FEMALE STUDENTS' EXPERIENCES IN LEARNING GEOGRAPHY AS A MAJOR AT TERTIARY EDUCATION LEVEL: A CASE STUDY OF A TEACHER TRAINING COLLEGE IN SWAZILAND

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LINDIWE NCANE MAGAGULA

SUPERVISOR: DR THOKO ESTHER MNISI

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DECLARATION

I, Lindiwe Ncane Magagula, student number 214584649, hereby declare that the thesis for Master of Education is my own work and that it has not previously been submitted for assessment or completion of any postgraduate qualification to another university or another qualification. When referring to the work of other authors I have referenced it using APA 5th referencing style.

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Lindiwe Ncane Magagula

ABSTRACT

This study aimed at exploring why there was a lower enrolment of female students learning Geography as a component of specialisation at teacher training college. A case study, looking into understanding the experiences of female students learning Geography as a choice component of specialisation was undertaken at one teacher training college in Swaziland. Semi-structured questionnaires which were administered to eighteen (18) female students learning Geography as a choice component of specialisation at the college were the main tool for generating data. This was followed up by three (3) focus group discussions meant to get an in depth view of the data generated using the semi-structured questionnaires. The data generated aimed at answering the key question: What are the experiences of female students learning Geography as a component of specialisation at college? The researcher was guided by the following sub-questions: a) What are the experiences of girls learning Geography as an area of specialisation? b) What factors inform girls' choice of Geography as a subject specialisation? c) How can girls' participation in Geography be enhanced? The data were captured, coded, analysed and interpreted using the inductive approach. Given that this study was dealing with the experiences of humans, a proper ethical clearance was obtained through getting the participants to sign a consent form that clearly stated the conditions of consent for participating in a research. Although the participants of the study were adults and over 18 years of age, permission was sought from the college principal to conduct the study in the college.

The study produced evidence that the girls learning Geography at the college found doing the subject to be an interesting experience although they encountered a few challenges in certain aspects of their learning. The study further illuminated there were fewer females than males

learning Geography as a specialisation, albeit that the girls claimed to enjoy learning Geography and find learning it interesting. From the data generated it became clear to the researcher that the lower number of girls had very little to do with the college experience, but was instead a consequence of subject selection policies followed in high school and the subject choices made there.

The conclusions and implications of the study are that the girls find learning Geography at college level interesting because of its multidisciplinary nature. However, the same girls found that the experience is fraught with challenges such as the shortage of learning materials, the use of archaic teaching methods by lecturers as well as unequal treatment by male lecturers. The study's findings also implied Geography was not given its rightful place in high school; was used as 'a filler' after students had selected other subjects and as a result not many girls got the opportunity to learn it. The implication was that there were therefore fewer girls that get to know and like Geography enough to want to learn it at college level.

DEDICATION

I dedicate this study to all the women who have been bruised; battered and so emotionally eroded they have forgotten what they are capable of. I say “here’s to you Ladies, with God everything is possible, you can pick yourselves up and start all over.” This work is also dedicated to my grandson Kgoshi, and I hope that one day it will inspire him to be a scholar.

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CHAPTER ONE

ORIENTATION TO THE STUDY

1.1. INTRODUCTION

Geography is the description of the earth (National Council of Educational Research and Training, 2006). Greek Scholar, *Eratosthenese*, first coined the term "Geography" deriving it from two words from Greek language - *geo* (earth) and *graphos* (description) – hence the definition of the word "the description of the earth." As the earth has always been seen as a home of human beings, Geography has therefore been defined by scholars as "the description of the earth as the abode of human beings" (NCERT, 2006, p. 3). Geography as a discipline is about the classification of the patterns of natural and cultural topographies as found over the surface of the earth, the distribution of these natural and human cultural features over the surface of the earth, as well as the causal relationships between these features, and further providing explanations for these patterns.

Undeniably Geography is the most interesting and most significant of the subjects offered in the school curriculum as a number of scholars allude to that. Geography as a subject is important because it sheds light on the nature and significance of the changing spatial arrangements and landscapes that our world is made up of (Murphy, 1998). Curriculum according to Hoadley (2012, p. 29) refers to a "planned" or "prescribed" course to be taught to learners. Curriculum lists the concepts to be learnt, organises and sequences the learning, provides ideas on how learners should be taught and clarifies the particular content to be taught (Hoadley, 2012).

Within the college in question, the curriculum offers Geography; a significant and fascinating subject, grounded on its multi-disciplinary nature and its ability to capture the interest of all. The multidisciplinary nature of Geography is demonstrated by Akintade (2012, p. 2) who describes Geography as a "very wide but interesting subject, which touches on most other subjects such as the social studies or the social environmental studies".

Given that Geography is a "very wide but interesting subject" according to Akintade (2012, p. 2), one would expect a large and balanced number of students in Geography lecture rooms. Previous studies carried out in other countries, however, suggest that there is a marked difference in the choice of subject specialisation between male and female students (Zafar, 2009). Although Kubiatko, Janko and Mrazkova (2012) while studying Czech students' attitudes towards Geography, proposed that boys would have a more positive attitude towards Geography than girls, the results of their study revealed that gender does not have any effect on the attitudes. This then leaves a question on the reasons of girls' low enrolments in Geography as a specialisation.

The enrolment figures at the College where the study was undertaken are indicated in Table1, below:

Table 1.1: Secondary Teachers' Diploma Enrolment (Level 3)

Academic Year	Males	Females	Total
2011/2012	14 (73.7%)	5 (26.3%)	19
2012/2013	11 (68.6%)	5 (31.3%)	16
2013/2014	10 (90.9%)	1 (9.1%)	11

Source: (Administrative Records of the Teacher Training College)

The data in the table above show that in the college more boys than girls choose to do Geography as an area of specialisation. Over the past three years, the researcher - a lecturer in this college has observed that Geography classrooms always have more males than females. This observation

is what prompted the researcher to explore the experiences of the female students learning Geography as a specialisation, to understand the experiences of the female students and possibly identify reasons for the imbalance between males and females. The researcher was also prompted by one scholar, Akintade (2012, p. 1) who emphasises that: "Geography needs to be promoted by all geographers, so that the society might not suffer from its absence or inadequate representation in the field of advancement".

1.2. STATEMENT OF THE PROBLEM

The study focused on female students who have selected Geography as an area of specialisation in a teacher training college in Manzini, Swaziland. Swaziland is a small land-locked country, approximately 17 360 km^2 in area, in South Eastern Africa. This country is divided into four administrative regions: Shiselweni, Lubombo, Manzini, and Hhohho. A case study was carried out in a college located in an urban area, one kilometre outside the city of Manzini, which is the "hub" of the country. According to the Swaziland Government Central Statistical Office Swaziland had a population that was estimated at 1 275 948 in January 2015.

