their national curricula and geography syllabi; this is due to fieldwork adeptness to promote active learning models in real contexts (Fuller, 2015). In England and Wales for instance, at compulsory education level, fieldwork is an essential part of both the national curriculum (age 5 – 14) and the General Certificate of Secondary Education (GCSE) syllabus (age 14 – 16) and for those candidates aged between 16 – 19 who study Advanced Level Geography (Han and Foskett, 2007). In Singapore, fieldwork has flourished in the context of wider efforts by educators, supported by the MoE, to encourage independent, creative, and critical learning (Chuan and Poh, 2000). Fieldwork is further identified as a 'signature pedagogy' for school geography in Singapore (Shulman, 2005a). In Namibia, fieldwork is reinforced in the geography syllabi from Grades 10 – 11 and therefore highly encouraged in the geography subject (Namibia. MoE, 2016:32-34) as it promotes a particular emphasis on critical thinking and active real-life learning (Simasiku, 2012). Whereas in South Africa, fieldwork is strongly advocated in CAPS (DBE, 2011) as a requisite approach to geography teaching and learning in geography in the FET phase (Grade 10, 11 and 12).

According to Chew (2008), educational psychologists such as Piaget, Vygotsky, Bruner and Gagne have suggested that the interaction between children and the environment plays an important role in learning. With reference to psychological models advanced by Piaget, Bruner and Bloom, fieldwork can enhance pupils' capabilities and development (Han and Foskett, 2007). Exploration, investigation, enquiry, and discoveries are fundamental attributes of the geography discipline. As a result, fieldwork is also closely analogous to such attributes. Substantial evidence established that well-conceived, planned, taught, and followed up fieldwork offers students the opportunity to develop their knowledge and skills supplementary to experiences in the classroom (Rickinson et al., 2004). The value of fieldwork arguably lies in its adeptness to actively engage students in the real world in a manner difficult to achieve in the confines of the classroom, promoting a deep approach to learning which not only aids in development of subject specific skills but also in transferrable skills (Cook, 2010; Fuller et al., 2006; Hope, 2009). Well-

conceived geography fieldwork evokes significant values fundamental to the discipline in the following ways:

i. **Geographical Enquiry**

'Geographical Investigation both satisfies and nourishes curiosity' (Geographical Association 2009:5).

According to the Geographical Association (2009), enquiry and investigation lie at the heart of geographical thinking. Although the meaning of geographical enquiry varies considerably, 'enquiry' has been an instrumental and statutory part of geography curricula (Roberts, 2010). Oost et al. (2011) assert that in recent times, there has been a growing interest in making the learning process more enquiry driven. Based on such significant grounds, Roberts (2003:6) went on to define 'geographical enquiry' in the context of geography as follows:

> *"An active process through which learners construct knowledge about the world. In order to learn, students need to make connections between what they already know and new information and new ways of seeing things. I think they do this through a process of enquiry. Geographical enquiry should be focused on real issues, on places and spaces that mean something to students and on real data of the kind that students are likely to encounter in the world outside the classroom".*

Arguably, well-executed fieldwork may successfully activate learning opportunities that are enquiry driven, which may consequently foster a deep geographical understanding. Since the learners are actively engaged in a range of activities such as measuring, observing, counting, using the field as learning resources (Bednarz, 1999), the construction of geographical knowledge becomes directly involved. Similarly, Roberts (2010) avers that this construction of geographical knowledge is shaped by the questions geographers ask, how they set about answering them and their existing understanding and imaginations.

Geographical enquiry is therefore essential to geography learning as it is more learner-centered, which highly encourages learners to contemplate and deliberate

as geographers through active investigations of geographical questions and issues. It heightens learners' capabilities of developing essential skills and qualities which are fundamental for learning geography. Geographical enquiry is an antithesis of the traditional textbook-based method of teaching geography, in contrast it connects learners with wide-ranging and stimulating geographic questions and associated data that enables them to consider the subject in greater depths (Biddulph et al. 2015). Not only is geographical enquiry a statutory part and signature pedagogy for geography learning, but it is also undoubtedly widely deemed as the most authentic approach for geography education.

While contemporary and traditional ways of teaching and learning geography only render a didactic means of knowledge acquisition, they do not enable students to acquire 'enquiry' skills that are required to help prepare students for the future through geography education. To enhance authenticity of geography education, Pollard and Hasslewood (2015) strongly propose that fieldwork and enquiry should permeate geography education at all levels. This distinctly suggests that all kinds of activities undertaken in geography education at school level should be comprised of some elements of geographical enquiry. In this regard, Awases (2015) asserts that geographical enquiry is seen to influencing and reflecting the perspective that learners are being occupied intellectually in their own active learning.

Fieldwork therefore provides the prospects for an enhancement of geographical enquiry: an avenue through which students use their immediate advanced analytic skills in order to build geographical knowledge (Pollard and Hasslewood, 2015).

ii. **Cognitive Development**

Over the years, various learning theories have been postulated, developed, and popularised in educational psychology, with attempts to apprise educators of strategic methods for learners' development and knowledge construction. Piaget's (1954) and Vygotsky's (1962) theories on cognitive development asserted substantial and considerable methodologies that learners undergo to achieve higher cognition levels. According to Lim (2018) who adds that while these theories were

largely formulated based on classroom settings, the concepts can still be applied to inform our understanding of learning in the field.

Effective fieldwork endows a significant opportunity for cognitive development, which further capacitates learners for higher-order learning. According to Oost et al. (2011), cognitive development is unswervingly linked to learning outcomes through processing of information and construction of meaning. Fundamentally, given the experiential nature of geography fieldwork (Lim, 2018), when actively applied, more meaningful learning occurs and cognitive development is enhanced (Foskett, 1999).

Well-executed fieldwork undoubtedly endows learners with an opportunity to be actively engrossed in enquiry-based learning, which plays an important role in advancing learners' cognitive capacity. Advantageously, enquiry-based learning ultimately promotes the development of higher level of thinking, such as analysing and evaluating concepts, processes, procedures, and principles (Anderson and Krathwohl, 2001). Just as reflected below in the revised Bloom's taxonomy (Anderson and Krathwohl, 2001); in the context of geography education, through enquiry-based learning that learners demonstrate during fieldwork, learners are able to transit from the lower levels of the hierarchy in the conceptual taxonomy to higher levels of the hierarchy, thus fostering their cognitive development. Through fieldwork, learners make a drastic transition and move higher up the hierarchy. They move from merely 'remembering' geographical concepts acquired in the classroom (which is at the lower base of the hierarchy) and move higher up to 'Evaluating', 'Creating', hypothesizing and reorganising content acquired in the classroom and apply it to the real and physical environment (which is at the top of the hierarchy).

Table 2.3: Bloom's Revised taxonomy

	In geography, this involves (for example):
Creating	Reorganising into a different pattern or structure; creating something new; imagining or designing a solution; planning and predicting/hypothesising/speculating
Evaluating	Critically examining information; making a judgement and justifying an opinion; understanding the views/opinions of others;

	empathizing; balancing arguments and decision making; reflecting on the effectiveness of an enquiry
Analyzing	Exploring relationships between factors; investigating and unpicking information; putting new and old information together; inferring new information from evidence; drawing conclusions
Applying	Using information in a new context such as applying a model; simple problem solving; illustrating with an example
Understanding	Making sense out of information, such as interpreting a graph or describing a process; comparing places; explaining the pros and cons of a site or location
Remembering	Recalling facts, identifying a place on a map

(Adapted from Anderson and Krathwohl, 2001)

Primarily, prior research has evidenced that learners who take part in field-based learning fare better, display higher cognitive abilities and demonstrate high-order thinking skills. Evidently, a study conducted by Kern and Carpenter (1986) established that students who participated in a field-orientated class performed better in subject-orientated tasks that required higher-order thinking skills, compared to those engaged in classroom-based learning (Lim, 2018). Henry and Murray (2018) further echo that fieldwork has a unique potential to engage students' cognitive skills, which contributes immensely to geography learning. When learners adopt a 'metacognitive' approach to learning geography, this becomes essential to the learners as they start to cogitate and deliberate as geographers. Furthermore, learners start to take ownership of their learning by defining learning goals and monitoring their progress as they work: field experience is thus transformed into knowledge (Henry and Murray, 2018).

iii. **Affective Development:**

According to Brett et al. (2003), mounting evidence supports the position that human beings are inherently emotional beings, and that emotion and affective development impacts human development and behavior in a wide variety of important ways. Fundamental to effective learning, 'affective' activities deal with emotions, feelings, and values which lead to perceptions of learning tasks (moods) that help to determine learners' approaches to learning activities (Boyle et al. 2007).

Fieldwork has long been appreciated in geography education, which has the potential to actively engage learners' affective domains. The affective domain, which contains learning skills that are predominantly related to emotional (affective) processes enhances learners' ability to be open to experience, engaging in life, cultivating values, managing oneself and developing oneself (Fan, 2011). Brett et al. (2003) add that the affective domain refers to emotions as well as their outward expressions. Development of the affective domain is therefore essential because it enables learners to review their value choices, reflect on their value beliefs, revise their value systems, and then create their own approaches for innovation and creativity (Wu et al. 2019).

Within geography education, fieldwork is anecdotally considered to elicit positive affective responses (Boyle et al. 2007); which arguably stimulate high levels of positive enthusiasm and impetus for effective geography learning. Analogously, Kern and Carpenter (1984) similarly echoed that fieldwork extensively enhances affective responses, with greater enjoyment, interest and value generated than in corresponding class-based activities. When fieldwork is effectively undertaken, it indubitably sparks positive affectional responses within the learners. Similarly, Boyle et al. (2007) assert that effective fieldwork is particularly likely to trigger positive emotional responses such as high confidence in learners' ability to do well; low levels of anxiety; high motivation; deep learning approach and ultimately high performance.

Undoubtedly, the significant role of fieldwork in fostering the affective domain within learners has been propped up by a sizeable amount of literature. Evidently, it can usefully enhance the ultimate causal link between learners' affective response (which deals with emotions, feelings, and values) and an effective approach to geography learning (Fuller et al. 2006). Substantial evidence from educational psychology clearly established that the inextricable relationship between fieldwork and affective gain (Foskett, 1999) increases the enjoyment and the value learners have for the subject. Boyle et al. (2007) have linked the enjoyment learners acquire from geography to an enhancement of deep and effective learning. With this deep

learning, the motivation for learning comes from within; it is valuable and characterised by critical thinking and a sense of ownership (Hope, 2009).

iv. **Development of social skills:**

Successful learning is a process concerned with the holistic development of the 'whole being' of a child, not just the generation and impartation of knowledge. Social skills are amongst the fundamental basic skills that learners acquire through their dynamic and active engagement in the fieldwork process. According to Oost et al. (2011), since fieldwork is often undertaken collaboratively, it also leads to social experiences, which arguably foster individual growth and development in social skills. Significantly, social skills (transferrable skills) are context-free and can be applied in different contexts: students applying such skills can be more flexible in adapting themselves to future workplaces and the rapidly developing world (McEwen, 1996).

Fieldwork can be an effective mechanism that can enhance acquisition and development of social skills (Rice and Bulman, 2001). Chew (2008) further adds that fieldwork creates a social learning environment whereby students must work in teams and develop socio-interpersonal skills. When learners actively partake in the assigned group activities during fieldwork, they work in collaboration with others, communicating extensively and sharing constructive ideas with each other. In so doing, learners exhibit crucial skills such as active participation and co-operatively working in unison with the other group members. Learners become more aware of their friends' needs and wants and usually share experiences with one another; while simultaneously learning how to positively interact with each other (Chew, 2008).

This social bond may also transcend to the teachers, as learners and their fellow teachers starts to develop social bonds that foster and promote effective learning. Rice and Bulman, (2001) similarly contend that fieldwork can improve student-staff relations and encourage the development of greater social integration of the student cohort. Through this socially and mutually co-operative bond between learners and teachers created through fieldwork, the learning environment becomes tension-free

as learners develop confidence to socially interact with their teachers and ultimately enhance and uncover deeper learning.

v. Construction of geographical knowledge:

> *'An essential educational outcome of learning geography is to be able to apply knowledge and conceptual understanding to new settings: that is to think geography about the changing world' (Geographical Association, 2009:9).*

Fieldwork is inextricably devoted to the physical and natural environmental setting. Such a strong attachment to the environmental setting should therefore assist learners with the acquisition of a basic understanding of how the environment functions (Ngcamu, 2000), its spatial processes and its relation to human beings. Arguably, students' encounter with new places and landscapes provides opportunities both for the application of knowledge and understanding and/or their acquisition (Kinder, 2018). Since every geographical fieldwork endows students with an opportunity to immerse themselves in the physical and real-world setting, it prompts them to develop informed judgements towards the environment, aroused by their first-hand observation. Their interaction with the physical environmental setting enhances the ability to construct geographical attitudes, principles, theories, and knowledge such as:

1. Formulating geographical-based questions related to the place (in-situ), spatial processes, spatial distribution patterns and human and environmental interaction (DBE, 2011).
2. Developing knowledge regarding geographical processes, physical and/or natural landforms and environmental-based issues.
3. Developing perceptual awareness on how individual behavior impacts on the environment from an ecological perspective (Ngcamu, 2000).
4. Achieving a greater appreciation and an obligatory indebtedness to protect and care for the environment and its living things.

2.5. INTERNATIONAL PERSPECTIVES ON THE IMPLEMENTATION OF GEOGRAPHY FIELDWORK

The state and status of geography fieldwork has been subjected to considerable debate and research in various parts of the world. Owing to the acclaimed benefits concomitant with fieldwork towards geography education across the world, fieldwork has been widely reckoned as an integral component of teaching and learning geography over the years (Yang et al. 2014; Fuller et al. 2010; Foskett, 1999). The emphasis on fieldwork in the discipline has contributed to a similar emphasis being placed on fieldwork in the geography curriculum at all levels of tertiary and school education in many parts of the world (Lai, 1999). Considering this high regard, various curriculum developers across the world espoused fieldwork into their school's curricula and syllabi as an essential requisite for geography teaching and learning. Conversely, the application and implementation of fieldwork in various countries remains highly unpredictable and erratic. Lai (1999) alludes to the fact that the frequency of school geographical fieldwork seems to vary greatly among different countries. Similarly, Foskett (1999) asserts that the position of fieldwork in the geography curriculum is highly variable.

In this respect, the following discussion will provide a contextual scrutiny of a global context regarding how fieldwork is feasibly operationalised within the school curricula, particularly in geography curricula in various countries.

2.5.1. Fieldwork in Europe:

Various countries in Europe largely assume the fundamental value and effectiveness of fieldwork as a learning strategy due to the long efficacious tradition of field activity in the discipline (Stokes et al. 2011). However, there remains a significant variation as far as the implementation and integration of fieldwork in school curricula is concerned in different countries.

In the UK, fieldwork has long assumed a central role and is often taken to be synonymous with the study of geography (Ploszajska, 1998). In their first geography curriculum (England and Wales), the curriculum advocated 'regular, purposeful and integrated fieldwork' as opposed to just an optional extra (DES, 1991:85). Since 1995, with the revised geography national curriculum that was employed onwards,

the national curriculum geography demands the provision of fieldwork to pupils in all English schools from Key Stage 1 (age 5) onwards (Rawling, 2016). According to Foskett (2002) this became a statutory obligation on all schools in the state sector in an attempt to foster an authentic geographic experience and ultimately enhance the acquisition of particular geographic skills by the pupils. In light of this strong regard and appreciation of fieldwork in the UK, Cook et al. (2006) further assert that fieldwork provides an important means by which students may engage with a particular subject and therefore choose to study it further, which is significant in the context of UK where geography is optional for pupils 14 – 16 years old. Undeniably, the rationale behind this statutory obligation and adoption within the geography curriculum is the fact that fieldwork remains a critical approach to learning geography effectively. Contestably, it provides an opportunity to apply ideas generated in the classroom to the real world, to test hypotheses by empirical methods and to learn new knowledge and concepts from first-hand observation (Foskett, 2002).

There is a notable a growing increase in importance of fieldwork as the requirement for geography fieldwork in certain parts of Europe (Kinder, 2015). The joint effort between Geographical Association (GA) and several other organisations including the Field Studies Council, the Ordinance Survey, the technology firm ESRI (UK) and the Royal Geographical Society/Institute of British Geographers are constantly working in collaboration, with the principal aim of promoting the essential place of fieldwork in the schools' curriculum (Kinder, 2015). In her research survey, Kinder (2015) established that in more than 250 schools, teachers are increasingly working hard to ensure that fieldwork remains an integral part of students' geographical learning. Furthermore, Kinder (2015) revealed that residential fieldwork experiences have drastically and significantly increased in years 12 and 13 in comparison with earlier surveys dating back for over 20 years.

In the geography syllabus (2013) of the European schools which was approved by the joint teaching committee in Brussels (2013), it highly upholds geography fieldwork as one of its didactic principles intended to guide the teaching and learning of geography (ScholaEuropaEA, 2013). Compellingly, the geography syllabus for

the European schools as approved by the joint teaching committee expressively affirms that:

> *'Fieldwork is an essential part of the syllabus. While residential field courses are preferable, teachers should give serious consideration to school-based fieldwork when residential fieldwork is not possible' (ScholaEurpaEA, 2013:4).*

Considering this proclamation, it remains evidently clear that fieldwork in the European schools undoubtedly usurps an inherent and pivotal role as a teaching method for geography students to acquire geographical skills (Wall and Speake, 2012).

2.5.2. Fieldwork in the Asian countries:

The approach to teaching geography in Asian countries varies greatly from country to country, which is relatively influenced by the traditions indelibly left by the various colonial powers that ruled the respective countries (Chuan and Poh, 2000). An amalgamation of various external influences induced by colonial powers (British, North American, Dutch and French) throughout the region discernibly meant that the academic discourses will also be subjectively impelled by the concerned colonial rulers. According to Chuan and Poh (2000), despite this variety of traditions influencing geography in this region, fieldwork has remained an integral part of geographical inquiry. The utilisation of fieldwork as a teaching and learning method in this part of the world is intensifying and receiving much support due to its pivotal role in positively effecting teaching and learning. Chew (2008) maintains that there is overwhelming support for fieldwork among prominent group of professionals such as subject leaders, heads of departments, geography coordinators and various stakeholders in this region. Therefore, the following discussion will extensively review how certain Asian countries feasibly operationalise fieldwork in their Geography school curricula and Syllabi.

Hong Kong:

Fieldwork has widely been acknowledged as an essential part of geography teaching and learning in Hong Kong schools, arguably due to the indelible British influence. According to Lai (1999), as early as 1960s, the geography syllabus discernibly encouraged teachers to use audio-visuals aids and conduct field visits wherever appropriate. The Geography Curriculum and Assessment Guide (CA) of Hong Kong's secondary schools strongly upholds fieldwork as a distinctive attribute of geography education because it provides students with opportunities to apply the knowledge/concepts learned in the classroom to the real world (Curriculum Development Council, 2007). As part of its high commendation and acknowledgement for fieldwork application, the Curriculum and Assessment Guide for Geography in Hong Kong stipulates that students are expected to develop geographical enquiry skills including the ability to:

> *'Locate, select and extract appropriate information and data from primary and secondary sources (e.g. the field, surveys, documents, maps, charts, ground and aerial photos and Geographical Information System [GIS] data, which require the ability to observe and record data systematically and accurately' (Curriculum Development Council, 2007:4).*

Fieldwork is therefore a mechanism through which such subject-specific skills and generic skills can be achieved and developed. It has therefore been highly accorded and occupies a valued position in the teaching and learning of geography in Hong Kong.

Given the prevalence and commonness of its application in the Hong Kong schools due to the rigorous ratification in the geography curriculum, the government assessment agency of Hong Kong went on to introduce the school-based assessment of fieldwork in the public examination in geography (Lai and Lam, 2013). According to Lai and Lam (2013), the aim of introducing school-based assessment of fieldwork in the public examination is to create a positive backwash effect on geography teaching, as well as to enhance the validity and reliability of fieldwork

assessment. Premised from the abovementioned substantiations, fieldwork is highly esteemed within the geography curriculum as a fundamental approach to enhance critical geographical skills acquisition.

China:

Fieldwork has had a strong bond with the learning and teaching of geography in Chinese schools; owing to its ability to provide students with deepened understanding of issues, cognitive and affective benefits, transferrable skills and knowledge, social skills, demonstration, and memorable experience (Yang et al. 2013). Recognising its capacity to enable students to experience the process of generating geographic knowledge, deepening understandings of subject knowledge, and promoting social skills (Ministry of Education, 2001); reportedly, Chinese geography educators have been increasingly incorporating fieldwork into their geography teaching (Yang et al. 2013).

The application of fieldwork in Chinese schools remains however highly variable throughout China. Fieldwork is positively acknowledged and catered for in geography curricula of certain schools, as a necessary part of geography education (Kent et al. 1997); whereas in certain regions of China, fieldwork is largely absent in the mainstream geography curriculum in most Chinese secondary schools due to several contextual constraints impeding its efficacy (Zhang, 1999). Salter (2001) similarly states that although fieldwork is valued, its developments have been affected by constraining factors in certain areas of China. However, despite this conflicting position of fieldwork, in a study conducted by Yang et al. (2013) in the city of Hefei, Anhui Province in China; findings established a positive attitude towards geography fieldwork from both teachers and students alike, and ultimately call for fieldwork to be compulsory or included in examinations in junior high schools (Yang et al. 2013).

Singapore:

In Singapore, there has been a significant shift in education towards a more inquiry-based learning approach to equip students with skills for the future (Qi, 2018). The learning approach in geography education has focused on geographical investigations as a form of geographical inquiry. Fieldwork has therefore been introduced as a mechanism of geographical inquiry through which students participate actively in knowledge construction (Qi, 2018).

The Ministry of Education in Singapore has emphasised geographical inquiry as a proposed pedagogical methodology for geographical education (Curriculum Planning and Development Division [CPDD], 2014). As part of its aims and objectives, the geography syllabus for the lower secondary school in Singapore encourages students to achieve the following skills:

> *'Students should be able to observe, collect and record geographic information from both primary and secondary sources; interpret maps, tables, graphs, photographs, and fieldwork data (Curriculum Planning and Development Division [CPDD], 2006:1).*

Throughout the syllabus, there is rigorous emphasis on the importance and appreciation of fieldwork; recognised and highly valued as a signature pedagogy for geography teaching and learning. Additionally, for school geography in Singapore, geographical inquiry (fieldwork in particular) is identified as a signature pedagogy (Shulman, 2005a); that can socialise students into distinctive practices, concepts, and values of the discipline of geography (Seow et al. 2019).

2.5.3. Fieldwork in North America:

Even though fieldwork is not a common part of geography education in the United States due to barriers impeding its efficacy (Bednarz, 2010); its necessity as an integral and indispensable component to address the National Geography Standards for K-12 curriculum has been largely assumed in the USA (Rice and Bulman, 2001). Given its significant role in providing opportunities for students to refine their geographic skills; in recent times, several strategies (research, reform of

teacher preparation programmes, curriculum development and internationalisation of fieldwork training) have been suggested to ensure fieldwork becomes a more important part of geography instruction in the United States (Bednarz, 2010). In the geography framework, it states that:

> *'It is essential that students learn to ask geographic questions; acquire information from primary and secondary sources; to learn the skills of observations and speculations; to gain the ability to analyze, synthesize, and evaluate geographic information' (National Assessment Governing Board [U.S. Department of Education], 2018:4 – 5).*

Despite a high regard of fieldwork in the National Geography Standards as a key mechanism for achieving critical approaches to geography education such 'observation', 'investigation' and 'inquiry', Rice and Bulman (2001) laments that in the K-12 classroom, the rhetoric-reality gap between the declared need for fieldwork and doing fieldwork is more striking. Fieldwork is hindered by various barriers which have necessitated staff development through the Network of Alliances for Geographic Education and the creation of National Geography Standards in order to improve and elevate the status and frequency of fieldwork in the schools (Bednarz, 2010).

Premised on this discussion, a myriad of evidence-based research emphasised that fieldwork plays an inherent role in various school curriculums and geography syllabuses around the world. Fieldwork is compulsory for many geography students in various countries and is a recommended option for most others because it occupies an important place within academic and professional geography (Phillips and Johns, 2012). However, despite this high regard and rigorous commendations of fieldwork within various school curricula and syllabi around the world, its efficacy is often impacted by various contextual constraints which ultimately jeopardise its implementation. The contextual constraints have consequently led to diminishing trends regarding the implementation and integration of fieldwork within geography curricula across the world. The discussion below will investigate the diminishing

trends and dwindling decline in fieldwork application in light of the contextual constraints impeding its efficacy.

2.6. DIMINISHING TRENDS OF FIELDWORK IN GEOGRAPHY EDUCATION

Despite numerous acclaimed benefits associated with fieldwork, it is constrained by various contextual factors which consequently leads to a decrease in the number of field-based learning activities conducted in geography and further negating fieldwork's necessity and application at schools. The diminishing trend of fieldwork transcends beyond school level to higher education. Wilson et al. (2017) adds that in spite of the benefits extolled in the literature on the relevance of fieldwork to geography education and the belief in its value to teaching and learning, it is unclear if fieldwork is actually an important component of undergraduate degree programmes in geography. This discussion has been attributed to various contextual concerns accorded to fieldwork.

Preceding research has conspicuously discovered diminishing trends of geography fieldwork in various parts of the world. In their small-scale survey, Yang et al. (2014) revealed that although fieldwork can be viewed as an integral component of geography, it fell out of favor in Chinese secondary schools in the recent past. Notwithstanding its capacity to internalise geography teaching and learning, in recent times fieldwork is not as preferred and undertaken as it should be. Although fieldwork is integral to geography education, in recent years is has become less a regular component in undergraduate curricula (Leydon and Turner, 2013). Ostensibly, the discovered decline of fieldwork in geography at schools is further stretched out even at high institutions of learning. Research by a number of scholars indicates that not only are field courses in decline but they also are no longer a requirement of geography programmes (Boyle et al. 2007; Fuller et al. 2006).

Regrettably, the implementation of geography fieldwork is being deterred by various contextual factors impeding geography teachers from successfully integrating fieldwork in their teaching. Poor implementation of fieldwork coupled with contextual constraints further exacerbates diminishing trends in fieldwork in geography education. In his research findings, Mohammed (2016) asserted that most of the

teachers indicated that the use of fieldwork as a method of teaching geography is constrained by a number of challenges, ultimately leading to the decline in the number of field-based activities conducted by teachers.

Issues of lack of time to implement fieldwork, financial constraints, poor fieldwork expertise, large class sizes, ill-discipline behaviours to name a few were some but hindering factors causing geography teachers to pull back from implementing fieldwork in their teaching (Baidoo-Anu et al. 2019; Boyle et al. 2007; Cook et al. 2006). This confirms the findings discovered by Han and Foskett (2007) in Senior High schools in Taiwan that the most important constraints as ranked by the participants were the number of pupils in the classes, the attitude of pupils, and poor support by parents through payments for fieldwork costs. These hindering factors outweigh teachers' aspirations to integrate fieldwork with their teaching, which consequently leads to the reduction of fieldwork experiences.

The contextual factors impeding the effective implementation of fieldwork in geography education, cause concern over the feasible operationalisation of fieldwork within geography curriculum. Despite the fact that geography fieldwork is advocated by various educational policies across the world, the easiness and feasibility of integrating fieldwork in geography learning is not clearly realised. CAPS (DBE, 2011) in South Africa upholds:

> *'The practice of field observation and mapping, interviewing people, interpreting sources and working with statistics as one of its subject-specific skills' (DBE, 2011:9).*

In spite of this recognition by various geography and curriculum policies, geography teachers are still severely challenged to effectively implement fieldwork in their teaching. The study conducted by Wilmot and Dube (2015) regarding school geography in South Africa states that fieldwork is rarely, if ever, undertaken in no-fee-paying schools where teachers cited time constrains, a lack of resources and expertise as barriers to doing so. The practical application of fieldwork as a signature pedagogy for geography teaching is not feasibly operationalised within the geography curriculum. This is clearly evident by the constraints that teachers

encounter when attempting to implement fieldwork in their teaching. Mohammed (2016) reported that the time allotted to geography in most schools never exceeds four periods of 40 minutes by week per stream or class. Considering the inadequacy of time in relation to the vast geography content knowledge that has to be acquired, there appears to be a discordance in relation to the practicum integration of fieldwork into geography teaching.

In the Netherlands, as well many other countries, fieldwork has never been compulsory in the geography curriculum (Swaan and Wijnsteekers, 1999). Grounded from this, it raises the question of whether and how fieldwork is being performed (Oost et al, 2011). It also further questions the correlational synergy of fieldwork and geography curriculum. The presence of constraints hindering and jeopardizing the integration of geography fieldwork raises concerns over the operationalization of fieldwork within the geography curriculum. As such a loophole, endeavors by teachers to implement fieldwork in their teaching is thwarted, as geography fieldwork become less 'operationalizable' within geography curriculum. Wilson et al. (2017) is of the opinion that the inconsistent provision of fieldwork and absence of fieldwork requirements makes its role as a defining feature in geography education dubious.