The said college is one of two public teacher training colleges in Swaziland affiliated to the only University in Swaziland in the country. It is one of two colleges that offers a Secondary Teachers' Diploma in the country. This is a government-owned teacher training institution administered by the Ministry of Education and Training. The college is under the supervision of the Chief Inspector for Colleges, and is administered according to government policies. All the students were on full government scholarships and gained admission to the college on the distinction of their Swaziland General Certificate of Secondary Education (SGCSE) and International General Certificate of Secondary Education (IGCSE) results. SGCSE and IGCSE are the highest levels of basic education in the country. Students are admitted to specialise in Geography also on the excellence of their specialisation results.

A continuously lower number of female students enrolling for Geography at the college as observed by the researcher were the motivation for the study. This observation is what prompted the researcher to explore the experiences of the female students learning Geography as a

component of specialisation to understand the experiences of the female students and possibly identify reasons for the imbalance between males and females. The researcher was also prompted by one scholar, Akintade (2012) who emphasises that in order for society not to suffer from the lack of or the insufficient representation of Geography it (Geography) must be promoted by all geographers.

1.3. RESEARCH QUESTIONS

Considering how significant Geography is in any person's education the researcher undertook to answer the following questions to understand why there was a lesser enrolment of female students at the college. The critical questions that guided the study were:

1. What are the experiences of girls learning Geography as an area of specialisation?
2. What factors inform girls' choice of Geography as a subject of specialisation?
3. How can girls' participation in Geography be enhanced?

1.4. RESEARCH AIM

The research aim therefore was, to explore why there were lesser females enrolling for Geography as an area of specialisation, given that Geography was not only a significant subject in the life of a learner but also an interesting one. The researcher attempted to attain understanding through meeting the following objectives, which were:

1. To understand the experiences of girls learning Geography as an area of specialisation.
2. To identify factors which inform female students at the college when choosing Geography as a specialisation.
3. To explore what could be done to enhance girls' participation in Geography.

1.5. CONCEPT CLARIFICATION

Concepts are words used to communicate ideas referring to phenomena sharing the same properties, according to Straits and Singleton (2011). The concepts used in this study are clarified below:

1.5.1. Geography

Geography is a subject on the explanation of "the earth as the home of human beings" (cf. 1.1). Within the country's education system all children - without discrimination by age or sex - get to learn Geography under the umbrella of Social Studies in Primary school. In the primary school, Geography is integrated with History and Religious Knowledge as Social Studies to form one of the core subjects in the primary school education curriculum. This, however, changes in secondary school where the three are no longer linked to each other and each student has the chance to choose subjects individually. At this level Geography ceases to be one of the core subjects and becomes an optional subject that may or may not be selected by the student depending on the option choice system found in that school.

1.5.2. Teacher training college

A teacher training college is an institution that prepares teacher trainees with skills to effectively teach learners in the schools. Therefore, teacher training involves undertakings that relate to all facets – mechanical, technical, and vocational – of the teaching process (O'Neill, 1986). In Swaziland trainee teachers go through a 3-year diploma course to qualify as either fully fledged Primary school or Secondary school teachers in the country. The said courses can only be undertaken in the government recognised public teacher training colleges in the country.

1.5.3. Tertiary education level

Tertiary education level refers to a level of education that takes place in institutions such as polytechnics, universities, colleges or technological institutes. The scope largely covers teaching and learning requiring high level conceptual and intellectual skills with the purpose of equipping students with skills needed in the labour market thus preparing them for entry into different professions (OECD, 2008).

1.6. CONCEPTUAL FRAMEWORK

In this study a conceptual framework has been used in place of a theoretical framework. According to Imenda (2014) a conceptual framework is a synthesis of the existing views in literature concerning a given situation. In this study, a synthesis of concepts and perspectives has been drawn from many sources to look at how the participants chose Geography as their component of specialisation. Looking at how the choice was made, answered the second critical question and also contributed to understanding the experiences of the girls doing Geography. The study's conceptual framework is based on the work of Weeden (2007) and others who have attempted to understand the reasons behind the choosing of a subject for specialisation. The conceptual framework is fashioned from a hybrid model from the work of Weeden (2007) which illustrates that influences on subject choice are a result of interactions between teacher, subject and school, and do not operate in isolation but rather they are intertwined. This conceptual framework is explained in detail in chapter 2, where the researcher also visually demonstrates it.

1.7. RESEARCH DESIGN AND METHODOLOGY

In this section, the research design, that is the qualitative approach, interpretive paradigm is briefly discussed. The research setting, sample and data generation tools are explained. Towards the end of the section the data analysis framework is discussed followed by the discussion on how ethical issues were addressed in this study.

1.7.1. Research design

A qualitative and interpretive approach is assumed by the study. Since the study's objective is to understand the experiences of girls learning Geography as a specialisation, a case study design has been found by the researcher to be the most applicable approach. Similarly, a qualitative research approach was preferred for this study because the researcher found it to be congruent with the research problem. In qualitative research, the enquiry carried out by the researcher produces results that are textually, instead of statistically presented, as pointed out by Chillisa and Preece (2005). Qualitative researchers stress that reality is "socially constructed" (Denzin & Lincoln, 2003, p. 271). In qualitative research people actively construct their social world rather than being objects of research. They understand their setting and are able to construct their worlds in an attempt to address the needs which are best known to them. Therefore, the researcher allowed the girls to interpret and understand their learning of Geography as a specialisation, by drawing from their own experiences as female students. Furthermore, the qualitative research approach was relevant with the philosophical assumption guiding this study. Guided by the interpretivist paradigm as "the lens or organizing principles" by which reality is constructed (Nieuwenhuis, 2007, p. 48), the researcher attempted to understand the opinions of the participants about the situation being considered. The situation in this case is the experiences of female students majoring in Geography as a choice component of specialisation. In this manner, the paradigm informed the choice of inquiry approach.

Suitable with qualitative approach undertaken in the study, the researcher chose a case study as the design of inquiry. According to Yin (2009), a case study is a thorough examination of an existing phenomenon within its real life context. A case study has been chosen by the researcher because it allows for an exhaustive exploration of the female students learning Geography as a choice component of specialisation. A case study also allows for various other sources of evidence to be used and the students to be observed while at the college, in a natural setting (Yin, 2009). This inquiry, therefore, is a case study that seeks to explore the experiences of female students majoring in Geography as a choice component of specialisation.

1.7.1.1. Research setting

As indicated in the statement of the problem, the study focuses on female students who have selected Geography as an area of specialisation in a teacher training college in Swaziland - a small landlocked country in South Eastern Africa. The college is located a kilometre outside of the country's busiest urban centre, the city of Manzini, which is also the central point of the small country. The students in the college are fully sponsored by government, and are admitted to the college on the merit of their Swaziland General Certificate of Secondary Education (SGCSE) and the International General Certificate of Secondary Education (IGCSE) results. Admission to specialise in Geography is also on merit of their results.

1.7.1.2. Sample

For this study participants have been purposely selected, hence, the purposive sampling method has been adopted in this study. While sampling refers to the method by which a portion of the population is selected for use in a study (Nieuwenhuis, 2007), purposive sampling, according to Denscombe (2005); Leedy and Ormrod (2005), is a thoughtful selection of participants who are assumed to be able to yield the most suitable or rich data about a topic. In keeping with purposive sampling, 20 female students learning Geography as a choice component of specialisation were purposefully selected, to safeguard that each of the individual students selected as part of the sample possessed the crucial characteristics to meet the specific requirement of the study (Fraenkel & Wallen, 2000). Also, that each student had that defining characteristic making her a holder of the information needed for the study.