2.7. PERCEPTIONS OF GEOGRAPHY TEACHERS TOWARDS FIELDWORK

2.7.1. Fieldwork as a 'Signature Pedagogy' for teaching and learning Geography:

In geography education, fieldwork is regarded by the UK government, most parents, and the overwhelming majority of subject 'teachers' as an essential element of the learning experience of the young people (Kinder, 2015). Generally, it is widely undisputed that geography teachers have a high opinion of fieldwork as a significant tool for geography teaching and learning. Fieldwork may encompass a repertoire of teaching styles, but is an approach used by teachers to provide pupils and students with first-hand experience of learning about geographical phenomena and learning new geographical skills in a way that is designed to make geographical concepts, theories and generalisations more real and meaningful (Harvey, 1991). The

research findings by Yang et al. (2014) in Taiwan discovered that over 90% of the teachers (92,5%) valued fieldwork as a good method for teaching geography.

A myriad of schools' curriculums and geography syllabi around the world encourages students to develop subject-specific skills affiliated to geographical inquiry, observation skills, creative problem-solving skills, and other skills. Geography teachers therefore consider that fieldwork in its manifestations provides many opportunities to learners in order to apply and develop these abilities (subject-specific skills) as opposed to a class-based teaching context (Wheeler, 2015). It is an imperative feature that geography teachers utilise in their practice in order to enhance a far better comprehension of geographical concepts by learners. Geography teachers highly appreciate the role that fieldwork has in the cognitive and affective domains of learners. Through fieldwork, there is an opportunity for more positive effects on cognitive and affective learning products and processes compared to traditional teaching methods (Yilmaz and Bilgi, 2011); and fieldwork further assists in bridging the chasm that exist between the classroom and the real world (Fuller, 2006).

2.7.2. Implementation of fieldwork in teachers' practice:

Notwithstanding their awareness of the positive benefits of fieldwork in geography education, geography teachers are still battling to fully comprehend how fieldwork can be effectively and feasibly integrated in their practice. This consequently results in geography teachers espousing a negative connotation towards fieldwork due to an antagonistic perception towards fieldwork. Significantly, there is a growing need to gain more understanding into how secondary geography teachers think about, design, and implement fieldwork in their curriculum (Oost et al. 2011). In their effortful study on state of school geography in the Eastern Cape (South Africa), Wilmot and Dube (2016) found negative inferences expressed by geography teachers as far as fieldwork is concerned. The following was one of the perceptions of a geography teacher as revealed by Wilmot and Dube (2016:346):

> *'I hate fieldwork… I know it's important, but I do not feel comfortable doing it because I have not done it myself at university, I was never taught to do fieldwork… You have to find time to do it and you have to set up the assessment and you have to look at the safety of the learners'*.

Another teacher recognised the importance of fieldwork, but she 'thinks' it was difficult to do fieldwork because she did not have sufficient expertise (Wilmot and Dube, 2016). Premised from the above expressions of geography teachers, despite the fact that geography teachers highly value the inherent role that fieldwork plays in geography education, they perceive it as something difficult and too complex to integrate in their practice due to impeding barriers attached to it. Undoubtedly, there are constraints that interfere when teachers carry out fieldwork, which results in negative criticism levelled against fieldwork. Encountered constraints contribute to a negative perception of fieldwork by geography teachers. For instance, common criticism about fieldwork concerns the length of time required in its organisation and planning and it was recognized that teachers are faced with external constraints (Chew, 2008). This was also clearly evident in the findings of Baidoo-Anu et al (2019) that geography teachers face challenges in the effective use of fieldwork in teaching. Lamentations of geography teachers consequential from contextual constraints have tainted fieldwork with negative perceptions; arguably making fieldwork a tool to consult only when it is necessary.

Generally, it is widely undisputed that geography teachers assume a valued opinion towards fieldwork. The research findings of Yang et al. (2014) found that over 90% of the teachers in China valued fieldwork as a good method for teaching geography. However, despite this positive acclamation and acknowledgement, simultaneously, 87,5% of teachers revealed that they have no intention of conducting additional fieldwork activities in the future. Such justifications are underpinned by barriers and constraints impeding the effective implementation of fieldwork in geography teaching, subsequently crafting negative perceptions of fieldwork by geography teachers.

2.7.3. Barriers impeding teachers from effectively implementing fieldwork

There is undoubtedly a considerable range of barriers that contribute immensely to an unwillingness of teachers to execute fieldwork in their practice. These barriers include a wide range of factors including structural challenges, school culture, individual's predisposition towards the outdoor setting (Scott et al. 2014), and level of fieldwork expertise.

Costs:

A considerable number of researchers have implicated high costs as a huge key barrier which impedes the undertaking of fieldwork (Han and Foskett, 2007; Cook et al. 2006). There is no doubt that fieldwork is costly due to the travelling costs as well as other basic costs involved. As such, this becomes an unfortunate hard reality for some learners who come from deprived and impoverished backgrounds, whose families are not in financial positions to cover these costs. This therefore becomes a huge encumbrance to geography teachers who are left with no other choice but to neglect fieldwork in their teaching.

Time factor:

Other researchers have lamented on the issue of time as a huge barrier which discourages geography teachers from undertaking fieldwork. The time allocated to geography is quite insufficient, taking into account the vast content knowledge that has to be covered by teachers (Baidoo et al. 2019). The study by Mohammed (2016) established that time allotted to geography in most school never exceeds four periods of 40 minutes per week per stream or class. Consequently, teachers remain adamant about not undertaking fieldwork in their teaching because there is not enough time to conduct it and they often articulate claims such as *"I have to cover the syllabus"* or *"fieldwork is not part of the formal assessment".* The issue of insufficient time to undertake and incorporate fieldwork in the teachers' practice remains a huge contributing factor that compels geography teachers to relegate fieldwork in their practice; with huge concerns expressed over curriculum coverage. Such anxiety over 'curriculum coverage' is indicative of the need for the re-evaluation of the significant role of fieldwork in geography education.

Poor student behaviour:

Poor student behaviour is undoubtedly one of the most pervasive risks that teachers are grappling with and consequently discourages them from outdoor or field-based learning. According to Cook et al. (2006), teachers' experience of poor behaviour in the classroom has made them reluctant to take some of their students out into the field because they do not trust them to behave well. In the findings of Scott et al. (2014), teachers established in their focus group concerns and anxieties about pupil management. This is often a cohort-related issue due to an insufficient adult: child ratio (Scott et al. 2014). Upon arrival at the field trip venue, students are often disorientated resulting in excited, explorative, and unrestrained behavior (Falk et al. 1978). As such, teachers are therefore left grappling with fears of losing control over the situation and wary of the risk of litigation (Cook et al. 2006).

Poor fieldwork competence and expertise:

Undertaking successful fieldwork activities requires geography teachers to possess clear content knowledge and specific skills for fieldwork techniques. Despite the recognised importance of fieldwork by teachers; various teachers still lament the difficulties of undertaking fieldwork due to poor fieldwork expertise (Wilmot and Dube, 2016). A lack of fieldwork skills and techniques coupled with a lack meaningful application of content knowledge in the field-based setting makes teachers lose confidence in applying fieldwork in their practice.

Large size of classes:

The teacher-learner ratio has been a far-reaching experience encountered by teachers either in class-based or field-based settings. In Boardman's survey (1974), the size of classes was allocated with a higher score as a hindering constraint towards fieldwork. Teachers may, however, manage to cope with more than thirty learners in a classroom, but it is virtually impossible for them to replicate it in the field (Boardman, 1974). Dealing with large classes poses serious challenges to teachers as they find it difficult to generate clearly understood group norms and to maintain good discipline (Jenkins, 1994). Not only does it pose challenges with maintaining

an orderly group, but a large size inevitably leads to logistical challenges such as transportation, accommodation, and other essentials.

2.8. STATUS OF FIELDWORK IN THE GEOGRAPHY CURRICULUM IN SOUTH AFRICA

2.8.1. Fieldwork and the geography curriculum of South Africa:

The National Curriculum Statement (NCS) Grades R-12 represents a policy statement for learning and teaching in South African schools (DBE, 2011). It compromises of the following policy amongst others; *'Curriculum and Assessment Policy Statements (CAPS) for each approved school subject'*. The CAPS document is one of the vital documents that sets out significant guidelines which govern the subject's principles, core aims/objectives, subject skills, and fundamental subject methods. It is an important document which aligns and acquaints teachers with what they are supposed to teach together with the teaching methodologies of that particular subject.

In the context of geography, CAPS (DBE, 2011) emphasises a need for all topics in the geography FET syllabus (Grades 10 – 12) to be explored within an enquiry based methodological approach. The geography curriculum aims to develop the following subject-specific skills, one of which encapsulates enquiry-based learning as a vital approach to enhance effective teaching and learning of geography:

> *'Practising field observation and mapping, interviewing people, interpreting sources, and working with statistics', (DBE, 2011:9).*

The importance of enquiry-based learning has been highly regarded in the works of (Roberts, 2013 and Oost et al. 2011), as well the NCS in South Africa (DBE, 2011a). Enquiry based learning (EBL) as synonymously espoused as an enquiry pedagogical approach is defined as an approach to learning disciplinary knowledge that enables students to develop a critical understanding of the world (Roberts, 2013). An enquiry-based approach therefore embraces fieldwork as a signature pedagogy to be utilised; in order to explore the geography curriculum's four main big ideas *(Place, Spatial Processes, Spatial Distribution Patterns and Human and Environmental Interaction)* (DBE, 2011). It is an approach that enables learners to

investigate key issues and questions within a geography framework. Fieldwork is rigorously emphasised throughout the three main geography syllabi (FET; Grades 10, 11 and 12) as a mode of inquiry to enhance better comprehension of crucial key questions such as *'What is it? What is it like? Who or What is affected?'* Six hours of extra-mural fieldwork is recommended in Grade 10 and 11 per year (DBE, 2011).

2.8.2. Fieldwork and Grade 11 Geography syllabus:

The Grade 11 Geography syllabus advocates the application of fieldwork as embodied under the general geographical skills and techniques. There are, however, no clear provisions as to under which geographical techniques fieldwork should be employed.

Furthermore, fieldwork is again emphasised in the topic of *Geomorphology* as an approach to be utilised for observation, collecting, and recording of information and presenting the fieldwork findings pertaining to the geomorphological features (DBE, 2011).

2.8.3. State of fieldwork in South Africa:

Fieldwork has been widely considered in the various literature as an appreciated learning experience and therefore it assumes an intrinsic role in geography education (Fuller, 2006; Oost et al. 2011; Gerber and Chuan, 2000; Stoke et al. 2011; Bland et al. 1996; Foskett, 1999). From the researcher's perspective as a geography teacher, the researcher is utterly aware of the significance and the capacity of fieldwork in arousing a keen interest in learners, to foster a thorough understanding related to the spatial, processes and patterns of various phenomenon. Wilmot (2017) asserts that immersing students in a real world enables them to contextualise the theory learned within the classroom, and it provide opportunities to interact and engage with new natural and social landscapes and look at familiar ones with new lenses.

Coming to the South African schooling context, little has been articulated regarding the status of geography fieldwork in South Africa. There has been little emphasis and research about how fieldwork is implemented and integrated in the teaching and the learning of geography in South African schools. Ngcamu (2000) adds that a

myriad of researchers from other countries have written on field studies, yet little writings are known from South Africa. One can perhaps allude to the affirmation by Swaan and Wijnsteekers (1999) that fieldwork has never been obligatory in the geography curriculum in the Netherlands: the same can be said in the context of the South African education system. It is only considered as an auxiliary tool for consolidating content acquired in class and, as a result, teachers have a lethargic regard for fieldwork because it does not even form part of the SBA (school-based assessment) and assessment program of high school geography. This contextual dilemma is exacerbated by the notion of teachers solely relying on what has been inscribed in the subject syllabus. Remarks such as *'this is not in the syllabus', 'I must finish the syllabus'* are commonly articulated by teachers (Ngcamu, 2000). Such remarks therefore display a lethargic outlook on fieldwork as far as its implementation and application in concerned. Geography teachers therefore become rigidly affixed with what is in the syllabus such that, they only teach what is stipulated therein.

According to Wilmot and Dube (2015), despite fieldwork being advocated by the CAPS curriculum (DBE, 2011), there is evidence which suggests that the implementation of fieldwork in South African school geography is scant and uneven. According to the CAPS, any topic in geography can be explored by applying a conceptual framework that embraces geography's four big ideas; Place, Spatial Processes, Spatial Distribution Patterns and Human and Environmental Interaction (DBE, 2011). CAPS (DBE, 2011) advocates an enquiry-based approach, yet there is little evidence as to how far this approach is implemented in the South African schools (Wilmot and Dube, 2016). Given this current status quo of fieldwork, this study will therefore imperatively endeavor to explore the 'lived experiences' of geography teachers regarding the feasibility of fieldwork in the Grade 11 geography curriculum, in attempt to uncover the degree of feasibility on fieldwork application within the geography curriculum.

2.8.4. Geography education research in South Africa – Review

Geography education research conducted in the South African context is evidently diminutive in relation to international research. There is very scant evidence of

research that is known to have been done by researchers based in South Africa. A study by R.N. Ngcamu (2000) entitled *'The implementation of fieldwork in Geography in Geography teaching in secondary schools'* sought to understand how fieldwork was implemented by geography teachers in their practice. The researcher felt that fieldwork has been long neglected in the teaching of geography and therefore strove to instill the awareness amongst the geography teachers and motivate them to rigorously engage fieldwork in their practice.

The study conducted by Wilmot and Dube (2016) entitled '*Opening a window onto school geography in selected secondary schools in the Eastern Cape Province'* attempted to address the issue of quality geography education in the South African public schooling system. The study successfully acknowledges the marginal status of fieldwork, however, it does not really render a thorough review as to why fieldwork is rarely undertaken in the South African education system.

Kriel (1996) essentially explored the importance and effectiveness of fieldwork in secondary schools. The study purposefully looked at the benefits and the inherent function of fieldwork at schools, particularly in relation to its application in the curriculum.

Premised from the abovementioned prior research of fieldwork in the South African context, there has been quite a range of diverse emphasis regarding fieldwork. However, none of the prior research explored the lived experiences of geography teachers regarding the feasible operationalisation of fieldwork in their practice. Numerous researchers explored the value, purpose, implementation, and effectiveness of fieldwork in geography education, yet none investigated the lived experiences of geography teachers, being the custodians of this approach, regarding the application of fieldwork in their practice. This study will therefore attempt to narrow that void.

2.9. CONCLUSION

This rich array of literature has explored the inherent role that fieldwork plays in geography education. It is a method that has a long efficacious tradition in the discipline. It has been rooted in the traditions of the discipline for centuries and has probably become a part of a shared heritage amongst geographers (Lai, 1999). Its pedagogic significance, values and benefits have been thoroughly cogitated upon to be wide-ranging.

This literature review established the significant role that fieldwork plays in enhancing geography teaching and learning. Essentially, it brings the theory and practice together, connecting what students acquired theoretically in the classroom with direct experience in the physical and environmental setting. The interaction with the physical and environmental setting fosters geographical inquiry, which is a foundational aspect of the nature of geography education. In the process, it ultimately contributes to the holistic development of learners. Fieldwork endows a variety of development opportunities. Learners develop an cognitively, affectively and socially. In addition, learners develop an ecological and sustainability ethos, aesthetic sensitivity towards the environment and ethical environmental behaviour.

This literature review has also highlighted the varying adoption of fieldwork by school curricula and syllabi across the world. The implementation and application of fieldwork within geography school curricula and syllabi is highly variable. Fieldwork is a compulsory component of geography teaching and learning in some countries, yet in other countries it is yet to form an incidental aspect of geography teaching and learning due to various contextual constrains. Consequently, it is falling out of favour in various parts of the world because geography teachers find it difficult to execute it meaningfully in their practice due to contextual barriers.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

This chapter presents the main philosophical assumptions underlying this research. It descriptively furnishes a detailed account and justification regarding the research approaches and methodologies employed in briefly explaining how the research process herein has been executed. It elucidates the rationale behind the adoption of methodological approaches, the empirical techniques, the research strategies as well as other methodological constituents such as population, sampling size and techniques, and data gathering tools in an attempt to help answer the research question outlined in the opening chapter. Furthermore, the chapter provides evidence of trustworthiness and the degree of transferability of the research to other contexts by critically clarifying how the rigour of this study will be heightened.

This chapter comprises of the following sections:

3.2. Research methodology

3.3. Research paradigm

3.4. Research design and strategies

3.5. Theoretical framework

In the following section, attention is drawn to the methodological approach underlying this research study.

3.2. RESEARCH METHODOLOGY

Premised from the investigative nature of this research study, which endeavours to gain rich descriptive data in respect of the lived experiences of Grade 11 geography teachers regarding the feasibility of fieldwork in their practice; the qualitative methodological approach was used. Qualitative research as a methodological approach is an inductive process that is particularly concerned with understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world (Merriam, 2009). This implies that it consists of a set of interpretive, material practices that makes the world visible, which

eventually turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self (Denzin and Lincoln, 2005). The qualitative methodological approach was a suitable methodological paradigm for this empirical study, as it is generally concerned with interpretation and meaning (Parker, 1994).

Qualitative researchers over the years have widely remarked on the multiplicity of approaches when conducting qualitative research, however, one key detectible feature of qualitative research is largely anchored in its adeptness to render descriptions of social phenomena from an insider's perspective. According to Denzin and Lincoln (2011), qualitative research studies things in their natural settings, attempting to make sense of and interpret phenomena in terms of meaning people bring to them. Mgushelo (2018) further adds that it allows informants to give a background, experiences and perceptions of the research problem and objectives.

Stemming from an explorative background of this research, which seeks to discover the feasible operationalisation of fieldwork within the Grade 11 geography curriculum, a qualitative methodology plays an advantageous role in discovering how Grade 11 geography teachers experience the integration of fieldwork into their practice as advocated in the geography curriculum and policies. To affirm the importance of the qualitative methodology for this study, Maree (2007) asserts that in qualitative research we maintain that knowledge should emerge out of local context and should privilege the voice of the insiders, taking into account what people say, do and feel, and how they make meaning of the phenomena under investigation. Advantageous to this study, more complete information on the participants' subjective perspectives and subjectively relevant concerns can be brought to light (Lenger, 2019).

The researcher therefore believes that the qualitative methodology is best suited for the purpose of this study because it is appropriately relevant in addressing the explorative and descriptive question/problem that is the clearly defined focus and principal question of this research: 'what are the lived experiences of Grade 11 geography teachers regarding the feasibility of fieldwork?' It is particularly aimed at

enhancing the understanding of fieldwork's applicability in the context of the geography curriculum. The emphasis is more on promoting the understanding of human experience and less on explanation and control which characterise quantitative inquiry (Stake, 1995).

3.3. RESEARCH PARADIGM

Any study is undertaken in terms of a specific epistemological paradigm, which provides a lens through which the results of the study can be interpreted (Athanasou and Maree, 2012). Gray (2021) further asserts that the informants' experiences of reality are the ground upon which any investigation of phenomena must be based. An explorative background of this study, which seeks to unravel the feasible operationalisation of fieldwork by geography teachers in their practice can be better comprehended through the constructed experiences of geography teachers. Premised from this insight, this study employs a 'phenomenological paradigm' as a lens through which data/knowledge will be acquired, interpreted, and communicated meaningfully due to the explorative nature of this study.

Phenomenology is directed at understanding the structures of consciousness as experienced from the first-person point of view (Smith and Thomasson, 2005). The phenomenological paradigm is founded on the assumption that reality is not separate from the observer and that it is rather shaped by the observer's perceptions and perspectives (Collis and Hussey, 2009). As a philosophical paradigm, it is anchored upon studying human experiences and the ways things present themselves to us in and through such experiences (Sokolowski, 2000). For the purpose of this study, phenomenology provides an understanding of a particular issue (feasibility of fieldwork) from the participants' perspective of their social realities (Athanasou and Maree, 2012). From the original conception of the paradigm, the emphasis is largely placed on the significant attempt to comprehend a phenomenon understudy through the experiences assigned by certain informants.

Premised on the above, phenomenological paradigm closely signifies that the researcher has to meticulously explore the phenomena under study from the grounds and basis of individuals' lived experiences and first-person point of view.

Significantly, the person who opens his/her eyes and sees the world, sees it and has a knowledge of it consciously. The following is the basic insight that this paradigm provides:

> *'Phenomenology is usually characterized as a way of seeing rather than a set of doctrines. In a typical formulation Edmund Husserl… presents phenomenology as approaching "whatever appears to be as such", including everything meant or thought, in a manner of its appearing, in the how of its manifestation' (Moran 2002, 1).*

The above quotation closely correlates with Edmund Husserl's fundamental conception of phenomenology. It is more inclined to a way of seeing, as opposed to a set of doctrines, metaphysical doctrines, and theories. Gallagher (2012) states that part of the way that one starts to do phenomenology is to push aside any doctrine and theories. The basic insight to this approach therefore is that reality can only be accessed through or via consciousness of individuals within a particular social system/context.

As such, this study adopts a phenomenological philosophical paradigm, as it revolves around gaining in-depth insight regarding the applicability and feasibility of fieldwork in the geography curriculum; on the basis of the lived experiences of Grade 11 geography teachers, in their practice. Reality will therefore be approached from certain subordinates, subjected to the construction of Grade 11 teachers' own experiences. It is thus the subjective experience that is essential in phenomenological research (Athanasou and Maree, 2012).

3.4. RESEARCH STRATEGY

For the purpose of this research, which is to explore the lived experiences of geography teachers regarding the feasibility of fieldwork within the Grade 11 geography curriculum, an empirical inquiry plays a pivotal role by exploring the phenomena (fieldwork) understudy in its utmost breadth and entirety. The study was therefore conducted using an exploratory case study strategy. In the social sciences, where the researcher has little or no control over events and has the desire to understand a contemporary or social phenomenon, which is, in this research

context, the feasibility of fieldwork in the geography curriculum; a case study is the most preferred research strategy for this kind of research (Yin, 2009). An exploratory case study sets out to explore any phenomenon in the data which serves as a point of interest to the researcher (Zainal, 2007). The lived experiences of geography teachers have barely and rarely been consulted as far as the feasibility of fieldwork in the geography curriculum is concerned. Taking that into account, exploratory case study has been employed to establish a deeper understanding of a phenomenon and is particularly useful when there is minimal preliminary research to inform and guide the research (Tetnowski, 2015).

Radojevich and Hoffman (2012) claimed that the strength of this approach is its ability to examine the following: the context in addition to the phenomena, a series of activities overtime, and several different important participants. In this light, it is the approach that will be capable of exploring complex outcomes that are beyond the capabilities of single factor analysis (Yin, 1981). The espousal of an explorative case study approach for this study enabled the researcher to obtain a comprehensible and unobstructed insight into how fieldwork is feasibly operationalised within the Grade 11 geography curriculum by geography teachers. Case studies are empirical investigations, in that they are based on the knowledge and experience, or more practically speaking involve the collection and analysis of data (Farquhar, 2012). Through an explorative case study, the researcher had the flexibility of proposing other general questions and small-scale data collection that open up the door for further examination and hypotheses of the phenomena under study. To enable a flexible and well-organised data collection process, a multi-method approach was utilised comprising of semi-structured interviews, observations, and focus groups. Baxter and Jack (2008) further advance that, possible data sources may include, but are not limited to interviews, documentation, observations, and physical artefacts. Data collection techniques/methods are hereunder discussed in detail.

3.4.1. Data-collection methods

Qualitative data can be collected in various ways. The chief means through which qualitative data can be collected is through observing people, conditions or by

surveying or questioning people (Cooper and Emory, 1995). For the purpose of this study, data has been collected through semi-structured interviews/phenomenological interviews which focused on the experiences of participants and the meanings they made of that experience (Seidman, 2012). According to Roulston and Choi (2018), through phenomenological interviews, the researcher is able to generate detailed descriptions of participants' experiences about a phenomenon through asking open questions concerning the participants' feelings, perceptions and understandings. The descriptions that arose from these interviews formed a fundamental basis of the reconstructed 'versions' of the phenomenon that was being explored by this study.

3.4.1.1. Semi-structured interviews

Semi-structured interviews were conducted to gather necessary data from the Grade 11 geography teachers regarding the feasibility of fieldwork in their practice. According to Longhurst (2003), a semi-structured interview is a verbal interchange where one person, the interviewer attempts to elicit information from one other person by asking questions. It is a form of interview that has some degree of predetermined order but still ensures flexibility in the way issues are addressed by the informant (Dunn, 2005). The semi-structured interviews therefore present the researcher with an opportunity to gather all the necessary ideas, philosophies, sentiments, and behavioural patterns devoted to the participants. In this regard, semi-structured interviews function as a means that permits the researcher to encounter reality through the lenses and perspectives of the participants. They become a valuable source of information, as long as carried out correctly (Maree, 2007).

Essentially, the research participants (Grade 11 geography teachers) are purposefully selected because they possess clear and defining characteristics/criteria for the purpose of this research study. Thus, the research participants comprised of geography teachers and geography Heads of Department (HODs). The semi-structured interviews have been conducted conversationally with one respondent at a time; while employing a blend of closed and open-ended questions which were accompanied by follow-up 'why' or 'how' questions (Adams,

2015). The choice of an integrated approach for both closed and open-ended questions was to obtain data that is easy to analyse statistically; and concurrently provides more depth and insight regarding the participants' experiences.

Barriball and While (1993) suggest that semi-structured interviews are a useful tool for obtaining detailed and rich qualitative data because they are well suited for the exploration of the perceptions and the opinions of the respondents regarding complex and sometimes sensitive issues and enable probing for more information and clarification of answers. Semi-structured interviews enable probing, open-ended questions and further leads to follow-up questions which help the researcher to know the in-depth thoughts of each respondent. In semi-structured interviews, the open-ended nature of the question defines the topic under investigation but provides more opportunities for both interviewer and respondents to discuss and probe some more themes emanating from the interview in more detail (Mathers et al. 1998). Mathers et al. (1998) claim that semi-structured interviews endow the freedom to probe the respondents to elaborate on the original response or to follow a line of inquiry introduced by the researcher.

The semi-structured interviews were utilised to discover the lived experiences of geography teachers regarding the feasibility and applicability of fieldwork in their practice. Interviews were carried out at the respective schools of the teachers outside school' working hours in an attempt to avoid interference with teaching and learning in schools. All the respective teachers had to arrange secluded environments within their schools for the interviews in order to ensure that they carried out confidentially, with minimal or no disruptions at all. English was used as a medium of communication and interviews were audio-recorded with the permission of the teachers. The audio-recorded interviews were then transcribed for analysis purposes.

3.4.1.2. Focus group

A focus group was utilised as an additional data gathering tool to complement the semi-structured interviews in order to ensure rigour in the research study so that data triangulation could be enhanced – to provide credible facts to validate the raw data (Cresswell and Clark, 2007). A focus group is therefore a good complement for semi-structured interviews (Gill et al. 2008). It is highly preferable to collect information from groups of people rather than just relying on a series of individuals (Mathers et al. 1998). A focus group is very useful to obtain certain types of data because group interaction among participants has the potential for greater insights to be developed (Mathers et al. 1998).

According to Gill et al. (2008), a focus group is a group discussion on a particular topic organised for research purposes. The group comprised of individuals (who in this research context are a group of Grade 11 geography teachers) with certain characteristics who focus on discussing a given issue or topic (Dilshad and Latif, 2013). Given its usefulness to the study, a focus group was aimed at collecting high-quality information: this in-depth information is primarily important to help understand the phenomenon from the viewpoint of the research participants. Stewart and Shamdasani (2014) assert that focus groups provide a rich and detailed set of data about perceptions, thoughts, feelings, and impressions of people in their own words.

3.4.1.3 Group composition and recruitment

Only a total of one focus group, with seven participants (four grade 11 geography teachers, along with an HOD per teacher from each school) was targeted for this research study. All the participants of the focus group previously took part in the semi-structured interviews; thus, they were all familiar and acclimatised to the envisioned aim and objective of the research study. This was a vital consideration because usually, participants are chosen on the basis of their experience related to the research topic (Cameron, 2005). Therefore, no new participants were added to the focus group. The idea is to attempt to simulate a group of friends or people who have things in common and feel relaxed talking to each other (Longhurst, 2003).

a. Focus group process

The researcher and participants spent a large portion of discussion time probing the geography teachers together with their HODs about their experiences regarding the application and feasibility of fieldwork in geography. This was an opportunity to ask the participants to share and compare their experiences regarding the use of fieldwork in their practice. The main idea was to discuss the extent to which they agreed or disagreed with each other (Breen, 2007). Overall, the researcher and participants actively engaged on the key research questions which yielded in-depth information regarding their experiences towards the use of fieldwork in geography. The participants shared their feedback, opinions, and insights towards the topic by responding to a set of questions that were presented to them by the moderator (researcher). The following categories of questions were used, as reflected in the annexure (Appendix 6):

- **Primary question**: this was the first open-ended question which was intended to initiate the discussion. Open-ended questions were asked particularly to acquire perfect understanding of the participants' experiences (McMillan & Schumacher, 2010). The responses towards these open-ended discussions were taken into account when results of the focus group were analysed.
- **Probe questions**: these questions were intended to explore deeper into the discussion of the open-ended questions/comments in the primary question. Through probing questions, geography teachers were encouraged to render comments that endowed greater insights towards the topic.
- **Follow-up questions**: after having established the overall knowledge and experiences of the geography teachers regarding fieldwork, the researcher asked follow-up questions for specific insights. The researcher intended to use follow-up questions in order to delve further into the participants' opinions regarding a certain issue.
- **Concluding questions**: the researcher used concluding questions so that the main points stated by the geography teachers were not overlooked. Geography teachers were granted another opportunity if they wanted to elaborate further on what had already been established.