1.7.1.3. Data generation tools

In qualitative research design data generation and data analysis take place simultaneously (Nieuwenhuis, 2007). The aim of qualitative research is understanding and description, and that

is the reason data generation methods must allow for detailed description (Tedlock, 2003). Such detailed data were obtained through written semi-structured questionnaires and focus group discussions.

1.7.1.3.1. Semi-structured questionnaires

A semi-structured questionnaire was filled in by the participants and the ultimate purpose was to generated descriptive data. This semi-structured questionnaire comprised of five sections. Section 1 recorded the biographical details of the student, while Section 2 interrogated the student's experiences while learning Geography. Further, Section 3 sought information about the student's experiences regarding the support they get from the college and Section 4 investigated how the students got to choose Geography as a specialisation. The final section asked the participants how can more female students be prompted to do Geography.

1.7.1.3.2. Focus group discussions

Focus group discussions (FGDs) were also conducted with the participants. Using a semi-structured focus group guide, the researcher acted as moderator and directed the discussions. The purpose of the focus group discussion was to obtain exhaustive qualitative data about the experiences of the selected group through allowing in-depth discussion among the participants (Nieuwenhuis, 2007). The final session of focus group discussion focused on how girls' participation in Geography could be enhanced. The aim was to hear and understand the students' views. The discussions were video-recorded to also capture non-verbal cues. An assistant did the recording.

1.7.1.4. Data analysis

The data that emerge from the semi-structured questionnaires are descriptive (Creswell, 2004). To eliminate researcher bias, data from the focus group discussions were transcribed verbatim. The data were then divided into meaningful analytical units. Thereafter, through coding, the researcher managed to organise, summarise, identify, and link patterns and themes. This basically meant reading the data sets line by line to identify similar ideas. The researcher then explicated the patterns and themes, the process is more detailed in the methodology chapter (chapter 3). Generally, qualitative data analysis is an inductive process of organising data into categories and identifying patterns among the categories (De Vos, 2005). According to Babbie and Mouton (2004) the process of analysing the patterns and themes is done for the purpose of drawing conclusions which are in line with the critical questions, interest of the study, and also reflect theories of the study.

1.7.1.5. Ethical issues

The researcher did take the necessary steps to observe the ethics code of the university under which the study was being conducted. The researcher began generating data from the participants only after having obtained clearance from the University of KwaZulu-Natal. Despite that all the participants of the study were above 18 years of age, permission was also be obtained from the college principal for the study to be carried out in the college. Also, the participants were sought and requested to sign a written consent form where all the consent conditions had been observed.

1.8. DELIMITATION OF THE STUDY

This study is located in the field of curriculum studies; a discipline that focuses on the learning experiences of students. This is a small-scale study carried out in one of the few teacher training colleges in the country. The study was conducted with only 18 female students learning

Geography as a choice component of specialisation, as participants. The participants only constituted a small group of the total number of students in the college. The findings therefore, only gave one a glimpse of the bigger picture and hence could not be generalised. The researcher nevertheless, offered a rich description of context, participants and methodology of the study.

For greater emphasis on the importance of each individual participant's stance on the subject at hand, the findings are presented and supported with direct quotes from the focus group discussions.

1.9. POSSIBLE CHALLENGES

Considering that some of the participants were the researcher's students, there was a possibility of them avoiding responses that they felt could compromise the student-lecturer relationship in future. The researcher circumvented this possibility by continually reassuring the participants of confidentiality of the responses and discussions, and how nothing that they said in their responses and discussions could, in any way, disadvantage them in the classroom.

1.10. COURSE OF THE STUDY

This chapter introduced the study by highlighting the importance of Geography in the curriculum. The researcher proceeded to state the problem under study, the aim of the study, the critical questions which were to be answered as well as the conceptual framework employed in the study. In the same chapter, the researcher further outlined the research design and methodology, sampling, data generation and analysis process.

Chapter two addresses literature relating to what influences students when selecting a subject as a component of specialisation. The conceptual framework used in the study is also described and explained in detail.

Chapter three outlines the research design and methodology. In this chapter, a full description of the research setting, research tools, the participants and a detailed description of the data generation process are specified. This chapter also clearly stipulates how the data were analysed.

Chapter four is a discussion of the findings of the study. The findings are interpreted, presented thematically and supported with direct quotes from the focus group discussions. The findings are then related to literature.

Chapter five covers the conclusions, implications of the findings, recommendations and suggestions for further research. Lastly, the limitations of the study are listed.

1.11. SYNTHESIS

This study looked into the experiences of female students learning Geography as a component of specialisation at college level. Further, this study hoped to develop the understanding of experiences of girls learning Geography as a component of specialisation as a minority gender. The researcher hoped to identify the reasons for the under enrolment of girls in Geography specialisation at college level. Further, the researcher hoped explore the girls' learning of Geography as a specialisation, and to explore how more girls could be enhanced to learn Geography at college level. The next chapter discusses literature on how students get to choose subjects as their components of specialisation.

CHAPTER TWO

LITERATURE REVIEW

2.1. INTRODUCTION

The purpose of this study is to understand the experiences of female students that are learning Geography as a choice component of specialisation at tertiary level. To better understand their experiences one has to understand the factors that led them to choose Geography as a major. This chapter reviews the literature on the factors that inform students when choosing a subject area of specialisation. This section discusses the interacting factors that literature (from different authors who have used different methodologies, in different contexts) has shown to inform students when choosing a subject for specialisation. These factors which will be discussed in subsequent subsections include: personal concerns, academic considerations, influence of personal relationships, and the impact of external factors on the subject choice made by students.

2.2. FACTORS INFORMING STUDENTS WHEN CHOOSING A SUBJECT FOR SPECIALISATION

The factors that will be discussed in this section are derived from personal concerns, which are inclusive of the influence of the student's interest, self-efficacy and gender bias and stereotyping; academic considerations which include pedagogy and curriculum, and teacher-student interactions; the influence of personal relationships which are parents, family and peer influences; external factors which are the institution's policy and practices on choice (Adeyemi, 2009; Akintade, 2012; Claire, 2004; Favara, 2012; Hango, 2013; Hashim & Embong, 2015; Kubiatko et al., 2012; Levon & Esters, 2004; Malgwi, Howe & Burnaby, 2005; Naugah, 2011; Ozdemir, 2012; Ramachandran, 2010; Walmsley, Wilson & Morgan, 2010; Weeden, 2007;

Wildman & Torres, 2001; Zafar, 2009). These constitute the convolution of interacting factors that influence students when they choose subjects in which to major.

2.2.1. Personal concerns

Walmsley et al. (2010); Waugh (2011), following studies on what influences college students to select a major concluded that personal concerns were among the factors that impacted a student when he/she selects a major. These personal concerns were inclusive of the student's personal interest in the subject, self-efficacy and gender bias and stereotyping.