3.4.2. Sampling

Sampling is undeniably a principal area in research, and its primary purpose is to enable the researcher to collect specific cases, events or actions that can clarify or deepen the researcher's understanding about the phenomenon under study (Ishak and Bakar, 2014). According to Cohen et al. (2011), sample size is, however, suggested by the style of the research the researcher plans to carry out. The sample size of this research was purposively chosen in order to enable the researcher to facilitate the determined and purposeful selection of participants that would provide insightful information to the research questions. Thus, this research study was comprised of a relatively small sample size – seven participants were sampled from four schools in the Waterberg District in Limpopo province, South Africa.

This research study used a purposive sampling technique by which to select a sample of only four high schools in the Waterberg district, although geography is part of the schools' curriculum in all the high schools in the Waterberg district. Purposive sampling simply means that the participants are selected on the basis of some defining characteristics that suggest that they are the custodians of the data required for this study (Awases, 2015). According to Maxwell (1997) and Tongco (2007), purposive sampling allows the researcher selectively to choose a particular group of participants and areas to provide significant/insightful/expert information to feed into the study objectives and to address the research question.

For the purpose of this study, the following defining factors played an influential role in determining the high schools that were chosen for the research study:

- All the schools are located in the Waterberg district, and they are all in close proximity to each other. Additionally, the schools are situated in the same location with the researcher's residential area. The close proximity between the schools made it easier for me to travel between schools and interview the participants. It was also easier to conduct the focus group because all teachers are based in the same area and there was not any strain in gathering for the focus group.

- All the high schools offered geography as one of the subject choices in the FET phase. Therefore, this made it easier for the researcher to find geography teachers from the schools to be part of the research study.
- Having resided in this area for a while, the researcher was familiar with all the schools, and this made it is easier for me to conveniently access the schools at no costs.

Purposeful sampling approach involves the researcher deliberately and purposefully selecting the sample they believe can be the most fruitful in answering the research question (Farrugia, 2019). Similarly, Collingridge and Gantt (2008) upholds that participants' selection should have a clear rationale and fulfil a specific purpose related to the research question, which is why qualitative methods are commonly described as 'purposive'. Thus, employing purposive sampling has enabled the researcher to consider certain defining characteristics that are essential for the purpose of the research conducted. Sampled teachers were considered because they possess defining characteristics that aided with providing answers to the research questions. For the purpose of this study, the following criteria were considered in an attempt to purposefully select participating teachers that are relevantly essential to provide in-depth information to the set research questions:

- Must live within the Waterberg District
- Must be Grade 11 geography teachers.
- Should have at least one year of geography teaching experience.
- HODs must at least have a minimum of five years supervision experience.

3.4.3. Data-analysis

In its broadest sense, 'data analysis' in this case refers to the activity of making sense of, interpreting or theorising the data (Schwandt, 1997). It is common practice in all research studies as with the case of all research techniques that the data analysis strategy employed in the research study should suitably complement the paradigm and design adopted in the study. In this regard, clarity regarding the processes and methods that were in the data analysis and reasons for doing so is vital (Awases, 2015). This study has therefore employed Braun and Clarke's (2006)

thematic analysis because it suitably complements the qualitative and phenomenological approach adopted for this study in order to explore the lived experiences of seven geography teachers regarding the feasibility and applicability of fieldwork in their practice. Braun and Clarke's (2006) thematic analysis played a crucial role by enabling the researcher to extract rich and detailed accounts of data collected through semi-structured interviews and focus groups from the geography teachers.

According to Braun and Clarke (2006), 'thematic analysis' is a method for identifying, analysing, and reporting patterns (themes) within data. It is an analytic method that has been widely employed in the qualitative studies as a means that richly organises and describes a data set in detail. Boyatzis (1998) adds that frequently, it may even advance further into interpreting various aspects of the research topic. Thematic analysis has been used in qualitative studies because it renders primacy to the reported experiences, meanings and the actuality emanating from the perspectives of the participants. It has sometimes been likened to a 'constructionist method'; which examines the ways in which events, realities, meanings, experiences and so on are the effects of a range of discourses operating within a society (Braun and Clarke, 2006).

Thematic analysis bears the following fundamental characteristics as outlined by Braun and Clarke (2013:130):

1) It works with a wide range of research questions, from those about people's experiences or understandings to those about the representation and construction of particular phenomena in particular contexts.
2) It can be used to analyse different types of data, from secondary sources such as media to transcripts of focus groups or interviews.
3) It works with a large or small datasets.
4) It can be applied to produce data-driven or theory-driven analysis.

The abovementioned characteristics of thematic analysis encapsulate a degree of flexibility which is an essential aspect of the thematic analysis method that enhances various approaches to analysis from different theoretical perspectives (Braun and

Clarke, 2006). One of these primary perspectives through which themes or patterns can be identified is an 'inductive or bottom up' approach (Frith and Gleeson, 2004). According to Braun and Clarke (2006), an inductive approach means themes identified are strongly linked to the data themselves (data-driven) and bear minimal relation to the specific questions that were asked of the participants. Furthermore, the fourth characteristic of thematic analysis abovementioned is the second theoretical perspective known as 'theoretical' thematic analysis, which is more aligned with the researcher's analytical perspective of the study area.

Originating from the aforementioned variety of thematic analysis approaches, this research study is largely grounded in theoretical thematic analysis, in the analysis of the first phase of the collected data which is in the form of semi-structured interviews. The theoretical thematic analysis in aggregation with a 'semantic approach' was employed in order to enable the researcher to identify themes emerging from data collected in the form of semi-structured interviews with the seven geography teachers. Through a thematic analysis approach at the semantic level, themes were identified within the explicit or surface meanings of the data; and the researcher was not looking for anything beyond what the participants have said or what has been written (Braun and Clarke, 2006). A thematic analysis at the 'semantic level' ideally refers to an analytic process that involves a progression from description, where the data has simply been organised to show patterns in a semantic content, and summarised, to enable interpretation, where there is an attempt to theorise the significance of the patterns and their broader meanings and implications (Patton, 1990).

In the analysis of the second phase of data which was collected in the form of focus group with the same seven geography teachers, a thematic analysis at a 'latent level' was employed. A thematic analysis at a latent level goes beyond a semantic content of data, and starts to identify or examine the underlying ideas, assumptions, and conceptualisations – and ideologies – that are theorised as shaping or informing the semantic content of the data (Braun and Clarke, 2016). At this analytic phase, the

researcher sought to identify the features that gave meanings and particular forms to the themes that emerged during the semantic level.

The table below outlines a pathway adopted by this study regarding steps executed through various phases of thematic analysis. The researcher does acknowledge the fact that analysis is not a linear process of simply moving from one phase to the next; but rather a recursive process, where movement is back and forth as needed throughout the phases (Braun and Clarke, 2006). It is also a process that should not be rushed, but one that develops over time (Ely et al. 1997).

Table 3. 1: Phases of thematic analysis

Phase	Description of the process
1. Familiarising yourself with your data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes in potential themes, gathering all the data relevant to each potential theme
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

(adapted from Braun and Clarke, 2006)

Premised from the above, it should be noted therefore that this study has been undertaken through the rigorous consideration of Braun and Clarke's (2006) six phases of thematic analysis outline guide. The subsequent discussions essentially render clear explanations of the above six analytical phases in the analysis of data.

The first phase in the thematic analysis process is 'familiarising' oneself with the whole data set; which entails 'immersing oneself in the data to an extent that you become familiar with the depth and breadth of the content (Braun and Clarke, 2006). After having transcribed the audio-recorded interviews in written form to ensure thematic analysis, the researcher then began with the process of familiarising and immersing myself with the data in order to acquire the holistic entirety of the content at hand. Though the reading and re-reading of the transcribed data was time-consuming, it however rendered an opportunity to tap into a basic conceptualisation in terms of lived experiences of the seven geography teachers regarding the feasibility and applicability of geography fieldwork.

The explanation of their experiences generated a list of concepts and ideas worth unravelling. It necessitated the second phase of thematic analysis called coding (development of codes). Coding is a common aspect of various approaches employed in qualitative analysis (Braun and Clarke, 2006). Codes identify a feature of the data that appears interesting to the analyst and refers to the most basic segment or element of the raw data or information that can be assessed in a meaningful way regarding the phenomenon (Boyatiz, 1998). In this respect, the process of re-reading the data set was approached with certain questions in mind informed by the research questions employed in the semi-structured interviews and focus group. At this stage, several significant and potential 'patterns' emerged and were extracted for ultimate analysis. The constant re-reading and back and forth movement between data sets, the identification of several features and collating of data into units revealed important segments which were of essence to the main research questions and further shed more light throughout the analysis process.

The coding and collating of data units identified brought me to the third stage of themes identification. A theme is defined as a coherent and meaningful pattern in the data relevant to the research question (Braun and Clarke, 2006). In the context of this study, the codes that were generated in the previous phase, which formed superficial and constrained themes were later employed, giving rise to the emergence of overarching themes; which eventually formed an overall

conceptualisation on the teachers' reflections and experience of the feasibility of fieldwork in their practice. The overarching themes were employed for bringing a high consideration and attentiveness to the main envisioned themes of the study namely: teachers' views, perspectives, and overall experience with regard to fieldwork feasibility in their practice, the contextual barriers impinging on the application of fieldwork, and the poor feasibility of geography curriculum towards fieldwork application.

Phase four begins when you have devised a set of proposed themes, and it involves the refinement of those themes (Braun and Clarke, 2006). At this phase, the main themes central to the study as previously identified in phase three are now clear. All the main themes central to the study, and those that were constructed through semi-structured interviews and focus groups were all reviewed together in order to provide meaning coherence amongst the data.

Phase five dealt with the naming and defining of the following themes: experiences of geography teachers regarding the feasibility of fieldwork in their practice, contextual constraints impeding the applicability of fieldwork, the role of geography in promoting fieldwork. 'Defining' and 'refining' of data means identifying the essence of what each theme is about and determining what aspect of the data each theme captures (Braun and Clarke, 2006). Chapter 5 evidently critically analyses each main theme in detail.

The sixth and final phase of the analysis process as adapted to this study involves the final data analysis and full in-depth discussion of the main themes in conjunction with the use of data extracts from the semi-structured interviews and focus groups as outlined in Chapter 4. Phase six ultimately illustrates the inextricability of the data extracts presented in Chapter 4 and analytic discussion presented in Chapter 5. Chapters 4 and 5 are intertwined into the context under which the study is conducted; in an attempt to provide a concise, coherent, logical and interesting account of the narrative accounts emanating from the data extracts, within and across main themes (Braun and Clarke, 2006).

The subsequent section involves issues that deal with validity and reliability of data collected in the context of this study.

3.4.4. Validity and Reliability

Issues of validity and reliability are to be give meticulous attention because they are a key aspect that can help to ensure findings are credible and trustworthy (Brink, 1993). This implies that the procedures of the research can be replicated in similar research (Awases, 2015). This is particularly significant to the context of this study that involved the use of semi-structured interviews and focus group as methods of data collection.

3.4.4.1. Validity

According to Le Comple and Goetz (1982), validity in qualitative research is concerned with accuracy and truthfulness of scientific findings. The researcher is well aware of the multiple risks associated with qualitative studies; which may negatively hamper the scientific rigour of the research findings. It must as well be noted that it is every researcher's utmost wish to have the information they have gathered up through various instruments fulfill their purpose, but simultaneously must ensure trustworthiness and credibility of the research findings. In this research study, the researcher has adopted the following critical strategies to ensure the validity of the findings in order to enable me to draw correct inferences about the lived experiences of geography teachers' regarding the feasibility of fieldwork in their practice:

a) Triangulation

Triangulation refers to the use of two or more data sources, methods, investigators, theoretical perspectives, and approaches to analysis in the study of a single phenomenon and then validating the congruence between them (Brink, 1993). In this study, as suggest by Denzil (1989), the rationale behind adopting triangulation is to circumvent the personal biases of investigators and overcome the deficiencies intrinsic to single-investigator, single-theory or single-method study thus increasing the validity of the study. This study used two forms of data triangulation and methodological triangulation.

The first form of triangulation which involves data triangulation made use of journal and peer-reviewed articles, books, and policy documents. The second form of data triangulation involved methodological triangulation which made use of the semi-structured interviews and focus group conducted with the geography teachers as indicated previously. These different methods of data triangulation were significantly employed to this study to render different method and perspectives which helped produce a more comprehensive set of findings (Noble and Smith, 2015).

b) Member checks

Member checks refers to recycling of analysis back to the informants (Brink, 1993). In this study, certain generated findings were given back to the teachers to confirm the accuracy of the content. This was done during the focus group. During this phase, the group interaction between the geography teachers played a pivotal role by viewing the main themes generated from data consistently. In so doing, geography teachers were also given the opportunity to confirm the accuracy of information rendered and supplement it with more information wherever possible.

3.4.4.2. Reliability

Reliability refers to the ability of a research method to yield the same results over repeated testing periods (Brink, 1993). It is the degree to which the ultimate findings of the research study can be consistent and thereafter replicated over time. It should however be highly noted, as according to Cohen et al. (2011), reliability does not entail that researchers should strive for uniformity: two researchers studying a single setting may drive different findings although both sets of findings may be reliable. As a researcher, I am well aware that certain processes that emanate from one semi-structured interview or focus group at a particular time does not consequentially guarantee similar processes and occurrences at all times. However, the theoretical underpinnings together with the research methodologies employed in this study makes it possible for this study to be replicated.

3.4.5. Ethical considerations

The purpose of ethical principles is to ensure that research is ethically sound while being respectful towards human beings who participate in such studies (Ketefian,

2015). In this regard, ethical measures should therefore highly uphold the human dignity of all individual participants involved in the research. In this case, respect of the rights of research participants requires maintaining confidentiality in the use of data and their sources and that participants must be informed if this is not possible and offered the opportunity to withdraw from the study (Awases, 2015).

Regarding ethical principles, the researcher applied for ethical clearance in order to conduct research which was granted by the Ethics committee at the University of Pretoria (EDU017/21) and pledged to abide by the research conduct stipulated in the Ethics and Research Statement of the University of Pretoria in the Faculty of Education. It is also required that permission is obtained from individuals in authority at research sites to gain access to study participants for data collection (Creswell, 2014). Permission was granted by the Waterberg District Department of Education to conduct research at the proposed schools. Moreover, the principals granted their permission for the interviews to be conducted at their schools (see Appendix).

To ensure that this research was conducted in a sound and ethical manner, informed consent forms were explained and thereafter signed by the geography teachers together with their HODs prior to their engagement in the semi-structured interviews. During the process (interviews and focus groups), teachers were reminded again that participation was voluntary, and that they could withdraw at any given time if they wanted to do so. Additionally, confidentiality and anonymity of participants was assured. Teachers were informed that their rights to confidentiality were assured, and therefore they are each represented by pseudonyms instead of their real names.

3.5. THEORETICAL FRAMEWORK

Prior research indicates that various school geography curricula frameworks have in recent years adopted fieldwork as a signature pedagogy that enhances the efficacy of geography education at schools. Fieldwork has been widely valued for its ability to raise the profile of geography within the school (Job et al. 1999). Such findings signify that fieldwork has formed an integral constituent of geography school curricula.

However, the full adoption of fieldwork in geography education has yet to occur and be fully realised within the schools by the geography teachers. As previously outlined in the aforementioned discussion, the applicability of fieldwork is largely constrained by a considerable range of factors, which ultimately determine the willingness or unwillingness of geography teachers to adopt and execute fieldwork in their practice. In order to explain, predict and account for factors impeding the applicability and overall adoption of fieldwork by geography teachers at schools, the Innovation Diffusion Theory (IDT) by Rogers (2003) will be used as a theoretical framework for this study to evaluate the behaviour change of fieldwork adoption on the basis of lived experiences of geography teachers in the geography education context. An overview of IDT and its application to geography education research provides a framework from which to explore how a diffusion model can be applied to geography fieldwork and its adoption by geography teachers. The following discussion provides a detailed overview and extrapolates further on the IDT as a theoretical framework for this study.

3.5.1. Theoretical framework: Innovation Diffusion Theory (IDT)

> *'Diffusion really includes three fairly distinct processes: presentation of the new culture element or elements to the society, acceptance by the society, and the integration of the accepted element or elements in the preexisting culture.' (Ralph, 1936: 334).*

Owing to the exploratory nature of this study, which attempts to explore the lived experiences of geography teachers regarding the feasible operationalisation of fieldwork within the high school geography curriculum, arising from diminishing trends and the drastic decline of fieldwork in geography education; this study adopts a 'Diffusion Innovation Theory' (DIT) as a framework for examining behaviour change (Scott and McGuire, 2017) observed within geography education at high school level.

Everett M. Rogers (1995) is the best-known scholar in the area of diffusion research (Yates, 2001). Pioneered by E.M. Rogers in 1962 as one of the oldest social science theories (Boston University School of Public Health, 2019) and later on popularising

the theory in his book entitled 'Diffusion of Innovations', the innovation theory is one of the most appropriate means for investigating social patterns in the social system (Sahin, 2006).

Diffusion is a process through which an innovation is communicated through certain channels over-time among the members of a social system (Rogers, 2003). As expressed in this definition, *'innovation'* can be an idea, practice or project that is perceived as new by an individual or other unit of adoption (Rogers, 2003). The diffusion theory is the most appropriate means for investigating social patterns in the social system (Sahin, 2006): it is a theory that seeks to explain how, why and at what rate new ideas spread (Bello and Ojigi, 2013). Hefty emphasis is largely placed on how an innovation, a new idea, a policy etc are disseminated through channels amongst the rest of all individuals within a certain social system. In a close scrutiny, this theory tries to explain how an innovation, which may be about an idea, behaviour or object is adopted amongst a population (Jwaifell and Gasaymeh, 2013). According to Yates (2001), there are four main elements/factors that influence the adoption of an innovation which are: 1) the innovation itself, 2) the communication channels used to spread information about the innovation, 3) time, 4) the nature of the society to which it is introduced (Rogers, 1995). In the following section, attention is given to expounding the four main elements of IDT.

3.5.1.1. Four main elements of Innovation Diffusion Theory

a) Innovation

Rogers rendered a clear description of the word 'innovation' in the following manner: an innovation is an idea, practice or project that is perceived as new by an individual or other unit of adoption (Rogers, 2003). According to Sahin (2006), an innovation may have been invented a long time ago, but if individuals perceive it as new, then it may still be an innovation for them. Based on Roger's definition, fieldwork is an innovation because it is an educational tool, policy, practice, and idea aimed at enhancing the teaching and learning of geography as a subject. Overtime, this innovation had to be adopted into school curricula and geography syllabi to be utilised by teachers because it serves as an essential requisite that endows real

world opportunity for students to hone their geographical thinking and experiences. According to Cook (2011), fieldwork is an innovation that aims at raising the profile of geography within the school and has a potential to inspire and motivate a future generation of geographers.

As previously established in this chapter, the concept of fieldwork has enjoyed a long-standing tradition within geography teaching (Stoltman and Fraser, 2000). Despite a long and inherent tradition of fieldwork with geography, there is a reported behaviour change by geography teachers regarding the adoption and utilisation of this innovation in their practice. This study therefore claims there is a lack of diffusion research on the lived experiences of geography teachers regarding the idea of 'fieldwork' in their practice. On this basis, this study therefore wants to point to ideas of DIT framework regarding the behaviour change of fieldwork adoption and utilisation by geography teachers. In order to answer questions of behaviour change of geography teachers with regard to fieldwork adoption and utilisation, it is important to model the 'innovation' based on the five perceived characteristics, which are most likely to influence the rate of adoption through innovation diffusion (Rogers, 2003).

i. Relative advantage

Relative advantage refers to the degree to which an innovation is perceived as providing more benefits than its predecessor (More and Benbasat, 1991). According to Rogers (2003), relative advantage results in increased efficiency, economic benefits and enhanced status. The relative advantage of fieldwork is what has been proposed by Job et al. (1999) in this manner:

- Fieldwork supports the geography curriculum by promoting geographical knowledge and understanding, bridging the gap between the classroom and outside world, and reinforcing students' understanding of geographical concepts.
- Fieldwork promotes the development of a range of transferable skills, including enquiry, numeracy, literacy, and communication.

- Fieldwork encourages students to develop an appreciation of a range of different environments, with an implication for the conservation of sites and linking to education for sustainable development.
- Fieldwork encourages students to consider and respect a range of perspectives on social, political, and environmental issues, while giving them the confidence to justify their own opinion.
- Fieldwork encourages students to be independent learners and develop teamwork, communication, and leadership skills.

ii. Fieldwork's compatibility

According to Chen et al. (2004), compatibility refers to the degree to which an innovation is perceived as consistent with users' existing values, beliefs, habits and present and previous experiences. It is a vital feature of innovation as conformance with users' lifestyles can propel a rapid rate of adoption (Rogers, 2003). Therefore, a lack of compatibility will negatively affect fieldwork's ability to be adopted by geography teachers into their practice. According to Hoerup (2001), each innovation influences teachers' opinions, beliefs, values and views about teaching. If an innovation is compatible with an individual's needs, then uncertainty will decrease and the rate of adoption of an innovation will increase (Sahin, 2006). Thus, in the context of this study, fieldwork's compatibility, and ease of use by the geography teachers in their practice influences its applicability and ultimately determines its feasible operationalisation in the geography curriculum. An idea that is incompatible with the teachers' values, norms and practices will not be adopted as rapidly as an innovation that is compatible (Robinson, 2009). If geography teachers experience challenges while attempting to implement fieldwork in their practice, then fieldwork will hardly be utilised as a signature pedagogy for teaching and learning geography, despite its acclaimed and perceived benefits.

iii. Complexity of fieldwork

According to Cheung et al. (2000), complexity is the extent to which an innovation can be considered relatively difficult to understand and use. It is the degree to which

an innovation is perceived as difficult to understand and use (Robinson, 2009). Complexity is the opposite of ease of use (Al-Jabri and Sohail, 2012): it is therefore a major factor/determinant of fieldwork adoption by geography teachers. There is a myriad of empirical research on fieldwork which suggest that teachers' ability to implement fieldwork in their practice is constrained by various contextual factors, which eventually impede its efficacy in geography education.

Costs, the time-factor, poor fieldwork expertise, poor student behaviour and large classroom size are some of the considerable range of barriers that contribute to the unwillingness of teachers to execute fieldwork in their practice (Han and Foskett, 2007; Cook et al. 2006; Scott et al. 2014; Jenkins, 1994). Geography teachers will be inhibited from utilising fieldwork in their practice if they realise that it requires mental effort, it is very time consuming and it causes a lot of frustrations. Thus, excessive complexity of an innovation is an important obstacle in its adoption process (Sahin, 2006).

iv. Trialability of fieldwork

Trialability refers to the capacity to experiment with an innovation before adoption (Al-Jabri and Sohail, 2012). The attribute of trialability is important for an innovation because potential adopters want to know if the benefits it claims really exist (Rogers, 1995). Geography fieldwork can be easily implemented on a trial basis because it is advocated by geography curricula at schools. The trialability of fieldwork largely influences the adoption of fieldwork by geography teachers. If geography teachers are encouraged and further supported to implement fieldwork in their practice; it will largely curtail the fears attached to fieldwork, which could ultimately lead to many geography teachers adopting and implementing fieldwork in their practice.

v. Fieldwork's Observability

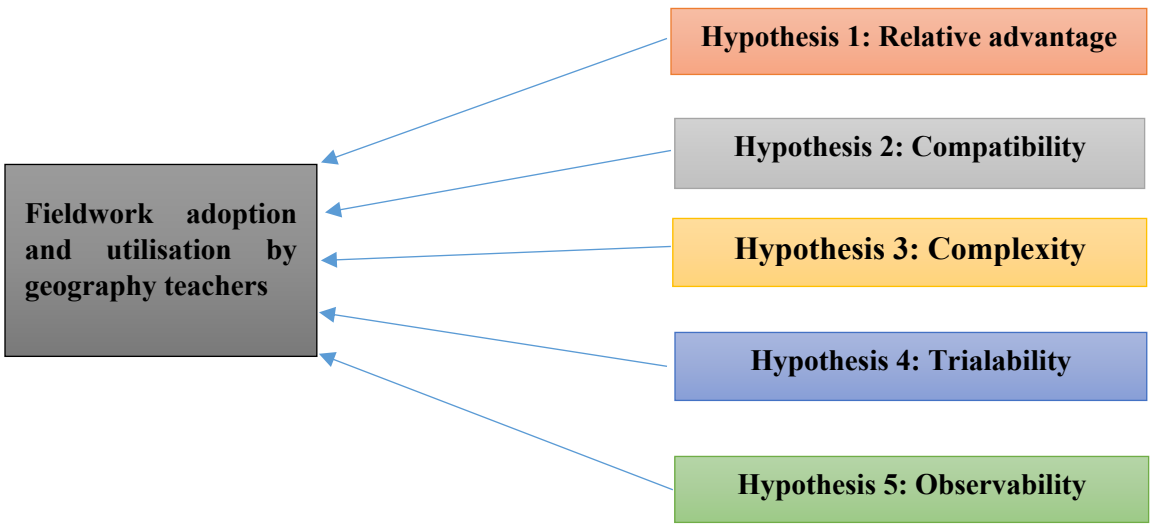
Observability of an innovation describes the extent to which an innovation is visible to members of a social system, and the benefits can be easily observed and communicated (Rogers, 2003). The easier it is for individuals to see the results of an innovation, the more likely they are to adopt it (Robinson, 2009); this is because

perceptible results are more like to accelerate the adoption rate of an innovation. In the context of this study, the review of literature provides an opportunity for fieldwork to be observed by geography teachers who aspire to implement fieldwork in their practice. If geography teachers could notice an opportunity that fieldwork may offer in fostering a deeper geographical understanding, then fieldwork adoption is highly likely.

3.5.1.2. Fieldwork adoption

Rogers (2003) clearly defined adoption as a decision to make full use of an innovation. In the context of this study, the focus is placed on exploring the lived experiences of geography teachers regarding the feasibility and applicability of fieldwork in their practice. It assesses the extent to which geography teachers adopt, utilises and feasibly operationalise fieldwork in their practice. However, research has proven that geography teachers are reluctant to adopt fieldwork into their practice due to the preconceived contextual barriers attached to it (Scott et al. 2014; Waite, 2009; Han and Foskett, 2007, Cook et al. 2006). Regrettably, the application of fieldwork by geography teachers in their practice is clearly diminishing and declining. The lived experiences of geography teachers regarding the feasibility of fieldwork in their practice will therefore be hypothesised in the research model below:

Figure 3.1: Hypothesis of fieldwork adoption



b) Communication channels

Communication channels are the second element of the diffusion of innovation process (Sahin, 2006). In order to better understand how geography fieldwork can be diffused and ultimately adopted by geography teachers in their practice, it is imperative to consider the communication channels that are used as mediums of information transmission regarding fieldwork in geography education. According to Rogers (2003), communication is a process in which participants create and share information with one another in order to reach a mutual understanding. It is a means by which messages get from one individual to another (Rogers, 1995).

In the context of fieldwork, a myriad of research and curriculum resources provide substantial evidence regarding the effectiveness of fieldwork in enhancing geography education. The espousal of fieldwork in the geography curriculum, syllabi and policies is an essential requisite that can inform geography teachers regarding the effectiveness and benefits of fieldwork in geography education. They are the most efficient and rapid way of communicating the imperative nature of fieldwork in geography education. Additionally, the geography subject specialists, curriculum developers and subject advisors can play a crucial role in influencing the rate of fieldwork adoption among geography teachers through constant and rigorous support with regard to fieldwork application in their practice. Face-to-face communication between individuals of the same socioeconomic status and educational level increases the potential of acceptance even more (Yates, 2001).

c) Time

The element of time is the third important factor in a diffusion process (Yates, 2003). The inclusion of the time dimension in diffusion research is one of the strengths of the diffusion process (Rogers, 2003). The aspect of time in the DIT deals with three main theories; i) innovation-decision process theory, ii) the individual innovativeness theory, iii) rate of adoption theory.

i) Innovation-decision process

According to Yates (2001), the innovation-decision process is a process through which an individual learns about an innovation, forms an attitude, adopts or rejects the innovation, implements new ideas and confirms the decision to do so. In the context of geography fieldwork, this is an essential period in which geography teachers gather all the necessary knowledge regarding the effectiveness, efficacy, applicability, and feasibility of fieldwork in the geography curriculum prior to their decision to adopt it in their practice. The innovation-decision process is a process that involves five main steps which include: 1) knowledge, 2) persuasion, 3) decision, 4) implementation, 5) confirmation (Rogers, 1995). A macro-level perspective of fieldwork in geography education clearly asserts that fieldwork is at the extreme end of the continuum of the five main steps of the innovation-decision process, however, full implementation of fieldwork by geography teachers in their practice is not fully realised due to issues pertaining to its feasibility. Several evidence-based research papers have noted that the majority of geography teachers have not yet decided to implement fieldwork in their practice because they are impeded by various contextual barriers (Baidoo et al. 2019; Mohammed, 2016).