2.2.1.1. Student interest

Rated principal and most significant by most scholars who have carried out intensive research in this area, with specific interest in the multiple factors that influenced a student when selecting a major, was the student's personal interest in the subject major (Beggs, Bantham & Taylor, 2006; Malgwi et al., 2005; Waugh, 2011). Interest is described by Ndalichako and Komba (2014) as the predilection to participate in some types of activities as opposed to others that will cause one to be persuaded to give their time and attention to them. Interest in a course may, among other factors, sometimes be regulated by self-efficacy. Interest in a class for a student may also be a result of the student enjoying the class (Waugh, 2011). Interest in a class will also be a result of teacher-student interaction. Content, themes and most importantly readings may also be the basis for apparent interest in a course (Babad & Tayeb, 2003).

Research suggests that when students view the educational content as interesting and connected to their everyday life, they will be motivated to learn (Kubiatko et al., 2012). Likewise, as Malgwi et al. (2005) put it, interest in a course is one of the major factors of students' enrolment and when students are presented with the chance to select a class they will opt for one that they find most interesting.

A class that students will find interesting is one in which they not only like the subject in terms of subject content matter, but also the teaching methods that are used by their teacher (Weeden, 2007). Students have been reported to enjoy learning in classes where the teacher keeps them actively involved and engaged. They voiced out that they did not like situations where they are inactive receivers of knowledge, only expected to listen to the teacher and take down notes (Weeden, 2007). Overall students' requirements for an interesting class were the teacher's using a variety of teaching methods and varied learning facilitation approaches (Adey & Biddulph, 2001).

The students themselves ranked interest as being the foremost in the order of importance for all the factors that influence their choice of major (Edmonds, 2012). The subject matter, topics and major readings were the student's yardstick to measure how interesting a class was (Babad & Tayeb, 2003). Malgwi et al. (2005) studied students' input in this field and concluded that what influenced incoming students' choice of major and what also later caused them to change it. In this study it was established that interest in the subject was the common factor in major choice. Therefore, a class which a student finds interesting is the one that he/she is most likely to choose.

Behind interest are factors that will create the interest or lack of it in a subject. The learning environment, for instance, contributes to whether students will be interested in a subject or not. Ndalichako and Komba (2014) point to the unavailability of teachers and lack of teaching material as valid destroyers of interest in a subject while good teaching methods, which focus on student involvement, effective communication and a positive relationship with students, are motivators of interest in a subject. It is on this premise that the researcher seeks to explore the College's students' perceptions of subject choice by also looking closely at their personal interest and the other likely factors that are discussed in this chapter.

2.2.1.2. Self-efficacy

This section discusses the term self-efficacy, its origins as well as its influence on subject choice. Human behaviour is in many diverse ways swayed by self-efficacy, as a belief of personal capability (Van Dinther, Dochy & Segers, 2010). The section will define self-efficacy and also

discuss some significant sources of self-efficacy; the relationship between self-efficacy and choice; the relationship between self-efficacy and gender, and the relationship between self-efficacy and interest in a subject. The self-efficacy theory was instigated from Social Cognitive theory by Alberta Bandura. Self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71). The same concept of self-efficacy is also put more simply by Bandura as what people believe they are "proficient" at (Waugh, 2011, p. 8). For students, self-efficacy denotes the belief a student has in him/her to succeed in a major field of study (Ecles, 1987). Self-efficacy is self-rated evaluation, as it is a form of evaluation whereby the student makes their own judgment of self. According to Bandura (1994), self-efficacy beliefs determine how one thinks, behaves and feels. Similarly, Bandura also believes that self-efficacy touches the choices made by people, their actions, the effort they exert, their determination and resilience (Van Dinther et al., 2010).

Rated top of the list of self-efficacy sources are past successes. Efficacy beliefs will be raised by past successes while they will be lowered by repeated failures (Artino, 2012). Self-efficacy is usually a result of previous success or failure in academic situations. Repeated success in a particular academic area is likely to cause a student to pursue that area more vigorously (Edmonds, 2012). The confidence usually emanates from previous success in the subject. Over-all students are also most likely to choose as a major, a subject in which they have previously had success and hence believe they will once again succeed in. Bandura (1994) observes that when people doubt their competences they will be reluctant to undertake difficult tasks which they see as personal threats. Illuminating the same point Bandura (1977) further expounds that after repeated successes have led to strong efficacy expectations, the adverse effect of failures is likely to be reduced. Thereby it can be ascertained that, although failure can dwindle self-efficacy, the extent to which failure affects an individual is reliant on the strength of the existing efficacy beliefs. Suffices to mention, however, is the fact that other students may be inclined to choose a major simply because it poses an intellectual challenge to them (Edmonds, 2012). For instance, when students judge themselves to be more capable they will embrace more stimulating goals in their learning (Zimmerman, Bandura & Martinez-Pons, 1992).

Witnessing the successes and failures of others may be yet another source of improving one's efficacy beliefs (Artino, 2012). According to Bandura's theory second-hand experiences can bolster efficacy beliefs in observers and make them feel that they too can succeed with perseverance and determination (Artino, 2012). In other words, self-efficacy can be created through observing experiences provided by people around that one relates closely with (Van Dinther et al., 2010). Furthermore, Bandura (1994) observes that seeing people that are the same as oneself flourish through continuous effort, raises one's beliefs that they can also succeed in a similar activity. Bandura's theory however points out that efficacy beliefs acquired in this way are weak and more inclined to change.

The third source of self-efficacy is social persuasion. People, who are verbally persuaded that they have what it takes to succeed, are more likely to put extra effort and try harder to succeed at a given activity (Bandura, 1994). Cherry (n.d.), states that people who are given verbal encouragement by others are able to conquer self-doubt and concentrate on applying their best effort to the task at hand. Zimmerman (2000) nevertheless, comments that the effectiveness of such persuasion is reliant on the credibility of the one carrying out the persuasion.

The final source of self-efficacy is reaction (both physical and emotional) to a given situation. One's reaction when faced with performing a particular task may impact negatively or positively on their subsequent performance. Reactions to one's performance can be motivating or otherwise if the individuals are overcome by stress reactions (Artino, 2012). One's self efficacy will be strengthened by a positive mood state while it will also be enervated by a dejected mood state (Van Dinther et al., 2010).

The importance of self-efficacy when a student chooses a major is emphasised (Porter & Umbach, 2006). According to Porter and Umbach (2006) research has established that there is a strong link between self-efficacy and major choice. Eccles (1987) observes that the choice of major that a student makes will largely be determined by whether they believe they will succeed in the subject or not. This is evidence that there is a significant correlation between measures of self-efficacy and the majors that students select in college (Edmonds, 2012; Zimmerman, 2000).

Men and women have differing perceptions with regards to their capability and aptitude (Waugh, 2011). Lackland and DeLisi (2001) concur that the students themselves have gender differences

in their perceptions on their aptitudes for different majors. These perceptions and attitudes are perpetuated by parents when they use discouraging comments towards daughters when it comes to courses that they feel their children should take, leading to females feeling less secure in some subjects (Waugh, 2011). Despite these differences however, research has signposted that in colleges the gap in perceptions of ability between males and females is closing (Waugh, 2011).

Self-efficacy is also a regulator of interest in a subject for a student. It is essentially a stronger regulator of interest than actual ability; the reason being that students want to be in a class that they trust they will perform well in (Waugh, 2011). Therefore, according to Waugh (2011) student interest is actually dictated by self-efficacy. A student is more likely to pursue a major if he/she has a high self-rating in that field, because people are more likely to select activities that they believe themselves more capable in and avoid those they believe themselves less capable in.

Notwithstanding that students will choose subjects when they believe themselves capable, the impact of self-efficacy is so strong that it will not only cause students to enrol in some classes but may discourage students from enrolling in others.

2.2.1.3. Gender bias and stereotyping

Gender refers to the social or cultural dissimilarities linked with being male or female. Gender is regarded by scholars as a social construct (Scantlebury, 2009). Gender is a concept that does not exist naturally but is created by society. Gender, therefore, comes from societal expectations. In the process of socialisation of children, they are brought up to act and behave in certain ways. Gender bias occurs when society has certain expectations concerning actions, capabilities or preferences of others on the basis of their being male or female (Scantlebury, 2009). Society's concepts of how males and females are expected to act and behave are called gender roles. These roles stem from standards whose source is society. The oversimplified notions about how men and women should think and behave are called gender stereotypes. From a very early age children are entrenched in what society believes to be appropriate gender roles. Boundless (2014) points out that observing these roles influences many aspects of our lives including education.

Students of a certain gender will be attracted to certain subjects. There are many reasons that have been suggested by scholars for these differences in preference. Firstly, the differences have been attributed to the presence of biological and neurological differences in males and females by research in psychology and medicine (Favara, 2012). Sadker and Zittleman (2009) also believe that males and females have different brains and call this difference 'wiring'. This assertion has often led to boys being perceived to have a more natural talent in science than girls (Scantlebury, 2009). The same assertion is claimed to be the cause for the underperformance of girls in technical and quantitative subjects (Lenroot, Gogtay, Greenstein, Wells, Wallace, Clasen, Blumenthal, Lerch, Zijdenbos, Evans, Thompson & Giedd, 2007). As a result, gender bias attracts more boys than girls to science (Kubiatko et al., 2012; Naugah, 2011; Panizzon & Levins, 1997; Ramachandran, 2010; Waugh, 2011). Waugh (2011), points out that, undeniably, there is a gender gap in math and science classes. Moreover, Naugah (2011) while undertaking a study of four purposely selected schools in Mauritius found that there is a low uptake of science by girls beyond the compulsory level. Chapman (n.d.) asserts that in early childhood girls are made conscious that they are not equal to boys. This results in girls disengaging themselves from technical and quantitative subjects in early childhood. The result is "the tendency for women to predominate in some occupations and men in others" which "correlates with the subject choices made by boys and girls at school" (Claire, 2004, p.95). Consequently, the choice of college major will be noticeably diverse in males and females.

Apart from the dissimilarities attributed to biological and neurological makeup in males and females, other scholars have argued that gender differences in student major choice are a consequence of socialization and traditional roles: gender stereotypes (Lackland & DeLisi, 2001). In the United States of America, Ren, Hagedorn and McGill (2011) in a study of how international graduate students selected their majors, confirmed that choices of college major for students were influenced by the gender role stereotypes that they identified with. In the same study of international graduate students, Ren et al. (2011) found that female gender roles were reflected in that English, education and nursing majors were dominated by women. On the other hand, males dominated the sciences and engineering according to the National Research Council, 1991, in the United States of America.

Tenenbaum (2008, as cited in Waugh, 2011) contends that the main cause of these differences is that parents tend to enforce the stereotypes that are already in existence because of gender differences, causing an increased sense of insecurity in females that makes them not to enrol in some classes. Furthermore, there is some evidence that parents' educational expectations are not the same for sons and daughters. In addition, the students themselves have gender differences in their perceptions on their aptitudes for different majors (Lackland & DeLisi, 2001). According to Tenenbaum (2008, as cited in Waugh, 2011) the stereotypes are enforced by parents through discouraging comments about courses which they feel their children should not take. Zafar (2009) found in a study of school sophomores that gaining the approval of parents was one of the important determinants in choosing a college major.

Teachers also exhibit unconscious gender biases that can yield stereotypic expectations for the success and participation of students in the classroom (Scantlebury, 2009). The unconscious stereotyped gender biases of teachers cause them to perceive boys as more capable than girls, especially in math and science subjects. The underlying cause could be the myth that is promoted by gender bias that; at mathematics and science, boys are better than girls (Scantlebury, 2009). The result of this is that boys and girls will have dissimilar learning experiences in the classroom, with girls' work often being undervalued while boys are being given significant and less critical praise (Scantlebury, 2009). Consequently, educational choice is affected by gender traits because boys and girls make gender stereotyped choices (Favara, 2012).

Similarly, Zafar (2009) disputes innate abilities and differences as reasons for the gender gap. Zafar (2009) established that gender differences stemming from beliefs about academic ability played an insignificant role in the gender gap and consequently rejected the factor of low self-confidence as a cause for female under representation in the sciences. Zafar (2009) opted for differences in preference and beliefs about enjoying the coursework as an explanation for the gender gap in subject choice. Zafar (2009) suggests as the cause for variety of choice in subjects, the variances in beliefs about enjoying coursework and variances in predilection. Favara (2012) also found that gendered subject specialisations could not be explained by gender-specific abilities but opted for that gender traits will be modified by the environment.

Yet again, Porter and Umbach (2006) point to a lack of acceptance of the token women that venture into the fields where females are underrepresented. Sandler and Hall (1986, as cited in

Porter & Umbach, 2006, p. 432) refer to this lack of acceptance as a "chilly climate". Porter and Umbach (2006) speculate that perhaps the "chilly climate" also has an influence on how women select majors.

On the other hand, Grebbenikov and Skaines (2009), highlight that, over recent years, there has been an emergence of gender differences that were previously not evident. New evidence indicates that females now outnumber males in higher education (Australian Bureau of Statistics [ABS], 2002, 2005; Baker & Velez, 1996; Bradley, 2000, as cited in Grebbenikov & Skaines, 2009). Moreover, females now opt to venture into areas of study where they were previously underrepresented while the male students stick to traditional choices (ABS, 2002, 2005, Ayalon, 2003, Beyer, DeKeuster, Rynes, & DeHeer, 2004, Beyer, DeKeuster, Walter, Colar, & Holcomb, 2005, as cited in Grebbenikov & Skaines, 2009).