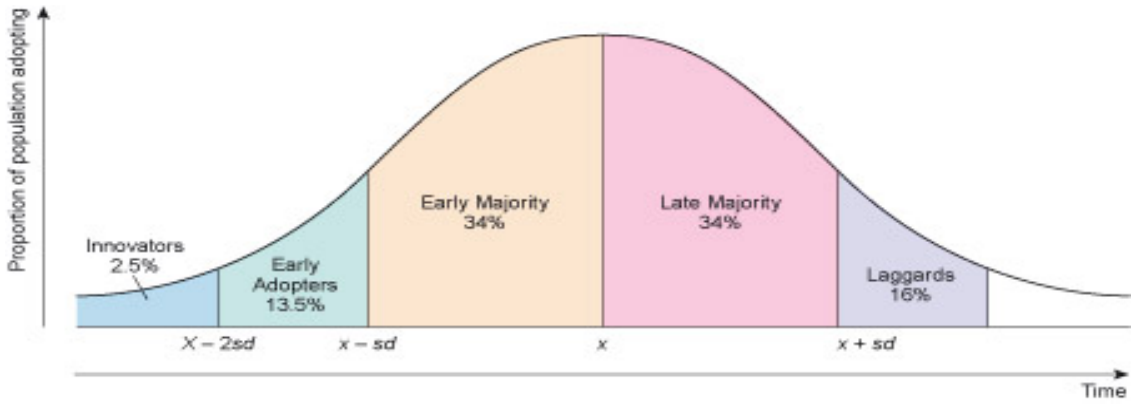
ii) Individual innovativeness theory

Rogers (1995) defined innovativeness as the degree to which an individual or other unit of adoption is relatively quicker in adopting new ideas than other members of a system. In general, different individuals adopt innovations on different time scales, depending on the degree of individual's comfortability with the innovation. Some individuals adopt a new idea much earlier than others do (Yates, 2001). These individuals who adopt an innovation much earlier than others are known as innovators (Rogers, 1995). According to Rogers (2003), innovators were willing to experience new ideas. Therefore, these groups of individuals should be able to cope with unprofitable and unsuccessful innovations, and a certain level of uncertainty about the innovation (Sahin, 2006). Fieldwork as an innovation has long been rooted in several traditions which ultimately played an important role in the development of the geography discipline (Lai, 1999). They are fundamental founders in geography

fieldwork who ultimately advocated the inclusion of fieldwork in the school curriculum.

Early and late majorities follow the early adopters (Yates, 2001). According to Rogers (1995), the early majority is slower to accept the innovation, but do so more rapidly than the late majority. The countries that included fieldwork in their geography curriculum will be considered as the early majority, whereas the late majority will be those that adopt fieldwork in their national geography curricula in the future. Laggards rarely accept new innovations (Yates, 2001). Members of each group of adopters typically share common characteristics like socio-economic status, exposure to fieldwork, and a limited or a wide network of interpersonal channels (Rogers, 1995). Individual innovativeness theory is clearly displayed in the illustration below, by categorising innovativeness based on adopters.

Figure 3.2: Adopter categorisation



Adopter categorisation on the basis of innovativeness (Rogers, 2003)

iii) Rate of adoption theory

According to Rogers (1995), the rate of adoption is the third area in the diffusion of innovations that involves time. As evident from the aforementioned discussion in this study, many geography teachers are still reluctant to implement and execute fieldwork in their practice. Despite national geography curricula and policies advocating fieldwork in the geography education, a full-blown execution of fieldwork

is yet to be attested for. There is however a wide acknowledgement by the teachers of the significance of fieldwork in enhancing the efficacy of teaching and learning geography. This acknowledgement is consistent with the rate of adoption by national curriculum and school policies, which are adopting education patterns that are more enquiry-driven.

With the passage of time, geography teachers have noted contextual barriers impeding the applicability of fieldwork in geography education, which eventually causes a tapering off and dwindling decline of fieldwork adoption by geography teachers. Rogers (1995) suggested that the cumulative frequency distribution over time will resemble an S-shaped curve. As geography teachers individually perceive and experience such barriers, their ability to adopt and implement fieldwork in their practice is highly jeopardised.

d) Nature of the society

The fourth and final factor which influences the diffusion of innovations is the nature of the society to which the innovation is introduced (Yates, 2001). Rogers (2003) defined the social system as ‘a set of interrelated units engaged in joint problem solving to accomplish a common goal’. A society is known as a social system (Yates, 2001), which in the context of this study is the geography educators at both primary and secondary schools, curriculum coordinators, policy makers and geography organisations. All the members of this social system are collaboratively working towards ensuring that geography education is enquiry-driven, by employing enquiry fieldwork approaches, which are inherently rooted in the principles of ‘geographical enquiry’, a process that involves the active participation of students (Foley, 2010). The diffusion of geography fieldwork within this social system is largely influenced by the social structure, the norms within the system and opinion leaders (Rogers, 1995).

3.6. CONCLUSION

This chapter presented the main philosophical assumptions underlying this research study in detail. It descriptively outlined the rationale and justifications regarding the choice of phenomenological and qualitative research approach. In this chapter, I attempted to elucidate critically on the processes and steps through which information was acquired for this study. Moreover, the chapter provided clarity on the methods and approaches that were utilised in the data analysis processes and the motivations for doing so. The data analysis section outlined the processes that were employed to analyse the information that was extracted from the teachers. It further detailed the way in which the analysis is interwoven with the discussion and findings regarding the lived experiences of the sampled geography teachers with regard to the feasibility of fieldwork in geography.

The next chapter presents the data from the semi-structured interviews and focus groups. It extensively analyses the data presented and further presents the final product of the analytic process through the processes described in this chapter.

CHAPTER 4: PRESENTATION OF DATA AND FINDINGS

4.1. INTRODUCTION

This research study purposely set out to explore the current way fieldwork is experienced by the geography teachers in the selected schools. The study principally explored the experiences of geography teachers regarding geography fieldwork, with specific reference to the applicability and feasibility of fieldwork in geography.

To ensure that the data of the research is methodically structured and coherently integrated, the researcher decided to organise the data collection procedure in to two phases, namely Phase one and Phase two. Phase one of the data collection process commenced on the 14th of September 2021 and concluded on 15th of October 2021. During this phase, the researcher started out by requesting permission from the school principals of the participants. Upon approval from the principals, the researcher visited all the research participants to familiarise myself with them and briefly outline to them the whole purpose of the research being undertaken. Semi-structured interviews were thereafter conducted with the teachers after reasonable arrangements were made.

After having gone through the data from the semi-structured interviews and identifying possible gaps, this led to Phase two of data collection, in which gaps that were identified in Phase one had to be addressed through a focus group. Phase two commenced on 20th of October 2021 and was concluded on the 21st of October 2021. During this period, the researcher concentrated on a focus group, in an attempt to collect greater insight from the whole group, rather than just relying on individual interviews.

4.2. CHARACTERISATION OF THE SCHOOLS AND TEACHERS

Semi-structured interviews were conducted with two geography teachers per sampled school. The researcher was cognisant of the fact that the sampled schools situated in the Waterberg district would yield a variety of rich and descriptive data because all the schools have differing characteristics in terms of national

examination performances, learners' enrolment, and staff experience. The two teachers interviewed were a geography Head of Department (HoD) as well as the Grade 11 geography teacher. Teachers were each assigned an anonym, which in this case was a value and a code denoting their school. The table below provides a summary of data representation in terms of pseudonyms of each teacher for the purpose of confidentiality and anonymity of each research participant:

Table 4.2a: Representation of participating teachers and their schools

School	HoD	Grade 11 geography teachers
A	A1	A2
B	B1	B2
C	C1	C2
D	D1	D2
E	E1	E2

KEY: Schools: Letters (A – E); HODs: Value (1); Grade 11 teachers Value (2)

School A is a high performing school that is situated on the suburban fringe of Bela-Bela town. It was founded in 1899 and throughout the years, School A has maintained outstanding national academic results, coupled with multiple accolades and exceptional ratings for individual teachers and learners in the Waterberg district. The school is classified under quintile level 5 (Q5), categorised as a fee-paying school with a high proportion of learners coming from middle to high-income families. According to the school's statistics, the 33 teachers (staff) and 563 learners (learner enrolment) have considerable academic, socio-economic, and cultural diversity. The school is well-resourced and has all other necessary education and sporting facilities in place. Unfortunately, at the point of this research study, School A did not have a geography HOD, as a result, there was no provision for participant A1. Consequently, the researcher only had one respondent from school A (A2), who is a Grade 11 geography teacher.

School B is a medium performing school, centrally located in the heart of Bela-Bela Township. The school was established in 1979, and presently has an enrollment of 1 300 learners and 36 teaching staff. A high proportion of learners at school B come

from low to medium-income families. It is a quintile level 2 school and learners are exempted from paying school fees due to the disadvantaged and underprivileged backgrounds of most learners. The learner-teacher ratio of the school is high. On average, classes comprised of 40 – 45 learners according to the statistics provided by the principal. The school's infrastructure is still maintained, however, the school is relatively under-resourced.

School C shares similar attributes to those of School B. School B and C are situated near each other, centrally located in the heart of the township. The building infrastructure of the two schools is more or less of a similar pattern. The variation is only determined by the learner enrollments. School C has currently enrolled 1 200 learners and 30 teaching staff. It is a medium performing school, however performance slightly fluctuates each year depending on certain contextual factors, according to the school's principal.

Over recent years, School D has been widely deemed as a low performing school in comparison to all other schools from the same township. Recently, academic performance has started to take positive shape and the school has begun performing slightly above average within the Waterberg district. The school has enrolled 978 learners, with a staff complement of 29 teachers. A high percentage of learners of the school are from poor and disadvantaged family backgrounds. The school does not have enough infrastructure, and to help mitigate the problem of overcrowding in classrooms, the principal went on to secure extra mobile classes through donations.

School E is also a high performing school situated 22km out of Bela-Bela. The school has hostel facilities and provides boarding facilities to learners from distant areas. This school aims to provide a balanced academic programmme of a high standard with exceptional achievement. For the past few years, the school has endeavored to maintain a 100% pass rate or very close to that. It is a conventional, co-educational, academic high school which is more inclined towards the sciences and provides agriculture science as an obligatory field of study for all learners. Most learners at this school are from middle to fairly high-income families. All the school's facilities and infrastructure are in good and pristine condition. At the time of this

research, the average number of learners per class is 25 and below, in contrast with the abovementioned schools.

Initially, as purposed by the researcher, the research population sampled was to be comprised of 10 geography teachers; that is one Grade 11 geography teacher accompanied by the geography HOD from each school (2 participants per school). Unfortunately, the researcher had to withdraw School E from the research study because geography has been phased out of the school's curriculum. Geography is no longer offered in the FET phase of School E and, as a result, the school no longer has geography teachers.

It is critically important to understand the profiles of the participating teachers. These profiles play a crucial role in underpinning the experiences of the teachers regarding the feasibility of fieldwork in their practice. The following table summarises the core key features of each participating teacher for the purposes of clarity:

Table 4.2b: Participating teachers' profiles

Teacher	School	Highest level studied geography	Educational qualification	Geography teaching experience	subjects offered	Classes teaching presently	Committee involved at school
A1	A	N/A	N/A	N/A	N/A	N/A	N/A
A2	A	University	BEd (FET) Hon (Sports Education)	7 years	Geography	Grade 10 – 12 Geography (6)	Sports organiser
B1	B	College	N Dip.	20 years	Geography Social Scienc	Grade 8, 9, 10 & 11 Geography (5) Social sciences (5)	NSNP SMT
B2	B	University	BA & PGCE	4 Years	Geography English	Grade 8-10 Geography (4) Social Sciences (6)	Sports organiser
C1	C	College	N Dip.	23	Geography	Grade 10 – 12	SMT
C2	C	University	BEd	22 years	Geography Setswana	Grade 10-12 Geography (5) Setswana (2)	Welfare Uniform
D1	D	University	BEd (FET)	3 Years	Geography	Grade 10-12 Geography (5) Social Sciences (2)	Sports organiser Timetable
D2	D	University	BEd (SENIOR) (FET)	2 Years	Geography English	Geography (6) English (1) Social Sciences (4)	LTSM

Presentation of data involving geography teachers is herewith presented in two sections outlined below. The first section involves results of data extracted from the semi-structured interviews with the geography teachers. The second section focuses mainly on the results of data presented by the teachers through a focus group, in order to supplement and harmonise that which was established during the semi-structured interviews.

The following sections will expound on the findings of the semi-structured interviews. Findings are structured around the themes attached to the initial research question concerning the experiences of geography teachers regarding the feasibility of fieldwork in their practice. As already discussed in the literature review, fieldwork is rarely undertaken by geography teachers due to various constraints. Therefore, one of the chief aims of this study was to explore the feasible operationalisation of fieldwork amongst geography teachers; by exploring the applicability and feasibility of fieldwork through the constructed experiences and perspectives of Grade 11 geography teachers. The themes developed from the semi-structured interviews attached to the research question is further elaborated below.

4.3. CONCEPTUALISATION OF 'GEOGRAPHY FIELDWORK'

Teachers' understanding of the concept of 'geography fieldwork' is essentially significant because it has major implications on how they practically apply the concept into their own practice. As already established in the literature review; a good understanding of fieldwork fosters geographical enquiry, which may then lead to higher-order comprehension and learning.

4.3.1. Teachers' conceptualisation of 'geography fieldwork' in the context on geography education.

Teachers' definition of fieldwork in the context of geography education.

The South African Curriculum Assessment Policy Statements (CAPS) advocate an enquiry-based approach (DBE, 2011) to teaching and learning and so teachers' attention was drawn to sharing their understanding of the concept 'fieldwork' in the context of geography education. Teachers were asked to define 'geography

fieldwork' according to their own knowledge and understanding. With this question, I as the researcher aimed to establish the prior knowledge and understanding that teachers had as far as fieldwork is concerned. Teachers expressed various conceptions with regard to the definition of fieldwork. Despite difference in matters of utterances, their statements however implicitly converged at describing it as 'learning that takes place in the real world/environment'. All their definitions are however clear and thus portray that teachers have a background knowledge and understanding of what fieldwork is. When asked to give their own definitions, respondents expressed themselves as follows:

B2 states:

It's all about facing the real world. It is when we are taking a study into reality; like doing it practically and seeing things in practical terms.

B1 defined fieldwork as follows:

In the context of geography, it is when a teacher decides to take learners out on a fieldtrip and teach learners based on what they see, especially things like landforms. It is a complete opposite of classroom learning.

D1 simply defined fieldwork as:

Learning directly in the real world outside of the classroom.

D2 expressed himself as follows:

In simple terms I would say, it is the education outside the classroom.

In the case of C2, she defined fieldwork as:

A process whereby learners observe and note information about different features on the landscape.

C1 states:

Fieldwork is when one takes the geography lesson outside the classroom, so as to help learners experience direct learning from the environment.

According to A2, fieldwork is defined in various ways, depending on to which field it is applied. In the context of geography education, she defined fieldwork as:

An act or process of taking learners out of the class into the field to gather data about the landforms.

Additionally, she regards fieldwork as a process of acquiring knowledge about landforms through seeing.

4.3.2. Teachers' lived experiences with the use of fieldwork in their practice.

Premised from the background of this study, the geography CAPS (DBE, 2011) expects the implementation of fieldwork for teaching and learning geography content across the three FET syllabi (Grades 10 – 12). Despite this requirement, multiple reservations have been laid out by the teachers regarding the applicability and feasible implementation of fieldwork by teachers in their own practice. The following section presents interview responses of geography teachers regarding their experiences with the use of fieldwork in their practice.

How often do teachers undertake fieldwork in their lessons?

This question was designed to establish the frequency of fieldwork undertaken by geography teachers throughout the course of the academic year. It establishes how frequently geography teachers are exposed to fieldwork in their practice.

Table 4.3a: Frequency of fieldwork undertaken by teachers:

Teacher	Frequency (Per year)
A1	N/A
A2	1
B1	0
B2	0
C1	0
C2	0
D1	1
D2	0

The statistics represented in the table clearly show that the participants rarely undertake fieldwork in their practice. Fieldwork is either conducted once a year or not at all. Various factors were laid out by different teachers as reasons contributing to why they undertake little or no fieldwork. Teacher A2 indicated that she is guided by the Annual Teaching Plan (ATP) provided by CAPS. She indicated that *'the annual teaching plan just does not allow fieldwork to be conducted often'*. Teacher C2 also concurred that the reason why she hardly undertakes fieldwork or none at all is because the ATP provided by the department does not make any provision of fieldwork at all. Due to this, Teachers A2 and C2 see no point of undertaking fieldwork in their practice because there is no provision of fieldwork in the ATP of the Grade 11 geography syllabus.

In the case of teacher B2, the environment plays an important role in influencing the undertaking of fieldwork. *'Bela-Bela is unlike other places'* as according to Teacher B2, the environmental setting of Bela-Bela offers few sightings and landscapes comprising of geography landforms. This then forces the school of Teacher B2 (B) to travel long distances in order to go and see places or environmental settings that offer a wide range of geographical landforms. Teacher D1 also concurred that the geographical setup of Bela-Bela does not offer much environmental landscape where learners can be taken for fieldwork. Teacher D1 further indicated that, *'fieldwork became difficult for me to conduct because places that offer a wide range of geography landforms and resources are far away'.* This then explains the reason why the teachers undertake fieldwork once a year or sometimes none at all.

Do teachers possess sufficient expertise to conduct fieldwork?

The researcher attempted to acquire information specifically related to the expertise that teachers possess in order to effectively implement fieldwork in their practice. This question is so important to this research study because the expertise and knowledge that teachers possess largely contributes to the way fieldwork is implemented and applied in geography education. 'Expertise' is such a significant variable in the context of feasibility and applicability of fieldwork in geography education. The researcher is of the opinion that if teachers are better equipped with

fieldwork expertise, then they will be competent in the way they implement fieldwork in their practice. On this basis, teachers were asked to comment on this introspective question: 'Do you think you are well-equipped and possess sufficient expertise to conduct fieldwork?'. A2 indicated that she is *'absolutely competent enough'.* She explained:

'In my third and fourth year at university, my lecturer took us for a fieldwork excursion to Vredefort Dome. I have seen all those things physically and observed all those landforms. Afterwards, I had to integrate what I have seen with the content. I know exactly how fieldworks because they have shown us at university'.

When asked to comment on how the undertaken fieldwork to Vredefort Dome contributed to her practice/professional development, she responded:

'It was really worth it. It was actually very interesting looking at things practically. I never knew in high school that South Africa has such beautiful landscape. Besides, I understood certain things better through the guidance of my lecturer'.

In like manner, D1 indicated that he accumulated vast fieldwork experience during his university years and thus, it has made him to be better equipped with the application of fieldwork. He explained how he acquired fieldwork expertise at university as follow:

'During my university experience most of my modules in geography focused on practical application as well as field related activities. So, for four years I have spent at university, I have been doing geography fieldwork. I believe I am therefore better equipped with the knowledge of fieldwork'.

B2's response on whether he was well-equipped and possesses sufficient expertise to conduct fieldwork was *'not to a great extent'*. When asked to elaborate further on what he meant, he responded:

'Unfortunately, my educational qualification is BA in political studies. I did not do BEd. I also did not study geography in detail from my first until last year. I only did a

methodology of geography when I did my PGCE after having completed my BA degree'.

The responses of B2 suggests that he positively reckoned fieldwork as a useful tool required to enhance better comprehension of geography by learners. Sadly, it is however unfortunate that he is not well conversant with the application of fieldwork because he was never involved in any fieldwork related discourse at university.

4.3.3. Application of fieldwork with the geography syllabus.

The application of fieldwork by geography teachers in their practice is the central theme of this study. Stemming from the purpose and focus of this study, ultimately, the researcher wants to be able to determine the extent of feasibility of the practicability and applicability of fieldwork with the Grade 11 syllabus within the geography curriculum. This will then be achieved as per the narrated experiences of the geography teachers in response to the following interview question.

Is fieldwork part of your Annual Teaching Plan (ATP)?

In the South African school context, the curriculum advisors and subject specialists furnish the teachers with the ATP prior to the commencement of each academic cycle. The ATP serves as the teacher guidelines for the implementation of annual teaching plans and the minimum core content and skills per subject and per grade (DBE, 2020). In this document, geography teachers are guided thoroughly to acquaint themselves with the syllabus/subject content intended to be covered for the year. The ATP is therefore regarded as an important document because through this, geography teachers are expected to know the amount of subject content they have to cover, when are they expected to cover the syllabus and all the assessment to be delivered during the academic year. Based on these grounds, the researcher therefore wanted to find out if fieldwork is part of the geography teachers' ATP. The following are responses by the geography teachers and their motivations.

On whether fieldwork is part of the teachers' ATP, A2 decided to narrate her experience regarding the use of fieldwork and ATP as follows:

'The ATP does not provide any room for fieldwork activity throughout the year. Fieldwork is not mentioned in the ATP at all. The only practical aspect of the syllabus in the content is mapwork, which does focus on outdoor learning. ATP does not allow it. There is just no time. With COVID – 19 also, there is just no place for fieldwork.'

For A2, she fully upholds the importance of ATP as well as fieldwork as equally important, however she does not fully comprehend the association between them. ATP is a significant guide that all geography teachers should be familiar with, nevertheless, despite its expediency, it does not convey any regulations pertaining to the conduct of fieldwork. C2 adds further as follows:

'Fieldwork is not part of my ATP because the DBE did not include it in the syllabus. It is not in the ATP as well that we received from the seniors such as curriculum advisors etc.'

B2 also indicated that fieldwork is not really part of his ATP nor in any of his year plans. He further expressed himself as follows;

'I wouldn't say fieldwork is part of my ATP because of the surrounding environment of the school where I am currently stationed. This place does not really offer sites worth conducting fieldwork with the learners. Taking learners to faraway places just to conduct fieldwork is costly. It requires a lot of funding. The reason why I do hesitate to organise fieldwork related activities with the learners is because of funds, but if funding is available, I will definitely take them'.

B2's expression suggests that fieldwork is only confined to certain environmental sites that offers geomorphological landforms and scenery. Therefore, schools that are situated in Bela-Bela areas will struggle to conduct fieldwork because there are no such landforms and scenery around the Bela-Bela area. According to B2's perception, schools that are situated in Bela-Bela will only make it possible to conduct fieldwork if they have funds to travel to distant locations that offer such landforms. D1 equally shares the same expressions as those of B2. D1 appears to be aware of the importance of the inclusion of fieldwork in the ATP, however, the environmental setup of Bela-Bela, in which the school is situated does not offer a

wide range of fieldwork sites. The school would like to include fieldwork in its year plan, however, it is unfortunately deprived of this privilege in the following manner as per the expressions of D1;

Fieldwork could be well fitted into the ATP but given rustic environment where I am working in right now it's a bit of a challenge. A lack of equipment at school is also a factor that caused fieldwork not to be part of my ATP. Furthermore, the school does not have enough funding to help take the learners to distant places where fieldwork could become possible. But most importantly, fieldwork should be conducted in geographical contexts, for example, we have no mountainous environments here. A lot of content covered in geography is not offered at all in the environment where the school is located. For this to be a reality, we will have to travel long distances.

Moreover, D2 supports the notion that the environment underpins the inclusion of fieldwork in one's ATP to a greater extent. He equally agrees with D1 that the school is under resourced and far away from places that offer fieldwork related activities. As result, fieldwork is negatively affected. D2 elaborates further:

I do not have certain equipment and the tools to actually conduct fieldwork. There are certain tools which I am aware of, for example, the rain gauge etc. If certain tools like these ones are not offered at schools, then this will make fieldwork to be difficult to be conducted. Besides, our school is very far from landforms. There are basically no sites around or closer to the school where I can take my learners to. For us to visit these places, it will require a lot of money. This is the reason why I don't include fieldwork in my ATP.

What time of the year do teachers prefer to undertake fieldwork?

In the literature review the researcher has established that geography teachers have lamented on the issue of time constraints as a huge barrier which prevents geography teachers from undertaking fieldwork in their practice. As such, remarks and claims such as *'fieldwork is not in the syllabus/ATP'* and *'we must finish the syllabus first'* have been enunciated by geography teachers; which display a lethargic outlook towards the implementation of fieldwork in geography education.

On these grounds, the researcher asked the respondents this question in order to understand how and when do teachers integrate fieldwork in their practice, in order to reinforce and relate the content that the learners acquired with into practical reality.

This was an important question that the researcher intended to use in order to find out if teachers really utilise fieldwork as something to aid better comprehension of geography content or just a 'trip' that they use after the syllabus has been completed, normally towards the end of the year. Table 4.3 show times of the year that teachers prefer/would prefer to undertake fieldwork and their motivations.

Table 4.3b: Period of the year that teachers undertake fieldwork

Teacher	Time of the year	Motivations
A2	Term 3 (July-Sept.)	*'In the beginning of the year, it's very busy. So it must be Term 3 because Term 2 they are writing major exams (June exams). So yeah, Term 3 is not that busy because we are only writing normal term tests'.*
B1	Term 3 (July-Sept.)	*'Because by this time, the whole syllabus is almost covered'.*
B2	Term 2 (April-June)	*'Weather and also other things they make it easy to see some of the things that you want to see such as fog and so forth'.*
C1	Term 3 (July-Sept.)	*'I also agree that Term 3 is not that busy. It will give you enough opportunity to at least undertake fieldwork'.*
C2	Term 3 (July-Sept.)	*'Because I think I will be through with the syllabus. I want to be through with the syllabus first and fieldwork will come after'.*
D1	End of every term	*'I believe that will be the right time for me to conduct fieldwork, so learners need to be reminded and understand what they are being taught better'.*
D2	June and September	*'I chose 2 different seasons so that learners can experience different processes. For example, in June when it's extremely cold, learners will be able to experience fog, mist, frost pockets etc.; whereas in*

		September they will experience different atmospheric processes of spring season as well'.

Teachers responded with different times of the year, depending on the schedules of their ATPs. Some of the teachers feel like fieldwork should come towards the end of the academic year; that is only if the syllabus is completed or partially done. These teachers have become rigidly affixed with what is in the syllabus and they will only teach and focus on what is stipulated therein. The other part of the respondents regard fieldwork as a signature pedagogy that should be used interchangeably with theory lessons. They responded that they would use fieldwork at variable times of the year in order to consolidate the content learned.

What are the factors that impedes the application of fieldwork in your practice?

Premised from the literature review, it is clearly established that there is undoubtedly a considerable range of barriers that contribute immensely to the unwillingness of teachers executing fieldwork in their practice. This question is posed to teachers for them to personally explain and account for factors impeding the applicability or adoption of fieldwork in their own practice. A2 stated the following challenges she encounters when undertaking fieldwork:

The biggest challenge I experience when undertaking fieldwork is learners' ill-behaviors. They get naughty and start to misbehave. For example, if you have a class like, let's say 20, it's easy to take them to fieldwork and work with them. But the moment when you have let's say 60-65 learners, it starts to get difficult. It is a large group to control.

A2 felt fieldwork is largely constrained by a combination of two factors; large class size which ultimately triggers poor learner behaviours. Stemming from A2's perspective, a large class size poses a serious challenge with maintaining an orderly group. Due to such, teachers are then left grappling over fear of litigation when attempting to impose harsh disciplinary measures on learners that are misbehaving.

In the case of B2, it is a matter of logistical issues that impede the undertaking of fieldwork in his practice. B2 previously mentioned that the environmental setting of his school does not offer any sites worth taking learners for fieldwork. Therefore, fieldwork can only become possible if they are able to travel in order to get to the right sites that offer fieldwork related activities. On how logistical issues discourage him from conducting fieldwork, he responded:

Issue of transport is a big problem. Like I've indicated, we stay far from places that have geographical landforms. It costs a lot of money to get the learners there. This is what discourages me to conduct fieldwork. Now I can't take learners for fieldwork because there are no funds to cover transportation costs.

Generally, B2 stresses the encumbrances he faces with issues emanating from costs associated with logistics related to fieldwork. B2's expression portrays that fieldwork's logistics are undoubtedly costly due to travelling costs, as well as other basic costs that are involved in the whole fieldwork process. This encumbrance is exacerbated by a lack of financial support from the parents and other relevant stakeholders. D1 equally expresses similar sentiments as far as funding fieldwork is concerned. He states *'the first challenge that I encounter when attempting to undertake fieldwork is funding'*.

Although this question was asked of all the teachers, certain teachers responded in Question 9 that fieldwork is not part of their ATP. Those that responded 'NO' to Question 9, were further asked to at least respond to Question 11 which is*: 'If you undertake less fieldwork activities or none at all, what are the main reasons contributing to that?'*. Considering this question, D2 does not undertake fieldwork in his practice due to a wide range of constraining factors. The following is D2's expression with regard to Question 11:

Like I have indicated prior, the school itself is under-resourced. This is the first thing that make fieldwork partially impossible even around the school environment. And then the location of the community itself as well. For fieldwork to take place, a trip outside the community must be conducted, because fieldwork is education out of the classroom. As soon as logistical arrangements start, a lot of learners withdraw

because of financial challenges. Parents around the community are not supportive as well as and they do not invest for their children on these kinds of trips.