Studies by other scholars have however failed to establish the relationship between gender and subject choice. Akintade (2012) while studying the factors that influence the choice of Geography in Ilorin, Nigeria concluded that there was no connection between subject choice and student gender. Ozdemir (2012) concurs in a later study carried out using a *"Geography attitude scale"* developed by Aydin, 2009, on high school students' attitudes towards Geography, when concluding that subject choice and gender were not meaningfully related. The same conclusion was reached by Kubiatko et al. (2012) who had initially hypothesized that boys have a more positive attitude than girls towards Geography, when findings of their study of Czech students' attitudes towards Geography, confirmed that there are no gender differences in attitudes of the students towards Geography. Weeden (2007) was however, inconclusive about the influence of gender on subject selection and felt that further research was needed.

Looking at the presentations of the different scholars above, one may conclude that there is on the one hand a group of scholars who believe that there is a relationship between gender and subject choice, whilst on the other hand there is also a group of scholars who believe the contrary is true. This study seeks to closely analyse perceptions of college students from the College and draw informed conclusions about the subject choice selection in this college.

2.2.2. Academic considerations

Waugh (2011) studied the factors that influence a student's decision for course enrolment and concluded that academic considerations are also important when a student makes the decision to enrol in a course or not. Waugh (2011) describes an ideal class as one where all the academic needs of the student will be met. Among the academic considerations to be discussed in this section are course value, a teacher's pedagogy and teacher-student interaction.

2.2.2.1. Course value

Whether a student chooses to enrol or not to enrol in a class will be affected by the quality of a course (Waugh, 2011). Research has established that most of the classes that will be chosen by students will be chosen for their high quality of teaching/learning (Babad & Tayeb, 2003). A class where the students will have the opportunity to learn a great deal of information worth knowing is the one that is most likely to be chosen by students (Waugh, 2011). The perceived value that a class will have on their lives may also make students choose a class. It therefore makes sense to reason that a student teacher, who is undergoing training to be a teacher in the preceding years, will want to choose to be part of a class in which the subject taught will empower him/her for the forthcoming task.

2.2.2.2. Pedagogy and curriculum

Pedagogy or a teacher's method of teaching is another important influence on the attitude and ensuing choice of a subject for a student. The way in which a teacher presents his/her lessons may positively or negatively affect the students' attitude towards a subject. A student may like or dislike a subject influenced by the way a teacher presents the lessons (Akintade, 2012; Azubuike, 2011; Naugah, 2011; Ozdemir, 2012). However, there is a variety of teaching approaches and active learning strategies available to inspire interest and arouse students to have an optimistic

attitude towards a subject. Moreover, the teacher's personal qualities and teaching characteristics also strongly influence students' perception of how much they will acquire in his/her class (Abrantes, Seabra & Lages, 2007).

In a study to establish the attitudes of high school learners in Turkey, Ozdemir (2012) found that a greater number of the students felt that the teachers' behaviour and performance was important in order to have a good Geography lesson. Abrantes et al. (2007) after their study on pedagogical affects, student interest and learning performance, confirmed that, students favour shared and student-focused teaching methods which tended to motivate students when choosing an area of specialty. In addition, teachers ought to employ methods of instruction that involve the students and enhance their own level of participation in their own learning. Moreover, according to Young, Klemz and Murphy (2003) where instructional methods are congruent with their preferences, students are more likely to learn. Ozdemir (2012) after studying high school students' attitudes towards Geography in Turkey found that the major deterrent to students' studying Geography in schools was teacher centred lessons. Ozdemir (2012) further posited that employing techniques that centred on the students in Geography teaching had positive results on the attitudes and success of the students. Likewise, Weeden (2007) had found in England and Wales that, students did not like to be inactive recipients of knowledge, and they shunned lessons that mainly required them to copy endless work, do exercise on learning geographic vocabulary, and answer questions through repetition of terms and definitions. Students' attitude to a subject is affected by the way a teacher relates to them and passes on information to them. Akintade (2012) in his study in Nigeria confirmed that poor teaching methods will discourage students from selecting a subject. So in teaching, the teacher is the greatest, single learning factor that is guaranteed to keep the students interested in a subject (Akintade, 2012), because students will be affected by the way a teacher presents his/her lessons.

All the same, there are other methods of teaching that can be used by teachers to make students not only develop a positive attitude towards a subject but also keep students interested in a subject. Biddulph and Adey (2004) for instance, investigated students' enjoyment and perceived usefulness of Geography in England, and found that strategy such as group work, information and communication technology and other practical approaches to teaching enhanced students enjoyment in the learning of Geography. Kubiatko et al. (2012) also found that e-learning

methods impacted positively on Geography learning as opposed to traditional education methods.

Teaching approaches impact strongly on students. Azubuike (2011) pointed out that the skill demonstrated by a teacher in teaching a subject will influence the enrolment of a student in that subject. It is essential that a teacher blends theoretical and practical work in lesson delivery to motivate the interest of the students in the subject (Azubuike, 2011).

2.2.2.3. Teacher-student interaction

According to Paswan and Young (2002), the opportunity to ask questions, express ideas and have an open discussion in class is referred to as teacher-student interaction. Consequently, the way in which a teacher relates to learners influences a student when he/she selects a subject (Akintade, 2012).

Azubuike (2011) points out that in learning the teacher is the most important person. Consequently, the way in which a teacher relates to or interacts with students is also important when students make the decision to choose a subject or not. According to Waugh (2011) students will not enrol in a class if they are concerned about the proficiency of the instructor. The attitude and disposition of a teacher may encourage students to enrol in a course or discourage them from enrolling in a course. For instance, teachers that were punctual, hardworking and friendly in their teaching were well liked by students (Ndalichako & Komba, 2014). While referring to social studies Odia (2014) noted that teachers who were willing to be of assistance to students in learning, were enthusiastic in the classroom, and paid close attention to the needs of the students, strongly affected the way the students felt about their subject. According to Babad and Tayeb (2003) passionate, well spoken, well-informed, compassionate and helpful teachers will be preferred by students as opposed to dry, uncompromising and imprecise instructors. For example, Naugah (2011) found that girls would not take certain subjects beyond the compulsory level, in spite of being aware of their importance, after having had negative experiences in those classes. Correspondingly, Ndalichako and Komba (2014) while studying secondary students' subject choice in Tanzania found, on the one hand, that teachers who were not approachable and

lacked commitment to their work eroded the enthusiasm of the students to pursue the subject. Moreover, students will be motivated to select even a challenging subject if the teacher manages to develop a friendly teaching atmosphere that is conducive to learning (Ndalichako & Komba, 2014).

Akintade (2012), while studying the determinants of selecting Geography as a discipline in Ilorin, Nigeria, confirmed that the way in which a teacher relates to learners greatly influences the learners' responses and attitudes in relation to a subject. This finding was made by Akintade (2012) after establishing that the attitude and relationship that the teacher had with his/her pupils impacted significantly on the attitude that the students had towards the subject. It is therefore important that a teacher should be scholastically eloquent in his area of specialisation because the response and attitude of his /her students towards his/her subject is determined by the way he/she relates to the students and passes across his/her instructions. For this reason, a teacher should be well trained, encouraged and motivated. Abrantes et al. (2007) conclude that higher learning performance will be a consequence of a higher level of congeniality. It is however unfortunate that all these factors having been considered, generally teachers have inferior expectations for the educational accomplishment of girls than they do for boys (Scantlebury, 2009).