From D2's perspective, it is an amalgamation of factors that lead him to taking a decision not to undertake fieldwork at all. The under-resourced state of the school coupled with high travelling costs, lack of parental support for their children, little information about fieldwork in the syllabus are amongst the key factors that led him to ignore fieldwork in his practice.

C2, who equally disregards fieldwork in her practice, shares similar concerns with D2. C2 further states that there is no direction nor guidance from the department regarding how fieldwork should be implemented in the syllabus. C2 states:

I feel like fieldwork is not included in the syllabus at all because it is also not mentioned in the ATP for 2021. Anything that is not included in the ATP means it should not be considered. That is why I don't conduct fieldwork. The top management never advises us to conduct fieldwork.

According to C2's perspective, fieldwork not being included in the ATP is a hindering factor because it seems like it is not a priority. Teachers rather focus on the content that is mentioned in the syllabus and render much priority to that. She stresses that undertaking fieldwork is not important because it is not in the syllabus nor is it included in the ATP of 2021.

What do you think should be done to effectively integrate fieldwork into teaching and learning of geography?

Respondents were asked to strategise approaches that could be implemented in order to effectively integrate fieldwork into teaching and learning of geography, irrespective of whether they currently undertake fieldwork in their practice or not. All teachers positively responded in Question 8 that fieldwork should be part of the Grade 11 geography syllabus. Despite the contextual constraints impeding the application of fieldwork, they however uphold fieldwork as an important means that help learners to relate the theoretical knowledge acquired in class with practical

knowledge outside class. For this question teachers responded and suggested different approaches as per their perceptions. A2 expressed herself as follows:

In event where fieldwork is impossible to conduct, I improvise and do it my way. Like for example in Grade 10, I took different soil samples and put them in my class. I want the learners to see the soil layers I am talking about and also feel it, because some learners don't know the different types of soils that you get.

A2 suggests that teachers should improvise in any way possible to ensure that fieldwork prevails despite the contextual constraints. A2 believes in the capacity of fieldwork to enable effective learning.

B2 positively acclaims fieldwork and suggests that everything possible should be done in order to assist learners to experience practical learning, not just theoretical acquisition. On what should be done in order to effectively integrate fieldwork into the teaching and learning of geography, he expressed himself as follows:

The schools should organise secondary resources that can be used as alternatives in case it is difficult to take learners on a fieldtrip. These could be things such as projecting live videos on white boards so that the learners could see things live. This could help a lot according to my opinion.

B2 is of the opinion that certain technological devices may play a pivotal role in the event where fieldwork is not feasibly applicable due to various impeding factors. Technological developments can be utilised to facilitate mobile/outdoor learning. Given the mentioned barriers attached to fieldwork as identified by the respondents, technological aids such as computers, projectors, GPS, Google Earth and so forth can stand in the gap and help salvage the status quo of experiential learning. This will also provide an opportunity to reinforce theoretical knowledge acquired in class through practical simulations provided by these technological aids.

C2 believes that immediate solutions should be put into place in order to salvage the status of fieldwork at schools. She sternly states that *learners need fieldwork so that they can know these landforms in reality, because by merely looking in textbooks*

it's really difficult. On what she thinks should be done to effectively integrate fieldwork into teaching and learning of geography, she states:

'It should start with including fieldwork in the ATPs for every academic year. Because if fieldwork is not in the ATP, a lot of us will not even consider it at all. So, it should be included, and in the programmes of assessments for each FET syllabus. This will make every geography teacher to be obliged to undertake fieldwork. Then geography will be a better subject and learners will also understand it better'.

C2 believes that the inclusion of fieldwork in the ATPs should be mandatory for all geography teachers for every academic year. In this way, geography teachers will be mandated in some way to operationalise fieldwork in their practice. She further calls for fieldwork to be included in the assessment programs of the FET phase. In this way, both teachers and learners alike will get to experience fieldwork.

D1 shares similar sentiments to C2. They both acknowledge that the ATP should clearly stipulate the guidelines of fieldwork in details. In addition to this, D1 asserts the following:

'I think they should clearly demonstrate to us in the ATPs how and when should fieldwork be undertaken. This should be accompanied with time allocation clearly determined in the ATPs as well. Additionally, let's say if we separate or isolate fieldwork section into its own module or chapter just like GIS for instance, which is also included in the final examination. I think that will make teachers to take it more seriously as well as learners'.

D2 believes this is more than just individual teachers' responsibility. It should a collective responsibility in conjunction with the higher structures of the department of education. A high percentage of teachers do uphold the impact that fieldwork has in enhancing the better comprehension of geography content, however, they have to be supported in all aspects by the department to ensure that fieldwork is feasibly integrated in the teaching and learning of geography. D2 conveyed his perspective as follows:

'Given a lot of barriers impeding fieldwork like I have said earlier, the Department of Education must intervene by developing a model that will at least ensure that all schools in the district are assisted and learners are given the opportunity to go out on fieldtrips. The department should also liaise and consult other geography agencies and organisations to get on board and facilitate this fieldwork model'.

According to D2, the Department of Basic Education should strive whichever way possible to engage external organisations that specialises in fieldwork related ventures and enterprises. Such organisations may be in good positions to adopt feasible models that would promote the effective operationalisation of fieldwork at school level.

In addition to the interview Question 17, the researcher believes that the subject advisors, specialists, and curriculum developers can play an important role in ensuring that the status quo of fieldwork is elevated. Finally, the researcher then decided to render an opportunity to all the respondents to suggest what they think subject advisers, specialists and curriculum developers should do in order to help improve the status of geography fieldwork at schools. Teachers postulated various suggestions as per their sentiments. Each teacher's suggestions are herewith provided in Table 4.4 below:

Table 4.3c: Role of subject advisers, specialists, and curriculum developers to improve fieldwork.

Teacher	Question 18: What should subject advisors/specialists/curriculum developers do to help improve the status of geography fieldwork at schools?
A2	1. *The first thing is to include fieldwork in the textbooks. Currently, there's nothing in the textbooks that explains what fieldwork in detail is and how fieldwork should be approached and integrated into the geography lessons.* 2. *Subject advisors should start encouraging constantly. Usually, fieldwork is something that the teachers will bring to the table themselves. It is more like a self-guided thing. As a result, in my experience, I don't know if I am doing the right thing or not.*
B2	3. *The Geography Department (subject advisers, specialists, and curriculum developers) should identify good fieldwork sites that are within the district. Those sites should be permanently used as fieldwork sites for geography education.* 4. *If fieldwork cannot be undertaken due to issues such as funds, the schools should organise technological means that can enhance and simulate fieldwork.*
C2	5. *The curriculum advisers and subject specialists should include fieldwork in the ATP. It should be mandatory every year because it is really important.*

D1	6. *Like I mentioned earlier on, this is all coming down one thing, fieldwork is dying because it is not assessed at schools. Therefore, I think the best way to improve geography fieldwork at schools is to make sure that curriculum developers should include fieldwork in the programme of assessment for the whole Geography FET phase. It needs to be assessed in the examination or in some way that will make teachers as well as learners to take it more seriously.*
D2	7. *I think the Department of Education should try and engage with other geography fields such as geology, climatology, demographers, geomorphologist, and others. They should develop a partnership with the Department of Education and make arrangements in order to take geography learners to their fields and orientate them in detail about their fields. This is very important because learners will also develop passion of the subject from the school level as they are being exposed to geography in reality and practical terms.*

4.4. TEACHERS' IMPLEMENTATION OF GEOGRAPHY FIELDWORK IN THEIR PRACTICE

Even though the researcher chose semi-structured interviews as the prime means of data collection for the study, the focus group was also utilised to complement the semi-structured interviews in order ensure the rigour of the research study so that data triangulation could be enhanced. As established in Chapter 3, I conducted only one focus group, that was comprised of the following participants:

Table 4.4a: Focus group profile

Teacher	Rank	School
A1	PL 1	A
B1	HoD	B
B2	PL 1	B
C1	PL 1	C
C2	HoD	C
D1	HoD	D
D2	PL 1	D

This phase of data collection comprised of three HoDs and four PL 1 geography teachers. The focus group was aimed at collecting high-quality information. This in-depth information is important primarily to help understand the phenomenon from the viewpoint of the research participants collectively. The focus group was meant to complement and supplement the semi-structured interviews through the

interaction of all teachers. The researcher is of the opinion that data accrued through group interaction will render greater insights and an in-depth understanding of the research question. In accordance with the compliance of COVID – 19 regulations, each respondent was seated at their own table and were two metres apart. Due to this composition and structure of the group, the researcher could not audio-record each respondent but rather decided to note down all important verbal and non-verbal information that was given by the respondents. Taking into consideration participants' rights, respondents were asked if they would allow the session to be video-recorded. However, all participants were uncomfortable with the video recording, hence, the researcher resorted to note-taking.

The presentation of focus group data has been structured around the themes that emerged the most from the first phase of data collection. Consequently, the researcher used these themes in order to delve further into the respondents' opinions regarding their experiences about the feasibility of fieldwork. Below is the presentation and discussion of the focus group data:

4.4.1. Open-ended question and close-ended question:
What is your take on fieldwork as a signature pedagogy for teaching and learning of geography?

As an introductory question, the researcher posed this question to re-introduce the research topic as a focal point of discussion. The question is also intended to render an opportunity to the respondents to re-acquaint themselves with their experiences premised from the first phases of data collection. Teachers were given a moment each to express themselves one at a time regarding the central role that fieldwork as a signature pedagogy plays in geography education. The responses of the respondents were summarised in the table below:

Table 4.4b: Teachers' responses on fieldwork as a signature pedagogy for teaching and learning of geography.

Teacher	What is your take on fieldwork as a signature pedagogy for teaching and learning of geography?
A1	*Fieldwork enhances a better understanding of geography. Learners are exposed to what they have learn (sic) in class and apply it to reality.*
B1	*It is very important to both learners and teachers. Fieldwork makes the understanding of geography to be much easier.*
B2	*It is a wonderful tool. It makes the teaching and learning of geography to be realistic and practical.*
C1	*I agree that fieldwork is important and should be encouraged at all times in geography. Most importantly, it makes geography more understandable to the learners. Geography is more attached to the surrounding environment, and through geography, that becomes easier and possible.*
C2	*I also believe that fieldwork should be done almost every time. This is because, it connects both theory and practical together. So yeah, it is important in geography.*
D1	*Yeah, I totally agree that fieldwork should be a signature pedagogy because it helps learners to learn geography in a practical way in order to enhance their geography understanding in geography that emanates from the real world.*
D2	*Fieldwork offers learners exposure to the real world. I definitely agree that fieldwork should be a signature pedagogy for teaching and learning geography.*

The responses above signify that all respondents are in agreement regarding the central role that fieldwork plays in geography education. Based on the above responses, all the respondents maintained their positive stance towards fieldwork as a main signature pedagogy that enhances a better understanding and comprehension of geography content. The responses emanating from the focus group affirm and complement the initial views of respondents acquired from the semi-structured interviews about the central role that fieldwork holds in geography education.

Is fieldwork a reality in the geography high school curriculum?

The discussion in the literature review pointed to a scant and uneven implementation of fieldwork in the South African school context. Based on these concerns, this is a critical question that will enable the researcher to understand from the viewpoints of the respondents the position of fieldwork as far as the application and

implementation in the South African school context is concerned. It is a closed-ended question that will help the researcher to clarify the reality of fieldwork in the South African school context. Respondents were asked to respond using either one of the three options provided in the table below:

Table 4.4c: Is fieldwork a reality in the geography high school curriculum?

Yes	No	To some extent
		A1
	B1	
	B2	
	C1	
	C2	
		D1
	D2	
0%	**71%**	**29%**

It can be noted from the statistical representation above that 71% of the respondents claim that fieldwork is not a reality in the geography high school curriculum. Only 29% claim that fieldwork is undertaken but rarely so or to a lesser extent. None of the respondents clearly believe that fieldwork is a reality in the South African geography curriculum.

Do you want/wish to undertake fieldwork regularly in your geography lessons?

Given the current status quo of fieldwork at school level, the researcher has firmly established in the literature review that fieldwork is rarely undertaken at schools due to the earlier discussed constraints. Due to these contextual barriers, geography teachers display a lacklustre outlook towards implementing fieldwork in their practice and rather become rigidly affixed with what is strictly in the syllabus and ATP. The researcher asked this question to determine the level of eagerness or indifference amongst the geography teachers towards the application of fieldwork in their practice. As a closed-ended question, it will provide clarity and enable the researcher to get to the respondents' bottom line. The following are the responses of the teachers:

Table 4.4d: Regularity of fieldwork in geography lessons.

Teacher	Do you want/wish to undertake fieldwork regularly in your geography lessons? YES/NO?
A1	YES
B1	YES
B2	YES
C1	YES
C2	YES
D1	YES
D2	YES

100% responded positively to the question asked. They all want or wish to implement fieldwork in their geography lessons on regular basis. The statistical figure elicited by this question was very important because it denotes the number of respondents that esteem fieldwork and wish to practically implement fieldwork in their practice. The figure signifies that teachers have good intentions and a positive outlook towards fieldwork despite the acknowledged barriers. They all want to implement fieldwork in their geography lessons, not once but regularly.

What is the relevance of fieldwork in the geography curriculum?

In the opening chapter of this research study, the researcher clearly established the relevance of fieldwork in the geography curriculum. It is clearly established in Chapter 1 that the South African Curriculum Assessment Policy Statement (CAPS) advocates an enquiry-based approach to teaching and learning, which calls for fieldwork to be an indispensable signature pedagogy through which enquiry learning is realised in the all the FET phases. Despite this realisation, fieldwork is rarely undertaken. The researcher wants to establish the relevance of fieldwork in the geography curriculum from the perspectives and experiences of the respondents. To allow flexibility amongst the group, the respondents were granted permission to interact for a few minutes and thereafter respond one at a time. Three respondents volunteered to respond to the question above.

A2 responded as follows:

From my understanding, I believe fieldwork is very much important and still relevant in geography. It is the only tool that can help learners to understand geography practically and in reality. I understand fieldwork has a lot of challenges, or I must say, it is difficult to do because of things like costs, lack of enough time, learners' ill-behaviours and so forth. A lot of teachers will start to realise the importance and relevance of fieldwork, and how it makes learners' understanding of geography easier as soon as they start undertaking fieldwork regularly.

D1 responded as follows:

In my humble opinion, you just cannot separate fieldwork from geography. It is just impossible, and it is an injustice to geography education. I understand it is something that is difficult to do right now given the situations of our respective schools, but the department must just make it work because this is an important and relevant aspect of geography.

D2 responded as follows:

For me, fieldwork is still very much relevant in the geography curriculum. Even if we don't undertake it as we are supposed to, but it's important. I also believe that the Department of Basic Education has a huge role to play in order to be evident at schools. Right now, fieldwork is not a reality in schools, but the department is also not doing anything to make it work. I understand the CAPS document says something little about fieldwork, but what about the syllabus? What about the ATPs of the FET phase?

Based on the above utterances of the respondents, all the respondents are still adamant that fieldwork is still very much relevant in the geography curriculum. The respondents mentioned a few suggestions that must be looked at in order to enable fieldwork to be a reality in the geography curriculum across all FET phases. The respondents call for immediate intervention by the Department of Basic Education in collaboration with all other education stakeholders to find amenable solutions.

4.4.2. Probe questions:
What makes fieldwork to be less undertaken in geography?

During the semi-structured interviews, all respondents identified some contextual factors that are impeding the effective application and implementation of fieldwork (Question 11). The researcher decided to revisit the question and asked the respondents to reiterate their perspectives on the previously mentioned barriers. At this stage of the focus group, the researcher hoped for comments that provided greater insights into the study topic. The researcher decided to note down and summarise the key points and barriers that are identified by the respondents only. The barriers mentioned by the respondents are summarised as follows:

Table 4.4: What makes fieldwork to be less undertaken

Teacher	What makes fieldwork to be less undertaken in geography?
A2	*Lack of funds* *Not enough time* *No intervention by subject advisors and other relevant stakeholders*
B1	*Learners don't have money to pay for their transport*
B2	*Learners' ill-behaviours*
C1	*No fieldwork in the ATP*
C2	*Schools don't have funds to organise fieldwork activities on regular basis*
D1	*Not enough fieldwork sites in the area*
D2	*Lack of equipment and tools*

Respondents identified several factors like the ones mentioned during individual semi-structured interviews. From the respondents' perspectives, this implies that the abovementioned barriers stand out as the most identifiable contextual factors that impede the effective application and implementation of fieldwork in the geography curriculum.

Do you think fieldwork should be mandatory in the Grade 11 geography syllabus?

In the review of literature, the researcher pointed to a myriad of scholarly research that regards fieldwork as a key constituent of geography's heritage. Fieldwork assumes an inherent role in the subject's tradition due to the potential positive impact that it bestows upon geography. Given this awareness of educational benefits attached to fieldwork, the researcher asked the respondents to comment on whether fieldwork should be mandatory in the Grade 11 geography syllabus. The researcher, being the mediator of the focus group posed the question to all the respondents and shared the platform for comments. The researcher randomly picked the respondents who raised their hands for comments. The following are the comments made by the respondents.

A2 commented as follows:

Well according to my opinion, fieldwork should be mandatory. We are all aware of the benefits of fieldwork in geography. It makes everything easy, I mean, obviously when you combine theory and practical, the understanding becomes much better. I do agree that there are a lot of challenges, but if the department comes on board and all other stakeholders, then it will be possible. But in a nutshell, I believe fieldwork should be mandatory.

D2 commented as follows:

In my opinion, it's quite tricky because the backgrounds of the schools are not the same. I wouldn't say it should be compulsory or not because am speaking from the context of my school, where am currently teaching. Yes, of course I believe in the power of fieldwork. I know fieldwork makes everything easier in geography, but some schools, like mine will find it difficult to implement it. Not all learners can afford to pay for their transports; besides, not all schools have tools and equipment to conduct outdoor learning. So yeah, I guess am just in the middle.

C2 responded as follows:

Okay, fieldwork is very important in my opinion. And we all know that the major and biggest obstacle of fieldwork is money. I am aware of all others, but the issue of funds is the biggest one. I think the department should do something about this. The schools on their own will not manage. It should be compulsory, in fact across all FET phases. The department should just find a model that will accommodate it and make it work.

Based on the three responses above, despite mixed reaction towards the question, all the respondents are in complete agreement towards making fieldwork mandatory. Other respondents agreed with the concept of making fieldwork mandatory on the condition that the Department of Basic Education and all other necessary stakeholders intervene and devise a feasible model that would accommodate fieldwork in the geography curriculum across all FET phases.

What place does fieldwork occupy in the Grade 11 geography ATP?

During the semi-structured interviews, the researcher asked the respondents if fieldwork is part of their ATP. It is such an important question because it will give an idea of the place of fieldwork in their ATPs. All curriculum advisers, irrespective of the subject they offer, are required in the beginning of each academic year to devise an ATP that is intended to guide teachers throughout the year regarding the content that is to be covered. ATPs are then devised by the curriculum advisers and thereafter pass it on to the all the teachers in the concerned departments. On this basis, the researcher sought to find if fieldwork has any place in the ATPs that teachers receive from their respective curriculum advisers. The following are the comments made by the respondents in summary:

Table 4.4f: Place that fieldwork occupies in the ATP

Teachers	What place does fieldwork occupy in the Grade 11 Geography ATP?
A2	*No place at all whatsoever, I've never seen it on any ATP.*
B1	*It is not there, and if it's not there that means it will not be done.*
B2	*Fieldwork has no place in the ATP.*

C1	*From my understanding, fieldwork has no place in the ATP. I have never seen it. Even if it was there, it has never been emphasised.*
C2	*I don't think if fieldwork has a place in the ATP. Curriculum advisers have never ever mentioned it.*
D1	*It has no place at all. If it is there, it's position is highly concealed.*
D2	*We do not have any fieldwork in the Geography ATPs. It is hard then to teach something that is not mentioned in the ATPs.*

All the respondents ascribed to the fact that the place of fieldwork in the geography ATPs is quite scant, minimal, or non-existent. Due to this scant position of fieldwork in the ATPs, it makes teachers hold back and never implement fieldwork in their practice. Respondents emphasised the fact they are rigidly affixed to what is mentioned in the ATPs only.

4.4.3. Follow-up questions:

Which factor stands out the most as a major obstacle that impedes the application of fieldwork?

In both phases of data collection, respondents identified various contextual constraints that impede the application and implementation of fieldwork. The researcher gave an opportunity to the respondents to identify a factor that stands out the most as a major barrier that impedes the application of fieldwork. During this phase of data collection, the researcher has established the overall knowledge and experiences of geography teachers regarding fieldwork. However, the researcher decided to ask follow-up questions for specific insights. The researcher intended to use this follow-up question in order to delve further into the respondents' opinions regarding contextual constraints that impede the application of fieldwork. Respondents identified the following factors:

Table 4.4g: Major obstacles that impedes fieldwork.

Teachers	Which factor stands out the most as a major obstacle that impedes the application of fieldwork?
A2	*Insufficient time*
B1	*Funding*
B2	*Not enough money*
C1	*Travelling costs*
C2	*Not indicated in the ATP*
D1	*No fieldwork sites*
D2	*Lack of funds*

A high portion of respondents believe that out of the contextual constraints identified, the issue of funding appears to be a major barrier towards the application of fieldwork. Although there are some other constraints identified, such as insufficient time to conduct fieldwork, lack of fieldwork sites around the schools and no place of fieldwork in the geography ATPs; a high proportion of respondents believe that it all comes down to the issue of funding. The researcher is of the opinion that the factor identified by the respondents as a major barrier towards the application of fieldwork should be given undivided attention as an initial attempt towards saving the place of fieldwork in the geography high school curriculum.

Should fieldwork be part of the Grade 11 programme of assessment?

During the first phase of data collection, some of the respondents suggested that fieldwork should be part of the Grade 11 programme of assessment. They believe that in this way, geography teachers will be compelled to prioritise fieldwork due to the fact that it will be part of learners' promotion requirements. The researcher asked the respondents to comment on the above and justify their stances. The respondents responded as follow:

Table 4.4h: Should fieldwork be part of the programme of assessment?

Teacher	"YES" Motivations	"NO" Motivations
A2	*Yes, fieldwork should be part of the programme of assessment. This is the only way that will make us take fieldwork seriously. I mean, there is no point of teaching something that will not be assessed at the end of the year. So yeah, I believe it should be part of both mid-year and final year exams.*	
B1	*Yes, I think fieldwork should also be part of the programme of assessment, because in that way, it will be taken as an important element of geography curriculum as well, just like any other chapter in geography.*	
B2	*Yes, I agree it should be a compulsory part of the programme assessment. It will make fieldwork to be taken seriously.*	
C1		*I will say no because we are not all trained properly to conduct fieldwork. Some of us will still struggle to implement it because of a lack of knowledge and understanding of how it works. They must first workshop us on how fieldwork works.*
C2	*Yes, I absolutely agree. Right now, we aren't undertaking fieldwork because it's not assessed, but as soon as it starts to be assessed, no one will ever fail to undertake fieldwork.*	
D1		*Just as I said last time, that this is a tricky situation. Not every school is in a good position to conduct fieldwork. As much as fieldwork is important in geography, I believe a few things must be met first, things like funds etc. If those needs are not met, and fieldwork is added on the*

		programme of assessment, then it will disadvantage the learners.
D2	*Yes, fieldwork should be assessed in exams. Fieldwork should have its own chapter and this chapter be assessed in the examination. For example, GIS is a difficult chapter that requires tools in order to understand, but just because it's part of the programme of assessment, teachers are improvising. It should be the same with fieldwork.*	

A high proportion of respondents believes that fieldwork should be a compulsory part of the Grade 11 geography curriculum. These respondents claim that this is the only way through which fieldwork will be likely to be undertaken. Respondents believe that undertaking fieldwork right now when it is not part of the program of assessment is a complete waste of time. However, another small proportion of respondents believe that certain measures must be looked at first. These respondents claim that fieldwork should not be in the programme of assessment given the current condition because it will disadvantage learners greatly.

4.4.4. Concluding questions:

What is your recommendation towards the improvement of the current status quo of geography fieldwork at school level?

In conclusion, given what has already established by the respondents, the researcher granted an opportunity for the respondents to recommend measures that must be put into place in order to help improve the status of geography fieldwork at school level. Having all acknowledged fieldwork as a signature pedagogy for geography teaching and learning, the researcher then finally asked the respondents to make their final recommendations. Respondents made the following recommendations:

A2 stated:

We need a serious intervention from the Department of Education itself. They need to look at this issue. They have to devise means, such as a feasible model that can accommodate the application of fieldwork. I personally believe that this should involve a top-down approach. The department has a huge role to play, other than just doing about fieldwork.

B1 stated:

I think this matter should involve a lot. By that I mean, the department, SGB, teachers, stakeholders, and others. Schools cannot do it alone. Like we said, there are so many challenges attached to fieldwork.

B2 stated:

I think it starts with priority. The department should start prioritising fieldwork. They must include it in the ATP of every academic year.

D2 stated:

I will recommend a few things according to my opinion. Number 1, the department should identify fieldwork sites. I don't know how, but the department must make agreements with the owners of those fieldwork sites. They should permit schools to visit those sites regularly. Number 2, include fieldwork in the programme of assessment. This will compel the geography department to make it work because it is going to be assessed in the exams. Number 3, make fieldwork compulsory, that is the only way it is going to work. And lastly, the department should engage with other external donors to contribute towards fieldwork. It can be companies that volunteers to assist schools financially in order for them to undertake fieldwork.

4.5. CONCLUSION

The findings on the lived experiences of Grade 11 geography teachers regarding the feasibility of fieldwork were expounded in this chapter. These findings were acquired from the phases of data collection namely: Phase one which involved the semi-structured interviews and Phase two which made use of the focus group. As indicated in Chapter 3, the researcher made use of semi-structured interviews as a prime source of data collection, and thereafter supplemented the semi-structured interviews with a focus group because of the gaps that were identified in the semi-structured interviews. In the next chapter, I have provided a detailed discussion of the findings obtained from chapter 4 by interpreting and critically analysing the experiences, perspectives, views and comments made by the geography teachers in relation to the main research question of this study.

CHAPTER 5: ANALYSIS AND INTERPRETATION OF DATA

5.1. INTRODUCTION

The presentation and findings of the research data from the previous chapter have laid out a framework for analysis and interpretation concerning the lived experiences of Grade 11 geography teachers regarding the feasibility of fieldwork in their practice. Thus, this chapter sets out to analyse and interpret the presented data and ultimately discuss the findings in an attempt to elucidate the main research question and ultimately find answers. The analysis, interpretation and ultimate discussion of this chapter is inextricably related to the principal research question of this study:

> *'What are the lived experiences of Grade 11 geography teachers pertaining to the implementation of fieldwork?'.*

In addition to the principal research question, the analysis and interpretation of the research findings are reviewed in the context of the literature review and rationale of the research study. The discussion of the research findings will later be carried out and communicated under the theoretical framework namely, Innovation Diffusion Theory (IDT), which was adopted for this study. For the purpose of this study, findings will be interpreted and discussed under themes that have emerged from the research questions during Phases one and two of the data collection process.

5.2. CONCEPTUALISATION OF FIELDWORK BY GRADE 11 GEOGRAPHY TEACHERS IN THE CONTEXT OF GEOGRAPHY EDUCATION.

A myriad of geography researchers regard fieldwork as a key element of geography's heritage, and an expression of its contemporary educational power because it embodies exploration and enquiry (Lambert, 2011). Fieldwork plays an inherent role in geography: it is regarded as an indispensable pillar of the geography subject (Hammond, 2017). With this in mind, the South African CAPS (2011) emphasised a need for all topics in the geography FET phase syllabus to be explored within an enquiry-based methodological approach (DBE, 2011). As indicated in Chapter 2, an enquiry-based approach embraces fieldwork as a signature pedagogy to be utilised in order to explore the geography curriculum's four

main big ideas *(Place, Spatial Processes, Spatial Distribution Patterns and Human and Environmental Interaction)* (DBE, 2011).

In responding to the definition of fieldwork in the context of geography education, which ultimately establishes teachers' overall conceptualisation concerning geography fieldwork, all the teachers' definitions revealed a basic and an essential conceptualisation of fieldwork in the context of geography education. This question greatly helped the researcher to establish teachers' understanding of the concept of fieldwork. All the definitions rendered by the teachers complement the fact that fieldwork is indeed an educational endeavour that must take place outside the constraints of the classroom walls, in an attempt to provide a sense of direct experience of reality. Fundamentally, teachers' overall conceptualisation of fieldwork came down to understanding that fieldwork is an educational activity conducted in the field setting outside the normal classroom environment (Lai, 1999).

The research findings deduced from the definitions of the teachers reveal that most, if not all, do understand what fieldwork entails. A small proportion of teachers understand fieldwork to a greater extent beyond a definition level. Beyond definition level, they also indicated the essence of fieldwork in the geography curriculum.

The following is the proportional representation of key words/phrases as per their frequency/occurrence in the definitions rendered by the geography teachers, expressed as a percentage:

- Educational activity outside the classroom (57%).
- Learning by 'seeing' or learning directly in the real world (29%).
- Observation about different landforms on the landscape (14%).

Most of the teachers agree with the perception that fieldwork is *'an educational activity that takes place outside the classroom'*. This key phrase was the most common and appears frequently in the definitions rendered by the teachers. It denotes the foundational and introductory understanding of fieldwork in the context of geography education because defining fieldwork in the context of geography education should indeed be substantiated by the environmental and outdoor setting that is somehow linked to the geography syllabus, as geography and the field are

completely intertwined. Similarly, it is the same conception used by Lonergan and Andersen (1988), who defined the 'field' as any place 'where supervised learning can take place via first-hand experience, outside the constraints of the four-wall classroom setting'.

The research findings also indicate that the teachers only rendered a superficial and lightweight fieldwork delineation. This signifies that some teachers' understanding of fieldwork is limited to 'educational activity outside the classroom' only. The researcher in the literature review has firmly rendered a descriptive and informative description of fieldwork in the context of geography education. In the perspective rendered by the geography teachers, a few omissions in the understanding of the definition of fieldwork are quite noticeable such as:

- Robertson (2003): '…geographical fieldwork is an active process through which learners construct knowledge about the work in order to learn and make linkages between what they already know and new information and ways of seeing things.'
- Stoddart (1986): 'Fieldwork is therefore a mechanism that enhances the acquisition of "real" geographical knowledge that takes place in the field as a result of an interaction of physical, mental and emotional experiences,'
- Bailey (1974): 'A means of bringing the two aspects of the subject (i.e., a body of knowledge and a distinctive method of study) together in the experience of a pupil.'

The above fieldwork delineations signify that fieldwork is more than just an act or educational activity that takes place outside the classroom. In the context of geography education, it transcends beyond a process of delivering a subject lesson outside the classroom.

5.3. TEACHERS' LIVED EXPERIENCES WITH THE USE OF FIELDWORK IN THEIR PRACTICE.

The Geography CAPS (DBE, 2011) advises geography teachers to utilise fieldwork for teaching and learning of geography content across the three FET syllabi namely, Grades 10 – 12. In Grade 11, the geography syllabus advocates the application of fieldwork as embodied under the *'geographical skills and techniques*.' This section discusses the use of fieldwork by the Grade 11 geography teachers in their practice, as per the findings from their experiences and perspectives.

5.3.1. How often geography teachers undertake fieldwork in their practice.

Since fieldwork is advocated for as a method of teaching and learning in the Grade 11 geography curriculum, the researcher directed this question to all respondents in order to find out how frequent geography teachers utilise fieldwork in their practice. The amount of fieldwork utilisation by geography teachers draws so much conclusion regarding the feasible operationalisation of fieldwork in the geography curriculum. Regrettably, the results of this study disclosed an appalling status as far as the frequency of fieldwork undertaken by teachers on annual basis is concerned.

The findings of this study established that only 29% of the respondents currently undertake fieldwork in their geography lessons. Even so, the findings revealed that 29% of those that undertook fieldwork in their geography lessons do so only once a year. These findings therefore coincide with Wilmot and Dube's (2016) assertion that despite CAPS advocating fieldwork as an enquiry-based approach in the geography curriculum, there is little evidence that this approach is implemented in South African schools. The findings show little evidence of the application and implementation of fieldwork by geography teachers in their practice. Fieldwork is indeed rarely undertaken by geography teachers. Therefore, the researcher has established that based on the findings from the teachers' responses, the position and status of geography fieldwork is rather indistinct. This is because of the lack of frequency of fieldwork sessions undertaken by teachers.

The researcher acknowledges multiple factors that were laid out by the geography teachers as the motives that led to such infrequent fieldwork application in their practice. Factors laid out by teachers include multiple barriers ranging from structural

challenges such as level of fieldwork expertise, school culture, individual predisposition towards fieldwork, costs, and many others (Scott et al. 2014).

Findings also reveal that teachers hardly undertake fieldwork in their geography lessons because they are struggling to realise the viability between the CAPS geography curriculum and the Annual Teaching Plans (ATP) they receive from their curriculum advisers. Geography CAPS makes provision for fieldwork application, however, fieldwork provision is non-existent in the ATP. The researcher believes that the feasibility between the geography CAPS and the ATP is another theme that calls for future probing and research. This is because the CAPS endorses the policy framework of geography as a subject, whereas the ATP serves as a guiding tool for teachers throughout the entire academic year. This is the reason why the majority of respondents articulated claims stating that the reason why they hardly undertake any fieldwork or none at all is due to the fact that the ATP provided by the department does not make any provision for fieldwork.

The findings in particular reveal that geography teachers rely on what is written in the geography ATP. Hence A2 stated *'the annual teaching plan just does not allow fieldwork to be conducted often'.* Such claims coincide with Ngcamu's (2000) findings that remarks such as *'this is not in the syllabus'*, *'I must finish the syllabi*' are commonly and often articulated by teachers. The researcher established that such remarks and claims contribute immensely to teachers ultimately adopting a lethargic outlook towards fieldwork as far as the implementation and application of fieldwork is concerned. Geography teachers therefore become rigidly aligned with what is in the ATP such that they only teach what is stipulated therein. Therefore, a minimal indication of fieldwork activities in the geography Grade 11 ATP makes it difficult for teachers to implement and undertake fieldwork. It is a major concern that leaves teachers grappling over the inclusion of fieldwork in their teaching plans and thus leaves the status of fieldwork at schools ineffectual.

5.3.2. Assessing geography teachers' level of fieldwork expertise

Although, teachers agree that fieldwork activities are an effective mechanism to address the theory-practice chasm (Wilson et al. 2001); some admit that they find it

difficult providing quality field experiences that will facilitate learning (Beck and Kosnick, 2002; Clark, 2002; Laboskey and Richert, 2002). A review by Ostorga and Lope-Estrada (2009) points out that teachers are constantly faced with the challenge of providing students with learning opportunities that will promote effective learning which will further maximize students' learning. The inference from the above review is that; to enhance students' learning and improve their ability to apply the acquired knowledge, learning must take place in an environment that facilitates the desired learning outcomes, particularly as they relate to application of knowledge in different situations (Woolfolk, 2004). Simply put, teachers should demonstrate the ability to replicate their content knowledge and experience in the field, through which learners are facilitated to supplement their theoretical content knowledge with real world knowledge.

According to Wilson et al. (2001), for fieldwork experiences to serve as a productive learning opportunity, an intense emphasis must be placed on learning that occurs in the field; by providing learners with the skills necessary to effectively comprehend the meaning of their observation (Tang, 2004). In this regard, geography teachers must possess relevant fieldwork expertise that would present an opportunity to learners in order to frame their theoretical content knowledge into the real-world context.

In this context, geography teachers' level of fieldwork expertise is under the spotlight as a prerequisite for effective fieldwork. The researcher has established that 'fieldwork expertise' is a significant feature in the context of the applicability and implementation of fieldwork in geography education. On this basis, the results of this research study revealed that the respondents' level of fieldwork expertise is found wanting.

In their response regarding their level of fieldwork expertise, the researcher decided to categorise the teachers into two categories, Group one and Group two. The categorisation of the teachers was based on their responses regarding their level of expertise and knowledge of fieldwork.

Table 5.1: Categorisation of geography teachers' level of fieldwork expertise

Group 1 – more competent	Group 2 – less competent
A2	B1
C2	B2
D1	C1
D2	

Based on their responses regarding their level of fieldwork expertise, Group one appeared to be more competent and well-equipped with fieldwork knowledge as compared to Group two. Based on the responses of Group one, in conjunction with the researchers' point of view, all the teachers in this group are more competent and well-equipped with fieldwork expertise based on the following features:

- in possession of a recognised four year BEd degree.
- specialised in geography at a higher institution of learning such as a university.
- participated in the geography field related activities during their years of study.

From the responses afforded by the teachers in Group two, the findings were that teachers in Group two have a lower level of fieldwork expertise. These teachers appeared to be poorly equipped with fieldwork knowledge based on the following features:

- in possession of a low geography qualification.
- did not specialise in geography at a higher institution of learning.
- did not participate in any geography field related activities during their years of study.

Overall, the research findings regarding participating teachers' level of fieldwork expertise reveal that only 57% of the teachers were exposed to a certain level and degree of fieldwork proficiency. 43% were never exposed to fieldwork during their period of studying, thus their level of fieldwork proficiency is very poor. It is also quite notable that none of the teachers received fieldwork induction post tertiary education. This seems to suggest that teachers have never experienced fieldwork

workshops, clinics or inductions post their tertiary educations. Teachers only rely on the little experience that they have gathered during their tenure at tertiary institutions.

Premised on the above, the researcher establishes that a low level of fieldwork proficiency and expertise by the geography teachers contributes greatly to a scant or rare application of fieldwork at schools. According to the IDT framework espoused for this study, it revealed that *'complexity of fieldwork'* is a major factor/determinant of fieldwork adoption by geography teachers. *'Complexity of fieldwork'* is a degree to which an innovation (fieldwork) is perceived as difficult to understand and use (Robinson, 2009). Undeniably, poor fieldwork expertise is one of the considerable range of barriers that contribute to the unwillingness of teachers to execute fieldwork in their practice (Han and Foskett, 2007; Cook et al. 2006; Scott et al. 2014; Jenkins, 1994). Thus, geography teachers are inhibited from utilising fieldwork in their practice due to a poor level of fieldwork proficiency.

5.3.3. Fieldwork and the Grade 11 geography syllabus

The Grade 11 geography syllabus clearly advocates the application of fieldwork as embodied under the general geographical skills and techniques. CAPS (DBE, 2011) emphasised that in every term of the FET band (with specific reference to Grade 11), geography skills and techniques should be put into practice. The teaching of geographical skills and techniques should be spread across all four terms and should be linked to specific topics in each grade (DBE, 2011). Fieldwork is embodied as a geographical skill and technique in the Grade 11 geography syllabus, and it is to be utilised as follows as according to the CAPS (DBE, 2011:16):

- *Observation*
- *Collecting and recording data*
- *Processing, collating and presenting fieldwork findings.*

A suggested breakdown of when these geographical skills and techniques might be applied only appears at the end of each topic as follows:

Table 5.2: Application of fieldwork in the Geography CAPS

Term: 2	**Topic: Geomorphology**
Geographical skills and techniques applied to the topic of geomorphology: **Fieldwork [2 hours]** **• observation;** **• collecting and recording data; and** **• processing, collating, and presenting fieldwork findings**	

Based on the above, fieldwork is clearly advocated and emphasized in Term two, under the topic *'geomorphology'* as an approach to be utilised for observation, collecting, and recording of information and presenting the fieldwork findings pertaining to geomorphological features. Therefore, guided by the above fieldwork stipulations in the CAPS (DBE, 2011); the researcher aimed at establishing the extent at which Grade 11 geography teachers make use of fieldwork as per the instructions stated in the CAPS document. The researcher believes that the application of fieldwork in the Grade 11 geography syllabus also forms part of the central of themes of this study. Through this, the researcher will be able to determine the level of feasibility regarding the practicability and applicability of fieldwork within the Grade 11 geography curriculum. This will then be achieved through the findings extracted from the narrated experiences of the Grade 11 geography teachers in response to the question *'Is fieldwork part of your ATP?'*.

5.3.4. Fieldwork and Grade 11 ATP

The researcher has previously stated that the ATP is an important document that every geography teacher should have in their possession. It serves as a guideline for the implementation of the annual teaching plans and the minimum core content of the geography syllabus as stipulated in the CAPS (DBE, 2011). It is important to note that in the context of geography for the FET band, the ATP document is not devised by the geography teachers themselves, it is furnished to them prior the commencement of each academic cycle by the subject advisors and specialists.

In the context of this study, the findings of the semi-structured interviews as well the focus group revealed that fieldwork is not part of the teachers' ATPs at all. The findings established that 0% of the participating teachers had fieldwork activities

included in their ATPs. Despite all teachers equally upholding the significance of fieldwork in geography education, the mere absence and deficiency of fieldwork activities in their ATPs complements the study by Swaan and Wijnsteerkers (1999) which found that fieldwork has never been obligatory in the geography curriculum in the Netherlands. The same can be said in the context of the findings of this study. Fieldwork is carefully encouraged in the geography curriculum by the CAPS (DBE, 2011), however, it does not form part of the ATP. This confirms that fieldwork is only encouraged, but it is not an obligatory component or feature of the Grade 11 geography annual programme.

Based on the participants responses regarding the existence of fieldwork in the ATP, the findings of the semi-structured interviews and focus groups revealed the following:

- *The ATP does not provide any scope and capacity for fieldwork activities throughout the whole academic year* (A2).
- *ATP does not convey any regulations and guidelines pertaining to the application of fieldwork* (D1).
- *The only geographical skill and technique mentioned in the ATP is mapwork skills: fieldwork is nonexistent (A2).*
- *There is no allocation of fieldwork activities in the ATP* (C2).

It is undoubtedly clear that geography teachers will only prioritise that which is within the ATP as furnished to them by the subject advisors and specialists. It can be stated that geography teachers will only focus on the content that is included in the programme of assessment. Fieldwork is therefore sidelined because it is not encouraged in the ATP.

5.3.5. Place of fieldwork in the Grade 11 ATP

The researcher believes that understanding the current place of fieldwork in the Grade 11 geography ATP contributes greatly to acquiring an understanding of the feasibility of fieldwork in the Grade 11 geography curriculum. When the researcher asked the participating teachers to state their final views again on the position of fieldwork in the Grade 11 ATP, the researcher sought to establish the place that fieldwork holds in the Grade 11 ATP, in order to ultimately grasp the feasibility of

fieldwork in the geography curriculum. Based on the interactive responses of the participating teachers in the focus group, the findings revealed that all teachers ascribed to the fact that the position of fieldwork in the Grade 11 ATP is vague, scant and or non-existent. All respondents (100%) believed that fieldwork has no provision in the Grade 11 ATP. Consequently, the fact that fieldwork has no provision in the ATP means that teachers will rigidly adhere to what is allocated in the ATP and disregard the application of fieldwork. This complements the study by Ngcamu (2000) which revealed that geography teachers rely solely on the school syllabus so much so that some teachers become stereotyped and rigid: they only teach what is in the syllabus.

5.3.6. Discussing factors impeding the application of fieldwork in the Grade 11 geography curriculum.

In the first place, all the participating teachers were granted an opportunity to comment on whether they *'want/wish to undertake fieldwork regularly in their geography lessons'*. The researcher asked this question to determine the level of eagerness or indifference amongst the geography teachers towards the application of fieldwork in their practice. As a closed-ended question, it provided the researcher with more clarity and enabled the researcher to get to the teachers' bottom line. All teachers (100%) responded positively to the question. That signified that teachers have good intentions and a positive outlook towards fieldwork despite the acknowledged barriers. They all want to undertake fieldwork activities in their geography lessons on a regular basis. However, there are factors that they felt impede their eagerness to undertake fieldwork.

The findings of this study have identified several factors as potential contextual constraints that impede geography teachers' ability to undertake fieldwork in the Grade 11 geography curriculum. In exploring teachers' lived experiences regarding the applicability and feasibility of fieldwork in the Grade 11 geography curriculum, teachers gave detailed accounts regarding factors that impede them from undertaking fieldwork activities in their practice. The following section discusses the

findings regarding factors impeding the applicability and feasibility of fieldwork in the Grade 11 geography curriculum:

a. Large class size

In the context of this study, based on the researcher's observations, schools B, C and D are located within the Bela-Bela township. All the three schools except school A constantly experience overcrowded classrooms. There are normally over a thousand learners in each school and a shortage of human resources. As a result, the teacher-learner ratio at these schools is approximately 1:35 and over on a yearly basis. Overcrowded classrooms were therefore identified as one of the major problems that these geography teachers are often faced with.

A2 cited large class size as a major obstacle that impedes teachers from undertaking field related activities in their practice. The issue of large class sizes is commonplace in many no fee-paying schools in the South African school context. The teacher-learner ratio has been an anguishing experience that is prevalent in the South African schools that teachers encounter on a daily basis. Teachers may bear the brunt of overcrowded classrooms but believe that it is virtually impossible to replicate the lesson during outdoor/field-based learning sessions. This was established in the Boardman's survey (1974) that teachers may, however, manage to cope with more than thirty learners in the classroom, but it is virtually impossible for them to replicate it in the field.

A2 and B2 further believe that the issue of large class size triggers other difficult challenges to deal with during the course of a fieldwork session. Undoubtedly, dealing with a large class size causes other potential challenges that ultimately trigger poor learner behaviour. The researcher believes that the issues of large class size and learners' ill-behaviour are intricately and inextricably connected to each other. This is in line with Jenkins' (1994) assertion that dealing with large classes poses serious challenges to teachers as they find it difficult to generate clearly understood group norms and to maintain disciplinary measures. Not only does it

pose challenges with maintaining an orderly group, but a large size inevitably leads to logistical challenges such as transportation, accommodation, and other essentials. Clearly, the findings affirm the issue of large class size, coupled with learners' ill-behaviour leaves geography teachers grappling over the fear of litigation when they attempt to impose harsh disciplinary measures on learners that misbehave and breach the code of conduct.

b. Issues of costs related to fieldwork

Several participating teachers identified 'lack of funds' as the main issue that makes fieldwork to be less undertaken in geography. Further, the findings emanating from the focus group also revealed that 'funding'; which synonymously comes down to costs related to fieldwork, stood out to be the most as a major obstacle impeding the application of fieldwork in the Grade 11 geography syllabus. 57% of the participating teachers identified 'issue of cost' related to fieldwork as a major obstacle that prevents geography teachers from undertaking fieldwork in their practice.

A myriad of researchers lamented the high costs involved with fieldwork logistics as a huge barrier that prevents fieldwork from being undertaken at school level (Waite, 2009; Han and Foskett, 2007; Cook et al. 2006). This was also equally expressed by B2 and D1 during their individual responses regarding factors that impede the application of fieldwork in their practice. In the context of this study, schools such as B, C and D will always find it difficult to partake in field excursions due to the financial circumstances of their learners. The researcher has established in the previous chapter that schools B, C and D are comprised of a high proportion of learners who are from disadvantaged and underprivileged backgrounds. As such, this becomes an unfortunate hard reality to some learners who come from deprived and impoverished backgrounds, whose families are not in financial positions to cover these costs. Consequently, this becomes a mammoth encumbrance to the geography teachers at the mentioned schools, who are left with no other choice but to neglect fieldwork in the Grade 11 geography curriculum.

It is clear from the teachers' comments that the poor state of schools' financial standing negatively impacts geography teachers' eagerness to incorporate fieldwork

in their lessons. There is no doubt that fieldwork is costly due to the travelling costs as well other basic costs involved. One of the problems that causes fieldwork related costs to be unmanageable is poor communication between schools and parents (Ngcamu, 2000). Parents become somewhat hesitant to finance their children's participation in the fieldtrips, perhaps due to poor and disadvantaged backgrounds of these families. The issue is exacerbated further by a lack external sponsorships at these schools, just as expressed by B2 that costs of fieldwork are extreme to be borne by the school alone.

c. No provision of fieldwork in the Grade 11 Geography ATP

There is absolutely no doubt that most of the teachers also pointed to a lack of fieldwork provision in the ATP as one of the possible factors that impede the application of fieldwork in the Grade 11 geography curriculum. Just as previously discussed in the previous sections, when geography teachers grasp the fact that there is no provision allocated for fieldwork activities in the ATP, nor is fieldwork part of the Grade 11 geography programme of assessment they will also disregard it in their daily geography lessons.

The findings revealed that geography teachers prioritise the selected subject content above all else. That which is allocated for in the ATP will also be assessed in the examinations. That implies that teachers will invest all their efforts in preparation for the examinations. This is equally echoed in the findings of Dube (2012), who discovered that an examination-orientated school system appears to be an impediment that hinders fieldwork. Moreover, the national examinations do not require any form of geography fieldwork/coursework to be submitted, nor are questions related to fieldwork to be asked (Chew, 2008). This indicates that fieldwork is also not structurally integrated at curriculum level (Oost et al. 2011). A lack of a proper structural integration of fieldwork in the ATP appears to be a huge impediment for geography teachers to undertake fieldwork in their practice. Therefore, the researcher believes that there seems to be too much ambiguity and a lack of correlation between the geography curriculum and the Grade 11 ATP,

which consequently leads to geography teachers disregarding fieldwork in their geography lessons.

d. Time constraints

Like numerous researchers who have lamented time constraints as a huge barrier which prevents geography teachers from undertaking fieldwork, findings of this study also revealed that geography teachers indicated 'a lack of enough time' prevents them from carrying out fieldwork activities in their geography lessons. According to CAPS (DBE, 2011), the time allocated for fieldwork in the Grade 11 geography curriculum is as follows:

Table 5.3: Time allocation for fieldwork in CAPS

Term	Geographical skills and technique (hours)
Term 2	**Fieldwork** [2 hours] • Observation; • Collecting and recording data • Processing, collating, and presenting fieldwork findings.

Fieldwork is only allocated 2 hours for the whole term. This clearly shows that it is not feasible for geography teachers to undertake fieldwork activities within the allocated two hours. The issue of insufficient time to undertake and incorporate fieldwork in the teachers' practice remains a huge contributing factor that compels geography teachers to relegate fieldwork in their practice; with huge concerns expressed over curriculum coverage. This echoes the findings of Baidoo et al. (2019) that teachers do not have the time needed to organise fieldwork for their students as the workload on them in the school usually does not permit them to plan fieldwork for their students.

e. A limited range of local fieldwork sites

Teachers also lamented a lack of fieldwork sites in the locality of Bela-Bela area. The environment in which the schools are situated does not offer a wide range of geomorphological landforms or sites that are close to Bela-Bela area, so that fieldwork could be easily undertaken without hefty travelling costs. This issue was

also lamented by geography teachers in Singapore, as according to Chew (2008) they stated that their local topography does not provide many opportunities and pupils have to go beyond their shores for more projects (Chew, 2008).

On how a lack of fieldwork sites or limited opportunities worth fieldwork exploration affect teachers' ability to undertake fieldwork in their practice; B2 stated that fieldwork can only become possible if they are able to travel in order to get to the right sites that offer fieldwork related activities. Undoubtedly, a limited range of local fieldwork sites, close to where the schools are situated will consequently compel geography teachers to organise long distance field trips to places that are far off. Field trips then starts to be jeopardized as soon as it begins to involve a lot of logistical dynamics, such as travelling costs, length of time, imposing disciplinary measures, deployment of other staff members to ensure safety etc.

5.4. OVERVIEW OF THE SCHOOLS AND THEIR POLICIES TOWARDS FIELDWORK.

The researcher is cognisant of the fact that due to variations in matters of schools' profiles, backgrounds, and quintile levels, there will be a disparity in terms of fieldwork executions at the schools due to their policies towards fieldwork. A school policy may take different forms, for the purposes of establishing and creating procedures through educational needs of the learners at the school. School policies may involve a set of established expectations for specific behaviour and norms within a school and they are put in place to guide the day-to-day functioning of the school, as well as to make it safe and an effective place for learning to occur (Forstall, 2019).

The researcher established in Chapter 2 of this study that in light of the high regard of fieldwork in geography education, many schools around the world included fieldwork in their school curricula and syllabi, as an essential requisite for geography teaching and learning. However, Lai (1999) alludes to the fact that the frequency of school geographical fieldwork seems to vary greatly at schools in different countries.

In this respect, the researcher believes that the schools' policies towards field trips or fieldwork related activities encourage geography teachers to either undertake

fieldwork in their practice or to relegate it, depending on the school's policy. The findings of this study reveal that the schools of the participating geography teachers have a sluggish approach towards fieldwork. The schools have no policies or programmes whatsoever that endorse fieldwork. The fact that the schools have no interest in the welfare of geography teachers regarding the application of fieldwork in their geography lessons signifies that fieldwork is not a priority of the schools. The researcher considers these schools as 'examination-orientated schools' (Dube, 2012). They are rigidly constrained to focusing only on preparing their learners on what is included in the national examinations.

The findings established that the inability of the participating schools to have policies that promote fieldwork at their schools may be influenced by the following circumstances:

Table 5.4: Circumstances that influence fieldwork at schools

School	Circumstances that might inhibit the schools to promote fieldwork
A	• Lack of motivation
B	• A lack of financial means is an impediment • Under-staffing • Lack of motivation
C	• A lack of financial means is an impediment • Under-staffing • Lack of motivation
D	• A lack of financial means is an impediment • Under-staffing • Lack of motivation

With the exception of school A, all other schools are situated in the same township and therefore experience more or less the same complexities and intricacies attached to the environmental setting of the place. The schools' lacklustre policy towards implementing fieldwork is underpinned by the circumstances shown on the table above:

- **A lack of financial means**

Financial impediments are inevitable at low-quintile schools. School B, C and D are public schools and learners at these schools do not pay school fees. A high proportion of these learners come from low-income families, who have poor and disadvantaged backgrounds. Therefore, financial means is a huge impediment that prevents these schools from effectively promoting fieldwork in their school policies.

- **Under-staffing**

Schools B, C and D have a high number of learners in proportion to the staff. Given this nature, the teacher-learner ratio at these schools is highly unlikeable. On average, the teacher-learner ratio is 1 teacher: 40-45 learners. Clearly, this shows that there is an impediment of 'under-staffing' at these schools. Given the complex logistics associated with field related activities or field trips, these teachers will always find it difficult to effectively implement fieldwork because of an imbalanced ratio of staff in proportion to learner enrolment.

- **A lack of motivation**

According to Chew (2008), the greatest constraint is the mind, the negative force that prevents you from carrying out fieldwork. Given the fact that fieldwork is associated with negative connotations, with common criticisms concerning the length of time, financial impediments, as well as other external constraints; the mindset of teachers is left grappling with the challenges of syllabus completion and exam preparation (Chew, 2008). The researcher believes that there is not enough motivation at these schools that can ignite teachers' perceptions to uphold fieldwork in their schools. Attention is only diverted to curriculum or syllabus completion in preparation of examinations.

5.5. CONCLUSION

This chapter demonstrated the instances regarding the feasibility, applicability, and implementation of fieldwork in the Grade 11 geography curriculum, on the basis of the lived experiences and perspectives of the participating teachers. The chapter demonstrated the importance of teachers' individual views (acquired during semi-structured interviews) complemented with teachers' group views (acquired during the focus group). Analysis of data acquired and contrasted suggests that while the Grade 11 geography teachers are acquainted with the knowledge, understanding, rationale, as well as the significant role of fieldwork in geography education, the analysis and findings regarding the lived experiences of Grade 11 geography teachers suggest that these teachers are significantly constrained by various contextual barriers that prevent them from implementing fieldwork in their geography lessons.

The interaction and analysis of Chapters 2 and 4, in conjunction with this chapter infer that geography teachers hold a positive outlook on fieldwork in general. This was evident in semi-structured interviews and further validated in the focus group. The chapter further acknowledged and ascertained the place of fieldwork in the Grade 11 geography curriculum as advocated by the CAPS document, however, what was not clear was the feasibility and association between fieldwork and Grade 11 geography ATP. According to the researcher, there seems to be too much ambiguity regarding how fieldwork is promoted by the geography curriculum CAPS and the ATP. They are not equally upholding the relevance of fieldwork in the Grade 11 geography syllabus. This ambiguity calls for further research.

In the next chapter, the researcher hypothesises the general findings of the study concerning the lived experiences of Grade 11 geography teachers and the adoption of fieldwork by geography teachers in their practice in relation to the theoretical framework espoused for this study; and ultimately provides a framework from which the general findings regarding feasible operationalisation of fieldwork in Grade 11 geography curriculum can be hypothesised, on the basis of the examined and explored lived experiences of the participating teachers.

CHAPTER 6: THE LIVED EXPERIENCES OF GEOGRAPHY TEACHERS IN RELATION TO THE INNOVATION DIFFUSION THEORY (IDT).

6.1. INTRODUCTION

According to Dreyer (1985), who stated that a hypothesis is the projection of the possible outcomes of the research and is not biased pre-statement of a conclusion. This, therefore, suggests that the acceptance or rejection of the hypothesis in relation to the principal research question of this study, *'What are lived experiences of Grade 11 geography teachers pertaining to the implementation of fieldwork?*' is dependent on general findings ultimately revealed by this study.

In this chapter, the researcher will hypothetically present the established experiences of the geography teachers relative to the Innovation Diffusion Theory (IDT); a theoretical framework espoused for this study to evaluate the feasibility of fieldwork in the Grade 11 geography curriculum, based on of the lived experiences of Grade 11 geography teachers. The researcher used the IDT to provide a framework from which the general findings regarding feasible operationalisation of fieldwork in the Grade 11 geography curriculum, (based on the examined and explored lived experiences of the participating teachers) can be hypothesised. The discussion below reveals a holistic portrayal of the established experiences of the geography teachers on the feasibility of fieldwork by means the IDT.

6.2. COMMUNICATING THE GENERAL FINDINGS OF THE STUDY USING THE FOUR MAIN ELEMENTS OF THE IDT.

Owing to the exploratory nature of this study, which attempted to explore and examine the 'lived experiences of grade 11 geography teachers', with regard to the feasible operationalisation of fieldwork, the researcher considers IDT as the most appropriate means for investigating social patterns in the social system (Sahin, 2006). The following discussions will demonstrate how the four main elements in the diffusion of innovation function, (a) innovation, b) communication channels, 3) time, 4) social system (Rogers, 2003) and how these criterion influence the adoption of fieldwork by geography teachers in their practice. This will consequently determine

the overall general findings on the feasibility of fieldwork in the Grade 11 geography curriculum.