2.2.3. Personal relationships

When selecting a major, students will be strongly influenced by those that are close to them. Literature has revealed that personal relationship, characterised by family members (parents and siblings) and peers play a prominent role in the process of major selection by students (Naugah, 2011; Walmsley et al., 2010; Wildman & Torres, 2001). Furthermore, the family and peers do not only act as vital sources of support but also act as information brokers for potential subject choices (Walmsley et al., 2010).

2.2.3.1. Parental support

Scholars studying the significance of family support when a student selects a major have concluded that parental support is very crucial. Imperative as the parental support may be, the influence that the parents wielded over the student's decision, the studies disclosed, was variable. Walmsely, Wilson and Morgan (2010) conducted a study on influences on a college student's major and concluded that the support or non-support of family members, especially parents, was very important when a student decided what subject to pursue or not pursue as a major. Malgwi et al. (2005) observed that the likelihood of parents influencing the students when deciding on a major than guidance counsellors or teachers is much higher. Likewise, when parents think that a child is likely to excel in a class they are very likely to influence the child to take that class (Waugh 2011). As a result, when fathers in particular perceive a class to be difficult, they will likely dissuade their daughters especially, from taking that class (Waugh, 2011). Walmsley et al. (2010) further pointed out that parents would bear so strong an influence on a student's choice of subject major that they would sometimes pose a challenge for some students when the students felt "pushed" by parents towards a certain major. According to Walmsley et al. (2010) some parents would push so strongly as to make the student get to the point of feeling shoved towards or away from a major. This led one student, particularly, to refer to parents as "forceful motivators on the major someone's picking" (Walmsley et al., 2010, p.32). Likewise, in Kenya, Kochung and Migunade (2011) found that children may select majors that their parents desire, but this time, only to please them. The aforementioned has sometimes led to students choosing majors they otherwise would not have chosen.

Other scholars have however, clarified that family relationships will not have an equal influence on a student's choice of major. Wildman and Torres (2001), for instance, argue that though family members have an influence, it is variable, and family members exert an unequal influence on a student's decision to pursue a major. Certain family members, for varying reasons, may exert a stronger influence on the student than others. For instance, Esters and Bowen (2005) point out that while studying the factors influencing enrolment in urban Agricultural programs, they noted that that it was the female relations (mother and/or female guardian) who had a more profound influence on the decision taken by a student to take or not to take a major. The stronger

influence of the female relatives was conceded by Hashim and Embong (2015) after conducting a study on students selecting accounts as their major in Malaysian schools. The purpose of the study was to investigate who had the stronger influence between parents and peers. Results of the same study similarly revealed that mothers in particular, exerted a stronger influence, especially on secondary school students.

2.2.3.2. Friends and peers

Other studies have revealed that notwithstanding the strong influence of parents in a student's choice of major, the influence of peers should also not be underestimated. Comments from siblings, friends and peers likewise have an impact on whether students enrol for a class or not. Peer influence was found to be weighty in the choice of Christian Religious Education (Walaba & Kiboss, 2013) and Accounts (Hashim & Embong, 2015) in studies carried out in Kenya and Malaysia respectively. According to Beggs et al. (2008) a class that is supported by the student's social network is the one that the student is more likely to enrol in.

In addition, Walmsley et al. (2010) after conducting a study with the purpose of understanding what influences the selection of a major by college students found that parents, family members and friends play the dual role of acting as sources of support and information brokers for the students. Waugh (2011) points out that, students are likely to be influenced by the views and opinions of their peers and to make their decisions on those estimations rather than their own thoughts. Malgwi et al. (2005), further elucidate that students will more likely take advice from their peers before they heed to their educators, counsellors or members of the family.

Siblings also play an important role through directly or indirectly acting as information brokers (Walmsley et al., 2010). Through siblings a student may get a "sense of a major's landscape" because of the experiences of the sibling (Walmsley et al., 2010, p.33). Comments from siblings may also serve as motivation for a student to pursue a major (Walmsley et al., 2010). Noteworthy is that, according to Waugh (2011), females are more predisposed to peer influence.

The arguments above reveal that in the process of choosing a subject as an area of specialisation social interactions also play a pivotal role. It can be either be parents, sibling or peers or even a combination of any of these above mentioned groups, but evidence from studies carried out, point to those around an individual as being most likely to influence the choice that one makes when selecting a subject area to pursue.

2.2.4. External factors

Under ideal conditions students would select subjects that suit their interests and abilities. Although students select their subjects based on interest and abilities, there are practical factors that have to be taken into consideration. Consequently, students often find themselves constrained by the institution's policy on subject selection or major selection.

2.2.4.1. The institution's policy and practice

Subject selection for college students will be directed by the institution's policy and practice. Access to an institution of higher learning is influenced among other factors by a student's academic performance in secondary school education (Ramachandran, 2010). The option choice system provided under the institution's policy and practice likewise determines the subject majors to be assumed by a student (Weeden, 2007). Moreover, Weeden (2007) also points out that sometimes the institutions policy on subject selection at college is having performed well in secondary school in that subject. Other institutions may require a high grading on the secondary school marks on the major that a student wishes to pursue. As a result, it may be the student's school leaving grades that determine the major that the student will pursue in college instead of interest. Some institutions may offer specific subject combinations as majors depending on their policy and programs offered. According to Weeden (2007) an institution's option choice system may even take into account the needs of the local community. Notwithstanding the facets

discussed above, while studying undergraduates in Turkey, Edmonds (2012) concluded that when making their choice of a major, the student will be the one that yields the most influence.

2.3. CONCEPTUAL FRAMEWORK

According to Imenda (2014) a conceptual framework is a synthesis of the existing views in literature concerning a given situation. It is a synthesis of concepts and perspectives drawn from many sources. A conceptual framework is an integrated way of looking at the problem and can be used in place of a theoretical framework. A framework may be theoretical or conceptual. A conceptual framework differs from a theoretical framework in that while a conceptual framework is "the researcher's idea on how the research problem will have to be explored" (Regoniel, 2010, p.1), a theoretical framework is "the application of a theory, or a set of concepts drawn from one and the same theory to offer an explanation of an event, or shed light on a particular phenomenon or research problem" (Imenda, 2014, p. 189).

The study's conceptual framework is based on the work of Weeden (2007) and others who have attempted to understand the reasons behind the choosing of a subject for specialisation. The Geography Community: Adeyemi, 2009; Akintade, 2012; Kubiatko et al., 2012; Ozdemir, 2012; Weeden, 2007; Agriculture: Levon and Esters, 2004; Wildman and Torres, 2001; Accounting: Hashim and Embong, 2015; Science and Math: Naugah, 2011 and others who have tried to understand the gender differences in subject choice: Claire, 2004; Favara, 2012; Hango, 2013; Ramachandran, 2010; Zafar, 2009. Building on the work of Weeden and that of the other researchers concerned, the researcher fashioned a hybrid model presenting the factors that influence students when selecting subjects for specialisation. In this model influences on subject choice are a result of interactions between teacher, subject and school. These factors do not operate in isolation but rather they are intertwined (see Fig.2.1).