6.2.1 Innovation (Fieldwork as an innovation)

For Rogers (2003), an innovation is an idea, practice or project that is perceived as new by an individual, members of a social system or other unit of adoption. An innovation may have been invented a long time ago, but if individuals perceive it as new, then it may still be an innovation for them (Sahin, 2006). In reference to the above, the researcher firmly established that fieldwork is indeed an innovation because it is an educational tool, policy, practice, and idea aimed at enhancing the teaching and learning of geography as a subject. Due its capacity to raise the profile of geography at school level (Cook, 2011); fieldwork as an innovation had to be adopted and advocated for in the CAPS geography curriculum (DBE, 2011). As an innovation that has been adopted into the Grade 11 geography curriculum, participating teachers have demonstrated a basic knowledge and understanding of the innovation. The findings of the study have revealed that geography teachers have a basic concept of the innovation (fieldwork) in the context of geography education.

In particular, the researcher hypothesised the lived experiences of Grade 11 geography teachers regarding the feasibility of fieldwork in the geography curriculum based on the five key attributes attached to the innovation (fieldwork):

a. **Relative advantage of fieldwork:** Whether the innovation is perceived as better than its predecessor in terms of 'economic terms, social prestige, convenience and psychological satisfaction' (Rogers, 2003). Relative advantage is the degree to which an innovation is perceived as being better than its predecessor (Rogers, 2003). Adopters need to see if there is some benefit and advantage that will come from integrating the innovation (Stephenson et al. 2016). Empirical evidence of the relative advantage of fieldwork on geography education is widely acknowledged in the literature review such as in the work of Bland et al. (1996), Han and Foskett (1997), Fuller (2012) and Stokes et al. (2011). The findings established from the semi-structured interviews and focus group revealed that the relative advantage of

fieldwork was not realised by the Grade 11 geography teachers in their practice. Although the researcher acknowledges that geography teachers uphold and appreciate the foundations and validations of fieldwork in geography education, the findings of this study established that the relative advantage of fieldwork is yet to be fully realised by geography teachers in their practice.

The findings revealed that the frequency of fieldwork undertaken by geography teachers is low. The study discovered that 29% of the geography teachers undertook fieldwork only once in year, and the rest did not partake in any fieldwork activity at all. In this study teachers expressed various contextual constraints that inhibit them from undertaking fieldwork. This unfortunately contradicts Rogers' (2003) impression that relative advantage results in increased efficiency, economic benefits and enhanced status. Difficulties in undertaking fieldwork by geography teachers in their practice clearly signifies that relative advantages of fieldwork put forth by 1) Bland et al. (1996); 2) Han and Foskett (1997); 3) Fuller (2012); and 4) Stokes et al. (2011) are not experienced by these geography teachers.

To increase the rate of adopting an innovation (fieldwork) and to make relative advantage more effective, direct and indirect financial incentive payments may be used to support the individuals of the social system in adopting an innovation (Sahin, 2006).

b. Compatibility of fieldwork: Is the innovation perceived as being consistent with existing values, past experiences and needs? (Sasaki, 2018). Compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters (Rogers, 2003). Compatibility is a vital feature of an innovation as according to Rogers (2003) because conformance with the user's lifestyle can propel a rapid rate of adoption of an innovation. Geography teachers acknowledged the advocation of fieldwork by CAPS (DBE, 2011). Simultaneously, their earnest aspiration of undertaking fieldwork in their practice is thwarted by various contextual constraints, according to the findings of this study. The researcher believes that the findings from the examined and explored

lived experiences of the geography teachers revealed that there seem to be compatibility issues between the use of fieldwork and geography teachers' existing values, experiences and needs. According to Hoerup (2001), each innovation influences teachers' opinions, beliefs, values, and views about teaching. Therefore, a lack of compatibility will negatively affect geography teachers' ability to adopt fieldwork into their practice.

Two findings established by this study can be used to explain the compatibility issues between fieldwork and geography teachers' existing values, experiences and needs. Firstly, the finding that there is no place and provision of fieldwork in the Grade 11 geography ATP means that geography teachers find it difficult to execute fieldwork in their geography lessons. As such, it becomes almost impossible for geography teachers to deviate from their teaching programmes in order to cater for fieldwork, given their over-stretched teaching schedules. Secondly, findings established that teachers are hindered by various constraints from undertaking fieldwork as advocated in the CAPS (DBE, 2011) geography curriculum. This seems to suggest that the guidelines and regulations for fieldwork set out in the geography curriculum do not align with the teachers' teaching strategies and schemes. An idea that is incompatible with the teachers' values, norms and practices will not be adopted as rapidly as an innovation that is compatible (Robinson, 2009). The fact that geography teachers experience enormous challenges when attempting to execute fieldwork therefore implies that geography will not adopt it into their practice, despite the acclaimed benefits.

According to Hoerup (2001), each innovation influences teachers' opinions, beliefs, values, and views about teaching. If an innovation is compatible with an individual's needs, then uncertainty will decrease and the rate of adoption of an innovation will increase (Sahin, 2006). Thus, this is the case with the application of fieldwork by geography teachers in their practice. They could not execute fieldwork in their practice because it is not compatible with their day-to-day practice.

c. Complexity of fieldwork: Is the innovation difficult to understand or use? (Sasaki, 2018).

Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use (Rogers, 2003). It is whether or not the innovation is easily adoptable (Stephenson et al. 2016). 'Complexity of fieldwork' is the opposite of 'ease of use of fieldwork' (Al-Jabri and Sohail, 2012); it is therefore a major factor/determinant in fieldwork adoption by the Grade 11 geography teachers.

As established earlier, this study attempted to explore the lived experiences of Grade 11 geography teachers regarding the feasible operationalisation of fieldwork in their practice. As established in a previous chapter, fieldwork was barely undertaken by the geography teachers in their practice. In particular, there are many complexities attached to 'application of fieldwork' in the geography curriculum, which further deters its applicability and feasibility. The findings pointed out the following complexities attached to difficult, which ultimately make fieldwork difficult to use:

- *Large class-sizes*
- *Issues of costs related to fieldwork*
- *No provision of fieldwork in the Grade 11 geography ATP*
- *Time-factor*
- *A limited range of fieldwork sites around the local setting*

Therefore, in the context of this study, excessive complexity attached to fieldwork is an important obstacle in its adoption (Sahin, 2006). The abovementioned complexities contributed immensely to the unwillingness of the geography teachers to undertake fieldwork in their practice. On the basis of the examined and explored lived experiences of geography teachers, the findings reveal that fieldwork is too complex for use by geography teachers. It is too difficult to figure out by geography teachers, hence its rare occurrence in their practice.

d. Trialability of fieldwork: Can the innovation (fieldwork) be tried on a limited basis? (Sasaki, 2018)

Trialability is the notion that an innovation can be integrated gradually based on experimentation, rather than an immediate adoption (Webster et al. 2013). It is the

capacity to experiment an innovation prior its full adoption (Al-Jabri and Sohail, 2012). According to Rogers (2003), the attribute of trialability is a significant feature of an innovation because potential adopters want to know if the benefits it claims it has really exist.

For the purpose of this study, the researcher decided to use the two fieldwork activities undertaken by the 29% of the participating teachers as models and patterns of the trialability of fieldwork. This is due to a lack of fieldwork undertaken at these schools. In the context of this study, the limited trialability of fieldwork by the 29% of the teachers who attempted to undertake fieldwork suggests the difficulties associated with implementing fieldwork in the geography curriculum. The limited evidence of fieldwork application in the schools in this study has negatively affected the adoption and the implementation of fieldwork by the geography teachers due to the ambiguity associated with the policy and regulation of fieldwork.

The trialability of fieldwork largely influences the adoption of fieldwork by geography teachers. If geography teachers are encouraged and further supported to implement fieldwork in their practice, it will largely curtail the indefinite fears attached to execute fieldwork, which could ultimately lead to these geography teachers adopting and implementing fieldwork in their practice. The findings therefore suggest that the geography teachers are not exposed to the trialability of fieldwork, hence the confusion and lethargic outlook towards fieldwork.

e. Observability of fieldwork: Are the results of the innovation (fieldwork) visible to others? (Sasaki, 2018).

Observability is the degree to which the results of an innovation are visible to the other members of a social system, and the benefits can be easily observed and communicated (Rogers, 2003). If the adopters can easily see and comprehend the results and benefits of an innovation, the easier it becomes for these members to adopt the innovation because perceptible results are more likely to accelerate the adoption rate of an innovation.

The findings established that geography teachers do acknowledge the acclaimed concomitant benefits of fieldwork in geography education, however, they are

unfortunately not practically exposed to these benefits. The fact that fieldwork is rarely undertaken suggests that it does not in any way contribute to the effective teaching and learning of geography, nor does it foster a deeper geographical understanding by learners at the schools in this study.

Due to poor fieldwork observability by the geography teachers, they are eventually demoralised, consequently making them relegate fieldwork in their practice. Clearly, these teachers practically lack assistance and motivation that could elevate their confidence and convictions as far as fieldwork is concerned. Role modelling (or peer observation) is the key motivational factor in the adoption and diffusion of an innovation (Parisot, 1997); similar to relative advantage, compatibility and trialability, observability is also positively correlated with rate of adoption of an innovation (Rogers, 2003). This therefore links to the findings that geography teachers find it difficult to implement fieldwork in the geography curriculum due to a lack of fieldwork motivation. There is basically no extrinsic impetus in their local setting to inspire them to start pursuing implementing fieldwork in their practice.

6.2.2 Communication channels

According to Rogers (2003), the second element of the diffusion of innovations process is communication channels. For Rogers (2003), this is a process in which participants create and share information with one another in order to reach a mutual understanding with one another. In order to better understand how geography fieldwork can be diffused and ultimately adopted by geography teachers in their practice, it is imperative to consider the communication channels that can be utilised as mediums of information transmission regarding fieldwork in geography education.

In this study, it can be noted that the geography curriculum, CAPS (DBE, 2011), is the first and foundational medium through which geography fieldwork is communicated and advocated. Through this medium, geography teachers are supposedly informed about the implementation of fieldwork in the geography curriculum. In addition to the geography curriculum, geography teachers are furnished with the ATPs by their curriculum advisers. The ATPs are documents that contain the guidelines and set the pace at which geography teachers deliver the

geography content to their learners. They are the most efficient and rapid way of communicating the imperative nature of fieldwork in geography education.

In the experiences of the geography teachers, they believe that there is not sufficient content related to how fieldwork should be feasibly implemented into their geography lessons. Geography teachers are left grappling over whether to include fieldwork in their geography lessons or neglect it, because the information related to the application of fieldwork in the CAPS, as well as the ATP is ambiguous.

Additionally, the geography subject specialists, curriculum developers and subject advisers are supposed to play a crucial role in influencing the rate of fieldwork adoption among geography teachers through constant and rigorous support with regard to fieldwork application in their practice. This study established that this kind of support is really lacking and, in fact, non-existent. Geography teachers are rather left on their own in devising better approaches to implement fieldwork in their practice.

Finally, face-to-face communication between individuals of the same socioeconomic status and educational level increases the potential of acceptance even more (Yates, 2001). Geography teachers who have implemented fieldwork in their practice will be more convincing to other teachers about the efficacy of fieldwork in geography than the advocation by the curriculum policies and syllabi. However, the findings reveal this communication channel between the teachers themselves is lacking. The study reveals that there is a lack of communication between the geography teachers pertaining to the application of fieldwork in the geography curriculum, despite the fact that they are all mystified as to how fieldwork should be integrated in the Grade 11 geography curriculum.

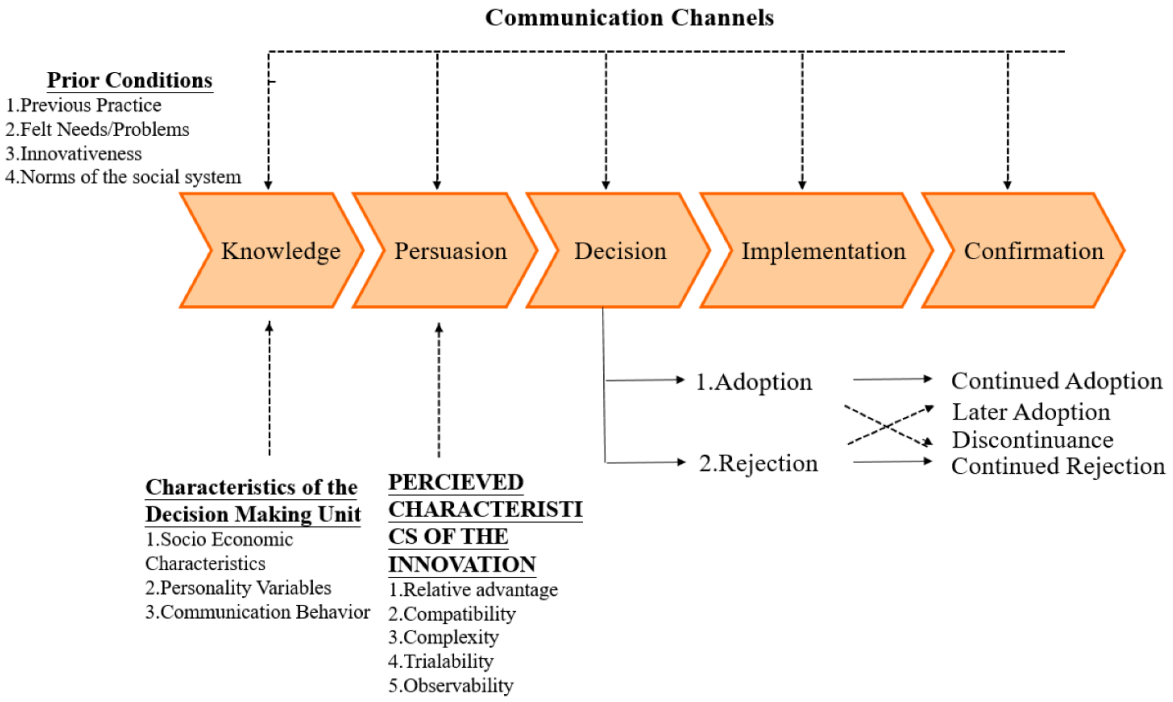
6.2.3 Time

According to Yates (2001), time is the third important element and factor in the diffusion process. In the context of this study, the aspect of ‘time’ will analyse three main theories in relation to the findings of this study, namely: 1) innovation-decision process theory, 2) the Individual innovativeness theory, 3) rate of adoption theory.

a. Innovation-decision process

Rogers (2003) described 'innovation-decision process' as an information-seeking and information-processing activity, where an individual is motivated to reduce uncertainty about advantages and disadvantages of an innovation. It is a process through which an individual learns about an innovation, forms an attitude, adopts or rejects, implements new ideas and confirms the decision to do so (Yates, 2001). For Rogers (2003), the innovation-decision process involves five steps (as outlined below in Figure 6.1) namely, 1) knowledge, 2) persuasion, 3) decision, 4) implementation, 5) confirmation.

Figure 6.1: A Model of Five Stages in the Innovation-Decision Process



(adapted from Rogers (2003)

Hypothetically, this is supposed to be a critical period in which geography teachers are granted a courtesy to go through all the five steps of the innovation-decision process, to enable them to gather all necessary knowledge regarding the effectiveness, efficacy, applicability, and feasibility of fieldwork in the geography curriculum, prior to their ultimate decision of whether to adopt fieldwork in their practice. This study therefore confirms that the participating teachers were never

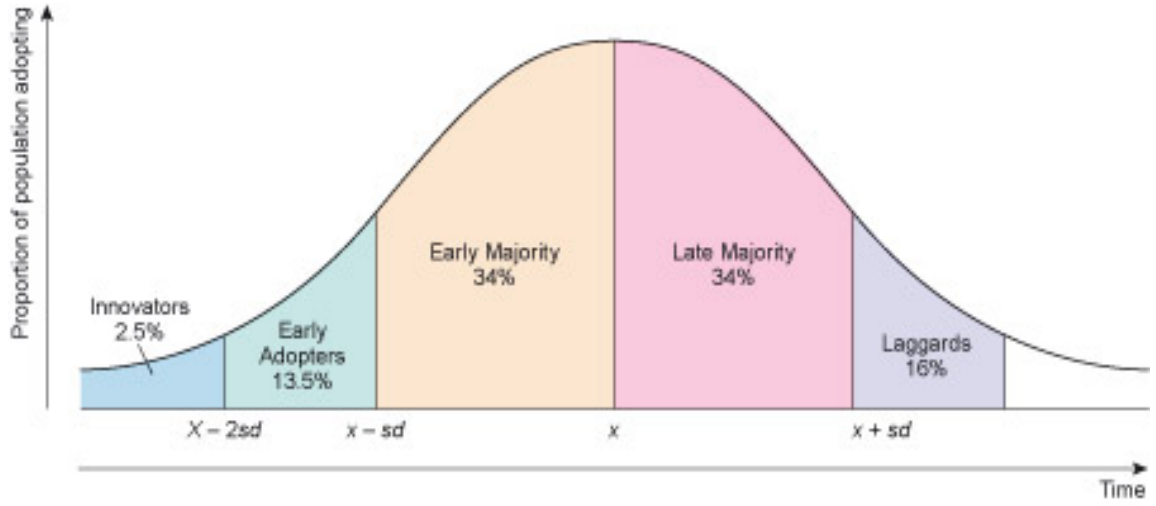
accorded the courtesy of this process due to a lack of fieldwork activity around these schools. The fact that teachers practically evaded this process in their geography practice led them to adopt a lethargic attitude towards undertaking fieldwork in their geography lessons. Rationally, it was practically impossible for the geography teachers to adopt fieldwork in their geography lessons because of a deficiency in their practical knowledge related to fieldwork, causing too much ambiguity around its application. Other concerns expressed by teachers were attached to the fact they did not receive fieldwork at university/teachers' college because they did not major in geography.

Therefore, the study clearly established that fieldwork was far from full acceptance, adoption and implementation by the geography teachers. Their unwillingness to adopt it in their geography practice was also largely influenced by the fact that they did not undergo and experience the courtesy of the five stages of 'innovation-decision process' associated with geography fieldwork.

b. Individual innovativeness theory

Individual innovativeness theory refers to the degree to which an individual or other unit of adoption adopts new ideas relatively earlier than other members of a social system (Rogers, 1995). It should be noted that different individuals adopt innovations on different time scales, depending on the degree of an individual's comfortability with that innovation. So is the case with the geography teachers in this study. For Rogers (1995), innovativeness helped in understanding the desired and main behaviour in the innovation-decision process (Sahin, 2006). Individual innovativeness theory is clearly displayed in the illustration below (Figure 6.2), by categorising innovativeness based on adopters.

Figure 6.2: Adopter categorisation on the basis of innovativeness



(adapted from Rogers, 2003)

- **Innovators**: Individuals who adopt an innovation much earlier than others are known as innovators (Rogers, 1995).
- **Early adopters:** Early adopters hold up leadership roles and positions in the social system, other members come to them to get information or advice about an innovation (Rogers, 1995). In the context of this study, the members of the Department of Basic Education (DBE) form part of the early adopters: they play a central role from the initiation to the implementation of fieldwork, particularly in deploying the resources that carry the innovation (which is fieldwork) forward (Light, 1998).
- **Early majority**: Early majorities have a good interaction with other members of the social system; however, they do not have the leadership role that early adopters have (Rogers, 2003). In the context of this study, the curriculum specialists and advisers assume this role; because their interpersonal networks are still important in the innovation diffusion process (Sahin, 2006).
- **Late majority:** They include one-third of all members of the social system who wait until most of their peers adopt the innovation (Sahin, 2006). The late majorities are very cynical about innovations due to the economic necessities attached. The late majorities are school heads in collaboration with management teams in the

context of this study. They will only adopt an innovation (fieldwork in this case) if it safe and aligned with the school policy.

- **Laggards**: They are the most localised members of the social system, who have a traditional view and are more sceptical about innovations and change agents (Rogers, 2003). According to Sahin (2006), because of the limited resources and lack of awareness-knowledge of innovations, they first want to make sure that an innovation works before they adopt it. In the context of this study, the Grade 11 geography teachers assume the role of laggards. Based on the findings of this study, they are lowest adopters of fieldwork due to the various sceptical concerns they have expressed in this study.

c. Rate of adoption theory

Rate of adoption theory describes the relative speed with which an innovation is adopted by members of a social system (Rogers, 2003). The perceived attributes of an innovation are significant predictors of the rate of adoption (Sahin, 2006).

The findings of this study revealed that geography teachers noted an amalgamation of complexities attached to the application of fieldwork in the geography curriculum, which eventually led to a tapering off and a deceleration of the rate at which fieldwork is adopted by the geography teachers. For Rogers (2003), relative advantage was indicated as the strongest predictor of the rate of adoption of an innovation. As established earlier, the relative advantage of fieldwork appeared to be less beneficial to the geography teachers. The perceived elements and attributes of fieldwork were found to negatively impact the geography teachers' capacity to execute and ultimately implement fieldwork in their geography lessons, which ultimately led a decelerated rate of fieldwork adoption.

6.2.4 Social system

According to Yates (2001), the fourth and final factor which influences the diffusion of innovations is the nature of the society to whom the innovation is introduced. A 'society' is known as a social system (Yates, 2001); which in the context of this study are the geography educators at both primary and secondary schools, curriculum coordinators, policy makers, members of the DBE, as well as the geography organisations at large. Therefore, the nature of this society played a significant role

because it affected the geography teachers' innovativeness, which is the main criterion for categorising the adopter (who are the geography teachers in this context) (Sahin, 2006).

The findings of the study therefore suggest that the lethargic outlook of geography teachers towards undertaking fieldwork is also underpinned by the nature of the collective society within which these geography teachers are situated. Rogers (2003) states that a social system is a set of interrelated units engaged in joint problem-solving to accomplish a common goal. Hypothetically, in the context of this study, this is a 'geography society', comprising of members collaboratively striving towards ensuring that geography education is indeed enquiry-driven, by employing fieldwork approaches which are inherently rooted in the principles of geography enquiry or education. Unfortunately, this 'geography society' did not contribute to positively influencing geography teachers with the capacity to adopt fieldwork in their geography lessons.

Clearly, all the elements of the geography society, such as fellow geography teachers from other schools, the subject specialists and geography curriculum advisers do not contribute at all to helping these geography teachers alleviate the challenges they face when attempting to implement fieldwork in their geography lessons. Seemingly, the social structure that they are living within is disjointed and disorientated. They are not getting any professional support with regard to solutions that they can employ in order to effectively implement fieldwork in their geography lessons.

6.3. ADOPTION OF FIELDWORK BY THE GRADE 11 GEOGRAPHY TEACHERS

According to Rogers (2003), innovations that offer more relative advantage, compatibility, simplicity, trialability and observability will be adopted faster than other innovations. The findings of this study, however, established that the key attributes of fieldwork are not in any way advantageous to the geography teachers. They are reluctant to adopt fieldwork in their practice due to the contextual barriers associated

with fieldwork, contrasting with the teachers' day to day teaching customs and habits.

Overall, the study showed that although geography teachers clearly understood the importance and essence of fieldwork in geography, a major problem lies in the implementation of fieldwork in the Grade 11 geography curriculum. Fieldwork, as laid out in the CAPS (DBE, 2011) geography curriculum, unfortunately appears to be ambiguous in terms of implementation and application according to the experiences of the geography teachers. Additionally, given the complexities attached to implementing fieldwork, there is no immediate support within the social systems of these geography teachers. Consequently, geography teachers feel neglected with regard to fieldwork implementation in their lessons and, as a result, everyone is on their own figuring out their own ways as per their individual efforts.

6.4. CONCLUSION

This chapter demonstrated the hypothetical presentation of the general findings of the study in relation to the theoretical framework adopted for this study. This study applied the Innovation of Diffusion Theory in order to critically expound, predict and account for factors impeding the applicability and feasibility of fieldwork in the Grade 11 geography curriculum in order to ultimately determine the rate of fieldwork adoption by geography teachers in their geography lessons.

The chapter demonstrates an interaction of the main components of the IDT in relation to the lived experiences of the Grade 11 geography teachers. The constant back-and-forth interplay of the main components of the IDT, in relation to the experiences of the geography teachers established the overall and significant general findings of the study relating to the lived experiences of the Grade 11 geography teachers regarding the feasibility and applicability of fieldwork in the geography curriculum. Analysis of the interaction of main components of the IDT in relation to the experiences of the geography teachers suggest that while the geography teachers have an earnest desire to implement fieldwork in their geography lessons, issues allied to the relative advantage, compatibility, complexity,

trialability and observability impinge on the adoption of fieldwork by the geography teachers in their practice.

The analysis in this chapter suggests ways in which the feasibility of fieldwork in the CAPS Grade 11 geography curriculum is impinged upon, thus affecting the effective application of fieldwork, which is a significant signature pedagogy for teaching and learning geography. In the next chapter, the researcher renders his own final findings to answer the research question which fundamentally directed the whole research study.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

In this chapter, the researcher sought to establish my own conclusive and ultimate findings, with an attempt to answer the principal research question that was the main theme throughout the whole research process. The central problem that this study sought to unravel, as specified in Chapter 1 was to explore 'The lived experiences of Grade 11 geography teachers pertaining to the feasibility and implementation of fieldwork'. Throughout this chapter, the researcher will reflect on the overall research developments, rendering key findings of the study, establishing and advocating approaches through which the geography teachers can be enhanced to integrate fieldwork effectively in their geography lessons.

7.2. OVERVIEW OF THE RESEARCH STUDY

As initially established in Chapter 1, this research study was largely influenced by the researcher's personal motivation as a FET geography teacher; who, based upon his reflective and professional experience never witnessed geography fieldwork being undertaken by schools in the same district when he was a geography learner nor even now that he is a geography teacher. The researcher was therefore prompted by such an experience, in order to explore the lived experiences of geography teachers regarding the feasibility of fieldwork in the geography curriculum. This was therefore an attempt by the researcher to find out how and why geography teachers fail to implement fieldwork in their practice; a signature pedagogy upheld as fundamental in the geography discipline for developing learners' geographical understanding (Shulman, 2005).

The literature review provided a comprehensive and contextual understanding of geography fieldwork based on the international perspective, geography teachers' perspectives, as well as the position of fieldwork in the South African geography school curriculum. Internationally, the status of geography fieldwork has been subjected to considerable debate and research across the world. Contrariwise, the application and implementation of fieldwork by various schools across the world seems to vary greatly and therefore remain erratic. It has also been noted that the

South African education system advocates fieldwork in the CAPS (DBE, 2011) curriculum. However, as far as application and implementation of fieldwork by geography teachers is concerned, findings indicate that this application is far too rare.

The research methodology explained the philosophical underpinnings underlying this research study. The researcher expatiated on how qualitative and phenomenological approaches were used to explore the lived experiences, perspectives, and viewpoints of the Grade 11 geography teachers regarding the feasible operationalisation of fieldwork in their practice. The phenomenological paradigm employed enabled the researcher to better understand the experiences and perspectives experienced from the first-person point of view. A combination of semi-structured interviews and focus groups achieved rigour and richness of data, which further enhanced credibility and validity of the research.

Data collected through semi-structured interviews and focus groups was presented and thereafter summed up in themes for interpretation. The data was then interpreted into themes. The interpretation of data through themes revealed findings, which the researcher validated through the IDT framework. Various findings were thus revealed and established, providing a comprehensive representation of the lived experiences of the Grade 11 geography teachers regarding the feasibility of fieldwork.

7.3. AN OVERVIEW AND SYNTHESIS OF RESEARCH FINDINGS.

The findings discussed in Chapters 4, 5 and 6 clearly articulated that the application and implementation of fieldwork (as per the advocation by the CAPS geography curriculum) by the participating teachers has not yet been fully realised. The expressions uttered by the participating geography teachers distinctly signify that geography teachers are caught up in an inexplicable state regarding the manner in which fieldwork is to be implemented in their geography lessons. Although there is a positive acknowledgement of fieldwork in the CAPS geography curriculum by the participating geography teachers, the ambiguity in matters of application to geography lessons is undoubtedly detectable. It can therefore be concluded that the

issue is not fieldwork policy, but rather hangs around strategic operationalisation and execution of fieldwork.

Based on the study's findings, the researcher can also conclude that geography teachers are highly examination orientated. Due to an extensive curriculum to be covered in a time-constrained schedule, geography teachers prioritise the ATP in order to ensure examination readiness. The fact that fieldwork is not assessed, nor does it form part of the School-Based Assessment (SBA) is enough for geography teachers to relegate fieldwork and rather stick to what will contribute to the progression of learners at the end of the academic year.

There seems to be a lack of synchronisation between the CAPS geography curriculum and teachers' ATPs. Fieldwork is clearly advocated in the geography curriculum, but there is no provision for fieldwork activities in the ATPs. Undisputedly, geography teachers constantly refer to the ATPs for teaching guidelines and content parameters rather than to the actual CAPS geography curriculum. The ATPs, which are furnished to them by their curriculum advisers regulate and standardise their teaching pace. Thus, it is a more highly prioritised document than any other. As such, they are involuntarily constrained to disregard fieldwork in their geography teaching plans according to the lack of fieldwork provision in their ATPs.

The findings of the study confirmed that geography teachers' attempt to undertake fieldwork activities in their geography lessons are also impinged upon by a variety of structural and contextual constraints. The participating geography teachers cited structural and contextual constraints such as a limited time to execute fieldwork, financial inconveniences, overcrowded classrooms, disciplinary issues amongst the school learners, a limited range of accessible fieldwork sites and the poor provision of fieldwork within the geography ATP. The researcher has also noted that an amalgamation of all noted impinging factors contributed greatly to demotivating the geography teachers. Many complexities and constraints attached to fieldwork ultimately influenced the geography teachers' choice to rather relegate fieldwork in their geography lessons.

The findings of the research can also further suggest that the prioritisation of geography fieldwork at the schools is limited. There is a lack of energy, enthusiasm and zest devoted to fieldwork by the geography departments as well as the school management teams (SMTs) at these schools. A lack of fieldwork prioritisation became evident by a lethargic attitude adopted by the geography teachers towards the implementation of fieldwork in the geography lessons. This is further attributed to a lack of fieldwork monitoring tools and developmental inductions/workshops for geography teachers by the geography curriculum heads and support structures.

With all the findings established, it should be noted, however, that the overall attitude of the participating geography teachers towards fieldwork is highly positive. The study confirmed that none of the geography teachers expressed any pessimism towards fieldwork as a prospective signature pedagogy for geography teaching and learning. All the geography teachers equally uphold geography fieldwork as an imperative and indispensable approach to augmenting learners' understanding of geography, which ultimately improves the efficacy of geography education. Conversely, geography teachers rather expressed frustration and dissatisfaction with the actual practicality and applicability of fieldwork to the geography lessons. Their expressions point toward the difficulties and challenges which revolve around 'application'. All these findings therefore signify a poor feasibility between the CAPS geography curriculum and application of fieldwork. The researcher believes that the feasibility of putting the fieldwork mentioned in the CAPS geography curriculum into practice calls for further research.

7.4 RECOMMENDATIONS OF THE STUDY

Based on the expressions bestowed by the geography teachers together with the ultimate findings established, the following recommendations are suggested by the study:

- The school authorities must ensure that there are financial means available to aid with the successful execution of fieldwork. The researcher does acknowledge the budget constraints that the schools are confronted with, however fieldwork activities/field trips should be specially allocated for. The school authorities should

make use of fundraising opportunities and donations from their immediate organisations in the local settings, to assist with other fieldwork logistics and necessities required.

- The Department of Education in Waterberg District, under the auspices of the Department of Basic Education (DBE) should, at the national level devise a tool that regulates a uniform *'modus operandi'* regarding 'how', 'when' and 'where' fieldwork activities should be executed. This will provide much-needed clarity to the geography teachers as they will now be furnished with clear guiding principles about the application of fieldwork in their geography lessons.
- The DBE should on a regular basis conduct meaningful workshops to monitor and support geography teachers' fieldwork endeavours. Geography teachers are left grappling with too many uncertainties and lethargy when they feel that they do not get support from their immediate seniors. This immediate support system will motivate them and further prompt them to make fieldwork a reality in their geography lessons.
- The heads of curriculum for school geography should make provision for fieldwork activities in the geography ATPs as well as geography assessment program. Geography teachers are greatly attached to the ATP. They highly prioritise the content stipulated in the ATP. An endorsement of fieldwork activities in the ATP and programme of assessment will ignite geography teachers' enthusiasm to ensure that fieldwork is undertaken.
- For fieldwork to be adopted by geography teachers in their practice, it is imperative that geography teachers are acquainted with the theoretical underpinnings of fieldwork in geography education. Geography teachers should be flexible in their approaches to teaching geography and employ enquiry-based approaches to teaching geography. This becomes significant for geography teachers to acquire the necessary content knowledge and expertise required to effectively carry out fieldwork in their practice. When geography teachers are effectively equipped with the fieldwork expertise and proficiencies, they will be in a better position to confront minor problems they encounter during fieldwork.

- The DBE should liaise and collaborate with other geography and fieldwork organisations by getting them on board in order to assist with school fieldwork. Organisations (such as Vredefort Dome Tourism Association) and other institutions (such as African Insight Academy) are highly advanced in the area of fieldwork. The DBE (Geography in particular) should therefore form partnerships with such geography institutions/organisations to provide the schools with the opportunity to elevate the status of fieldwork at schools. Consequently, this will also aid geography learners who have future aspirations and careers in the geography discipline to broaden their passion and meaningful understanding of the geography discipline.
- There is scope for teachers to attend further in-service training and workshops offered by various Communities of Practice, such as the *Southern African Geography Teachers' Association* (SAGTA) to upskill and better capacitate and training teachers to undertake fieldwork in their schools.

7.5. A NEED FOR FURTHER RESEARCH

The findings established from the lived experiences of the Grade 11 geography teachers in this study is requisite for further research in the following focus areas:

I. Feasibility of implementing the fieldwork in the CAPS geography curriculum in geography lessons. The participating geography teachers expressed huge concerns about the applicability of fieldwork, however they highly upheld the endorsement of fieldwork in the CAPS geography curriculum.
II. Geography teachers need a model for the effective application of fieldwork in their geography lessons. This, therefore, calls for research into a 'feasible model' that can uniformly be utilised at the school level for fieldwork activities.
III. Means to creating Continuous Professional Development points and training for teachers to better do effective fieldwork in their classrooms and teaching.

7.6 CONCLUSION

Fieldwork has been widely applauded as a signature pedagogy that plays an essential role in enhancing the efficacy of geography education for both geography teachers and learners alike. It is renowned for bringing together classroom geography and real-world geography; by placing learners and teachers in contact

with the actual environment in order to acquire and develop essential skills required in the discipline.

Recognising the merit of fieldwork, the South African CAPS geography curriculum adopted and implemented the application of fieldwork into the FET geography syllabi as an attempt to advocate an enquiry-based approach to teaching and learning of geography in the South African education system. Fundamentally, an 'enquiry-based approach' is characterised as a core feature that lies at the heart of geography and evokes the discipline's tradition of discovery and exploration. In general, it is fieldwork that ensures that geography teachers and learners should make sense out of geography as a discipline.

However, despite the wide appreciation of fieldwork in geography education, a scarce and rare application of fieldwork by geography teachers into their geography lessons raised concerns over the applicability and feasibility of fieldwork in the geography lessons. On this basis, this study was therefore about exploring the lived experiences of geography teachers regarding the feasibility of fieldwork in the geography curriculum. The goal of the researcher was to understand the feasibility/applicability of fieldwork in the geography curriculum based on the lived experiences of the Grade 11 geography teachers. Based on the experiences of the participating teachers, it was discovered that the applicability of fieldwork by geography teachers was largely constrained by various structural and contextual factors. The results of the study also revealed that there are so many complexities attached to fieldwork, which ultimately inhibit the relative advantages of fieldwork and consequently leading to a low adoption rate of fieldwork by geography teachers. The researcher's concluding remarks adopted a stance that there is still so much to be done as far as the application and execution of fieldwork by geography teachers is concerned, because full adoption of fieldwork by geography teachers is yet to be fully realised.

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APPENDICES

APPENDIX 1: Request letter to the Department of Basic Education

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education
Fakulteit Opvoedkunde
Lefapha la Thuto

Clinton D. van der Merwe, PhD
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Tel: +27 12 420 5566
Aldoel Building; Room 1-101
Groenkloof Campus

12th March 2021

Head of Department: Education

Waterberg District

Private Bag X1040

South Africa

Dear Sir/madam

RE: PERMISSION TO COLLECT DATA FROM GEOGRAPHY TEACHERS IN SECONDARY SCHOOLS IN THE WATERBERG DISTRICT.

Reference is made to the above captioned subject, I am writing to request for permission to carry out a study among geography teachers currently offering geography at secondary schools within Warmbaths circuit.

The study explores the lived experiences of geography teachers regarding the feasibility and applicability of fieldwork in their practice. The researcher will carry out an interview with participants.

This research study is in fulfilment of the researchers' Master's Degree study in Geography Education at the University of Pretoria. My supervisor is Dr Clinton van der Merwe at UP.

Your approval to conduct this study will be greatly appreciated.

Yours faithfully,

Sikerete Antonio
(079 115 7168)

Dr C. D. van der Merwe
(012) 420 5566

Clinton D. van der Merwe
BA Hons H.Dip.Ed (PG) BEd Hons MSc PhD

ORCID ID
https://orcid.org/0000-0001-9861-2779

Google Scholar
https://bit.ly/2KWDcfk

Appendix 2: Request letter to the principals

Faculty of Education
Fakulteit Opvoedkunde
Lefapha la Thuto

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

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Tel: +27 12 420 5566
Aldoel Building; Room 1-101
Groenkloof Campus

12th March 2021

Principal: Bela Bela High school

Private Bag X1627

Bela Bela

0480

Dear Sir/madam

RE: PERMISSION TO COLLECT DATA FROM GEOGRAPHY TEACHERS AT YOUR SCHOOL

Reference is made to the above captioned subject, I am hereby requesting for permission to conduct a research study among geography teachers at your school.

The study is endeavoured at exploring the lived experiences of geography teachers regarding the feasibility and applicability of fieldwork in their practice. Precisely, the researcher will carry out interviews with the geography teachers (research participants).

This research study is in fulfilment of the researchers' MEd Degree study in Geography Education at the University of Pretoria. My supervisor is Dr Clinton van der Merwe at UP.

Your approval to conduct this study will be greatly appreciated.

Yours faithfully,

Sikerete Antonio
(079 115 7168)

Dr C. D. van der Merwe
(012) 420 5566

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APPENDIX 3: Consent form/letter to the Grade 11 Geography teachers

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education
Fakulteit Opvoedkunde
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Tel: +27 12 420 5566
Aldoel Building: Room 1-101
Groenkloof Campus

Date: _____

Informed consent form for Geography Teachers

Dear Respondent

You are invited to participate in an academic research study to be conducted by Antonio Sikerete a MEd student in the Department of Humanities Education at the University of Pretoria.

Description of the study

The study is titled as *"Exploring the lived experiences of Geography Teachers regarding the feasibility of fieldwork"*. The study is endeavoured at exploring lived experiences of geography teachers regarding the feasibility and applicability of fieldwork in their practice. Precisely, we are going to conduct an interview which should not take more than an hour. The interview will be audio recorded for the purpose of ensuring that accurate information is correctly collected and transcribed.

Ethics and Participants Rights

This study adheres to research ethics and I assure you that:

1. Your participation in this study is entirely voluntary.
2. Your participation in this study is very important to us, however, you can choose to withdraw from the study at any time without any negative consequence.
3. You will not be identified or named but a number will be assigned to you and information about you will be recorded in that manner.
4. All the information that you will provide during the interview will be used for academic purposes only and may be published in an academic journal. We will provide you with the summary of our findings upon request.

Clinton D. van der Merwe
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Fakulteit Opvoedkunde
Lefapha la Thuto

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Groenkloof Campus

5. If you have any questions please contact my supervisor Dr. C. van der Merwe (Clinton.vandermerwe@up.ac.za).

We also would like to request your permission to use your data, confidentially and anonymously, for further research purposes, as the data sets are the intellectual property of the University of Pretoria.

Please sign the form to indicate that:

- You have read and understood the information provided above.
- You give your consent to participate in the study on voluntary basis

Date .....

Respondents Signature.....

(Sikerete Antonio :0791157168)

(Clinton van der merwe: 012 420 5566)

Clinton D. van der Merwe
BA Hons H.Dip.Ed (PG) BEd Hons MSc PhD

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APPENDIX 4: Semi-structured Interview Questions

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Interview questions with the participants (geography teachers)

1. What educational qualification do you have?
2. What is the highest level (Secondary, College, University) that you studied geography? (Secondary, College, University)
3. How long have you been teaching geography?
4. How many classes are you presently teaching?
5. Do you have any other subject that you teach apart from geography?
6. What is your overall experience of teaching the geography subject?
7. How do you define the concept "fieldwork" in the context of geography?
8. Do you think fieldwork should be part of the Grade 11 geography syllabus?
9. Is fieldwork part of your geography Annual Teaching Plan (ATP)?
10. How often do you do you undertake fieldwork in your geography lessons?
11. If you undertake less fieldwork activities or none at all, what are the main reasons contributing to that?
12. Do you think you are well-equipped and possess sufficient expertise to conduct fieldwork?
13. What time of the year do you prefer undertaking fieldwork?
14. What method do you utilize when undertaking fieldwork?
15. What challenges do you encounter when undertaking fieldwork?
16. What do you think should be done to alleviate the mentioned challenges?
17. What do you think should be done to effectively integrate fieldwork into the teaching and learning of geography?
18. What should the subject advisors/specialists/curriculum developers do to help improve the status of geography fieldwork at schools?

(Sikerete Antonio: 079 115 7168)

(Clinton van der merwe: 0124205566)

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APPENDIX 5: Focus Group Interview Questions

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UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Education
Fakulteit Opvoedkunde
Lefapha la Thuto

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C2-NRF Rated Researcher
clinton.vandermerwe@up.ac.za
Tel: +27 12 420 5566
Aldoel Building; Room 1-101
Groenkloof Campus

Date: _____

Interview questions (Focus Group)

1. **Open-ended question and close-ended question:**
   i. What is your take on fieldwork as a signature pedagogy for teaching and learning of geography?
   ii. Is fieldwork a reality in the geography high school curriculum?
   iii. Do you want/wish to undertake fieldwork regularly in your geography lessons?
   iv. What is the relevance of fieldwork in the geography curriculum?

2. **Probe questions:**
   i. What makes fieldwork to be less undertaken in geography?
   ii. Do you think fieldwork should be mandatory in the Grade 11 geography syllabus?
   iii. What place does fieldwork occupy in the Grade 11 geography ATP?

3. **Follow-up questions:**
   i. Which factor stands out the most as a major obstacle that impedes the application of fieldwork?
   ii. Should fieldwork be part of the Grade 11 programme of assessment?

4. **Concluding questions:**
   What is your recommendation towards the improvement of the current status quo of geography fieldwork at school level?

(Sikerete Antonio :0791157168)

(Clinton van der merwe: 012 420 5566)

Clinton D. van der Merwe
BA Hons H.Dip.Ed (PG) BEd Hons MSc PhD

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APPENDIX 6: Permission letter to conduct interviews

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION
WATERBERG

Private Bag X 1040
Modimolle
0510

Ref : 3/5/7/2 (84207698)
Enq : Makhananisa MC
Tel : 014 718 1500

TO : **Mr. / Mrs. / Ms. Sikerete A**
Warmbaths Circuit: Bela Bela Secondary School
PO BOX 1268
BELA BELA
0480

FROM: HR CONDITIONS OF SERVICE

RE: REQUEST TO CONDUCT RESEARCH: YOURSELF

1. Receipt of your letter on the above subject is hereby acknowledged.
2. In response thereto, please be advised that permission to conduct a Research study for proposed research in Waterberg District Secondary Schools is hereby granted subject to the following conditions:
   - That the interviews will be conducted outside school working hours and will also not interfere with teaching and learning in schools.
   - The research will not have any financial implications for the Limpopo Department of Education.
   - Upon completion of research study, the researcher shall share the final product of the research with the Department.
3. The District appreciates the contribution that you wish to make and wishes you success on your research.
4. Regards.

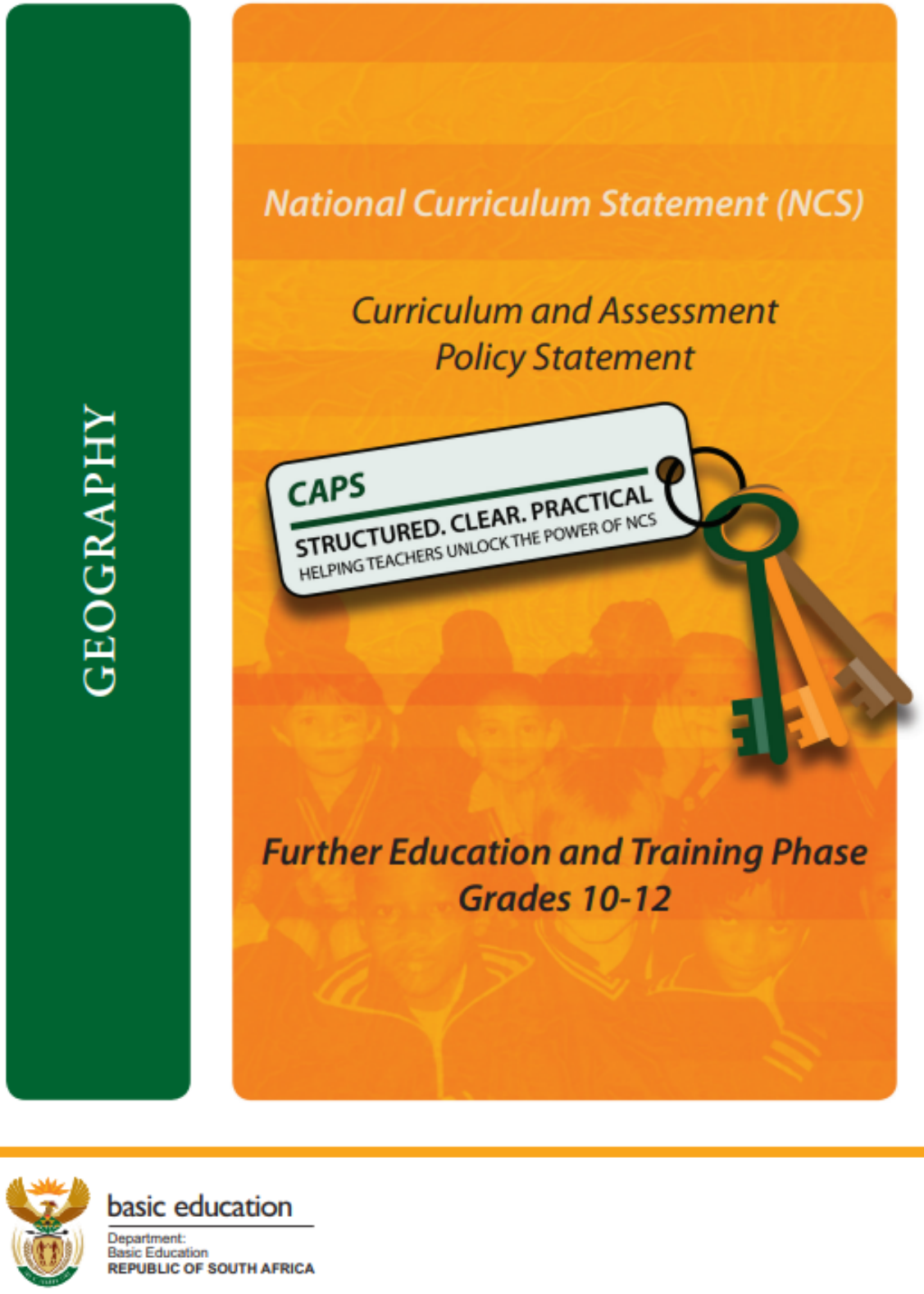
.....
DISTRICT DIRECTOR

2021/07/26
DATE

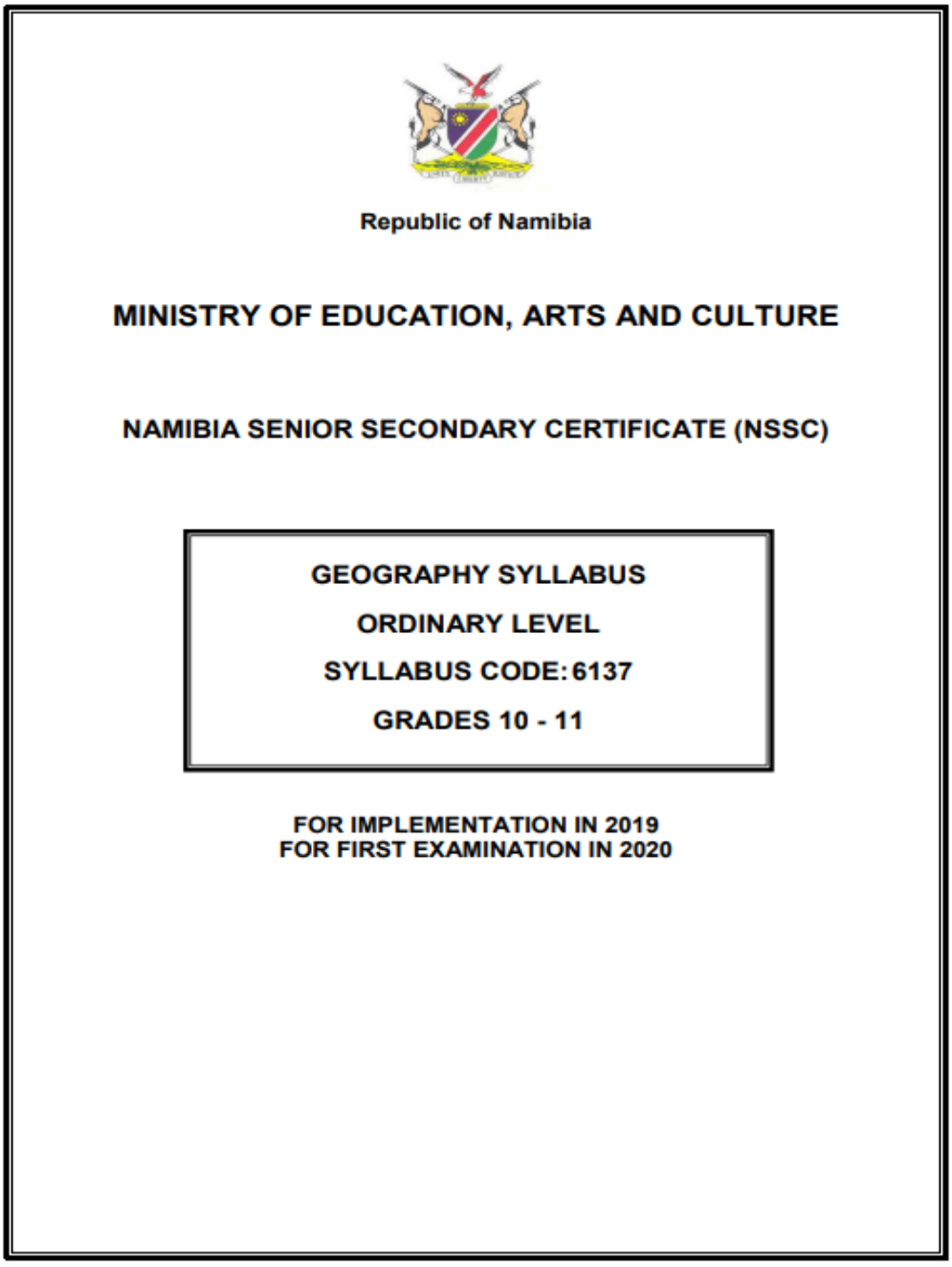
84 Cnr Limpopo & Thabo Mbeki Street NTK building, Modimolle, 0510, Private Bag X 1040, Modimolle, 0510
Tel:014 718 1500/ Fax 014 717 2785

The heartland of Southern Africa-development is about people

APPENDIX 7: CAPS Geography for Grades 10, 11 and 12.



APPENDIX 8: Geography Syllabus for Grade 10-11 (Namibia)



Republic of Namibia

MINISTRY OF EDUCATION, ARTS AND CULTURE

NAMIBIA SENIOR SECONDARY CERTIFICATE (NSSC)

GEOGRAPHY SYLLABUS

ORDINARY LEVEL

SYLLABUS CODE: 6137

GRADES 10 - 11

FOR IMPLEMENTATION IN 2019
FOR FIRST EXAMINATION IN 2020

APPENDIX 9: Geography curriculum for Key stages 1 and 2 (England)

Department for Education

Geography programmes of study: key stages 1 and 2

National curriculum in England

Purpose of study

A high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth's key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge, understanding and skills provide the frameworks and approaches that explain how the Earth's features at different scales are shaped, interconnected and change over time.

Aims

The national curriculum for geography aims to ensure that all pupils:

- develop contextual knowledge of the location of globally significant places – both terrestrial and marine – including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time
- are competent in the geographical skills needed to:
  - collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes
  - interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)
  - communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

Published: September 2013

APPENDIX 10: Geography curriculum for Key stage 3 (England)

Department for Education

Geography programmes of study: key stage 3

National curriculum in England

Purpose of study

A high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth's key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge, understanding and skills provide the frameworks and approaches that explain how the Earth's features at different scales are shaped, interconnected and change over time.

Aims

The national curriculum for geography aims to ensure that all pupils:

- develop contextual knowledge of the location of globally significant places – both terrestrial and marine – including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time
- are competent in the geographical skills needed to:
  - collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes
  - interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)
  - communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

Published: September 2013

APPENDIX 11: Geography Curriculum and Assessment guide (Hong Kong)

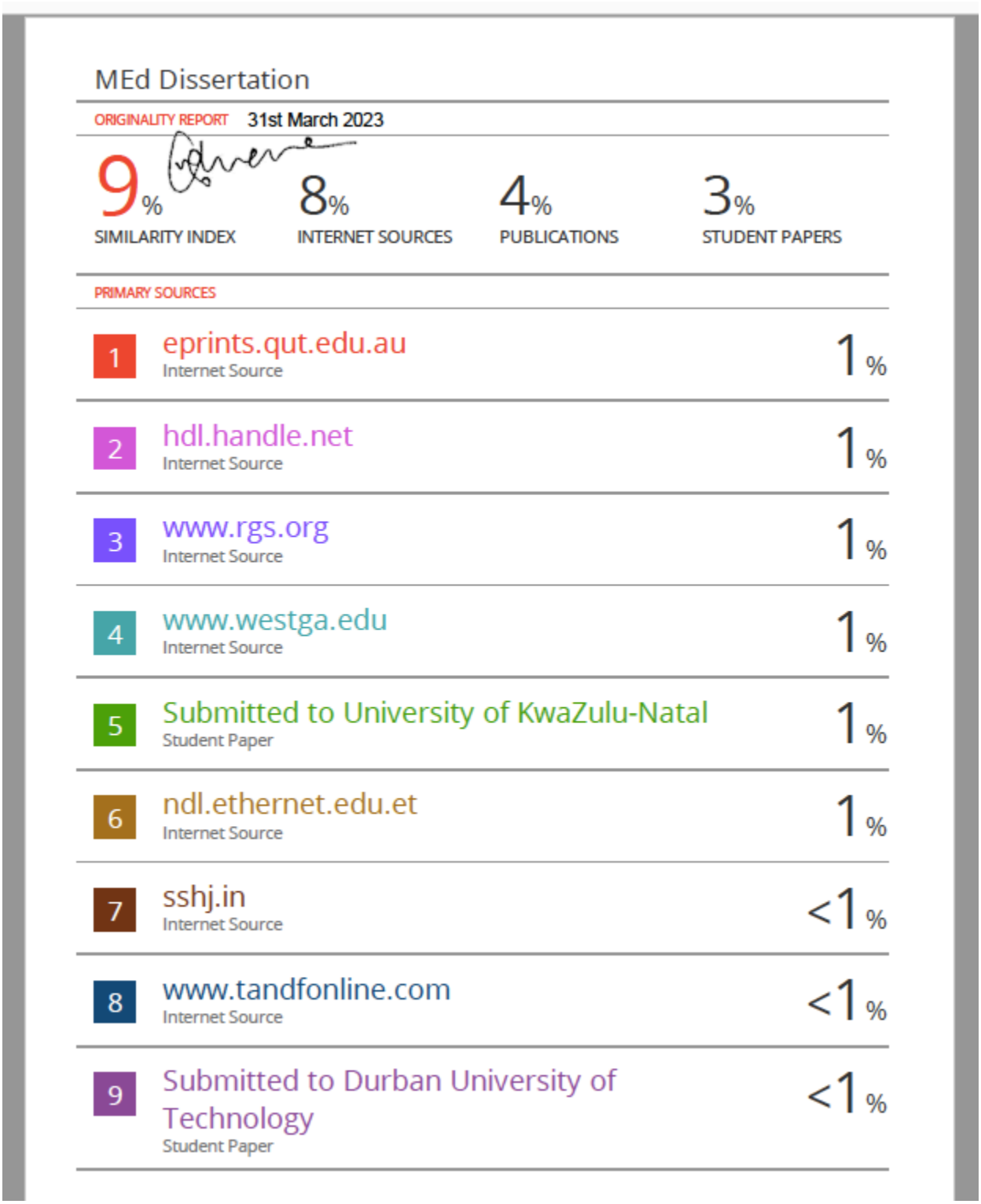
Personal, Social and Humanities
Education Key Learning Area

Geography
Curriculum and Assessment Guide
(Secondary 4 - 6)

Jointly prepared by the Curriculum Development Council and The Hong Kong Examinations and Assessment Authority

Recommended for use in schools by the Education Bureau HKSARG
2007 (with updates in July 2022)

APPENDIX 12: TURNITIN CERTIFICATE



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