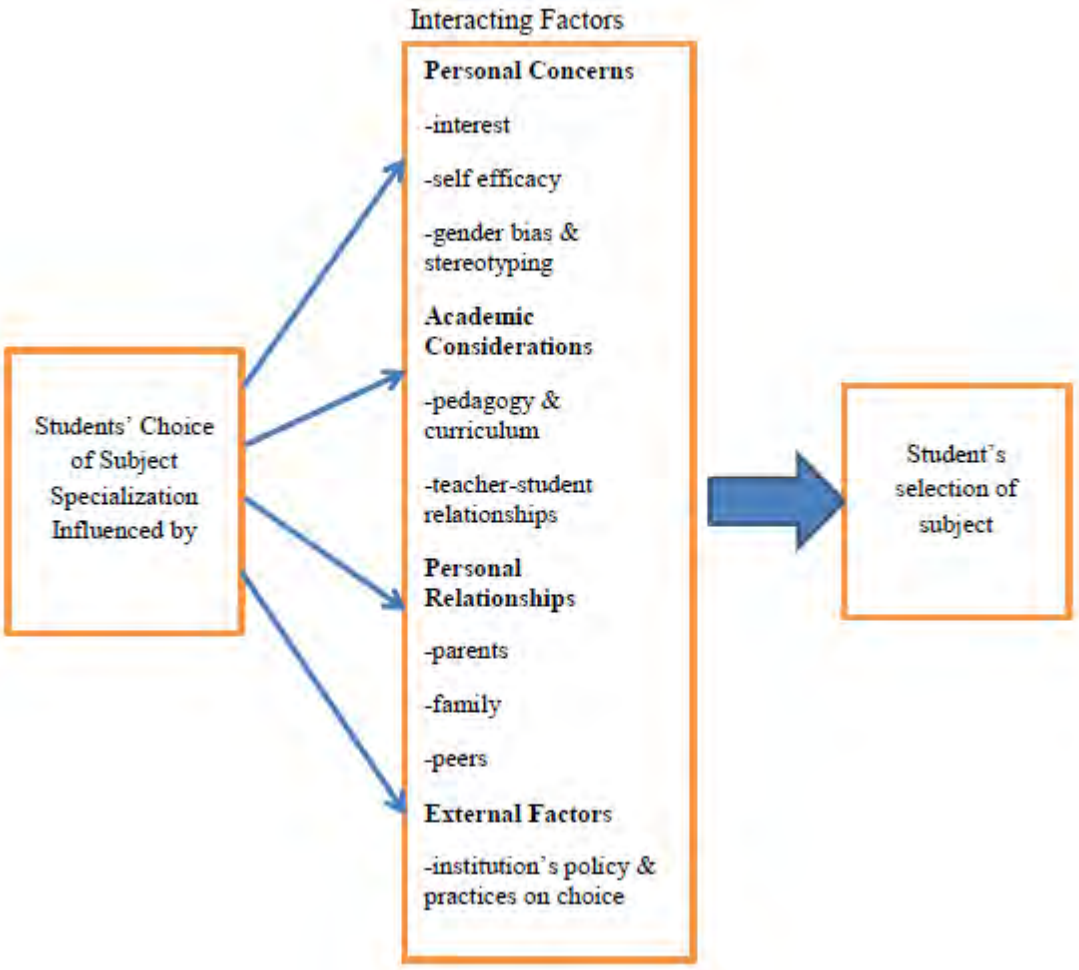

Figure 2.1: Conceptual framework adapted from Weeden, 2007.

As illustrated, the model includes four key constructs: personal concerns, academic considerations, personal relationships and external factors. Under these constructs are sub units which further clarify these ideas.

2.4. SYNTHESIS

This chapter explained reviewed literature on what informs students to select a subject as their component of specialisation. It revealed that when a student selects a subject as a component of specialisation personal concerns, academic considerations, personal relationships and external factors are the constructs that have an influence. These, however, are intertwined and do not carry equal weight. The chapter concluded with a conceptual framework model, adapted from Weeden (2007), showing the aforementioned constructs.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. INTRODUCTION

Chapter 2 discussed the literature on how students get to choose their subject specialisations and that informed the related conceptual framework which guided this study. This chapter outlines the research design and methodology that was adopted to carry out this study which sought to understand the experiences of female students learning Geography as a choice component of specialisation in the college. This chapter is divided into three parts. Part I: discusses the research design and methodology, together with the research paradigm which is what determines the path that the study follows. Part II: relates to the preparations that were necessary before getting into the field; and Part III: gives a narration of the actual process of data generation, in the field. In the next section a recap of the aims and the critical questions is presented.

3.2. AIMS OF THE RESEARCH

The aim of this study was to understand the reasons for the underrepresentation of females in the classrooms of the students learning Geography as a component of specialisation in the college, as indicated by college statistics, by understanding the experiences of girls learning Geography as a specialisation. To further understand the students' experiences the researcher also identified the factors that informed students at the college when choosing Geography as a specialisation. As a means to find a solution to this problem, the researcher explored what could be done to enhance girls' participation in Geography.

3.3. RESEARCH QUESTIONS

1. What are the experiences of girls learning Geography as an area of specialisation?
2. What factors inform girls' choice of Geography as a subject specialisation?
3. How can girls' participation in Geography be enhanced?

3.4. PART ONE: RESEARCH DESIGN AND METHODOLOGY

3.4.1. Research approach

A qualitative research approach was preferred for this study. This is the approach that the researcher found to be congruent with the research problem. The research problem required that the researcher allow the girls to draw from their own experiences. Furthermore, the qualitative research approach was appropriate with the philosophical assumption guiding this study. In keeping with the philosophical assumption a qualitative research was the most suitable because a qualitative research is a process of investigation aimed at understanding a human or social problem that gives a detailed report of the views of the participants that is carried out in a natural setting, further another goal of qualitative research is to place emphasis on the specific and personal first-hand or real experiences of the participants Strydom and Bezuidenhout (2014). In this case a qualitative research approach was followed because the manner in which the researcher generated data, organised them and the information that was sourced from the data were all a consequence of the "lens" through which the researcher looked at the world and resultantly approached the data **(**Nieuwenhuis, 2007). The researcher took on this approach because the qualitative approach generated data that were descriptive. In qualitative research data are reported in words – largely the words of the participants, or pictures (Chillisa & Preece, 2005). Qualitative research is a type of scientific research that in addition to pursuing and finding answers to questions, also seeks to understand a research problem from the viewpoint of the persons under investigation. The qualitative research approach is meant to use to explore and understand the meanings that individuals or groups attribute to a human and social situation (Creswell, 2013).

The qualitative approach was preferred because the researcher wanted to find out how the female students viewed their experiences, and the meaning that they made of them (Nieuwenhuis, 2007), and qualitative researchers stress that reality is "socially constructed" (Denzin & Lincoln, 2003, p. 271). People actively create their social world instead of being objects of research. Qualitative research acknowledges that the participants' reality can only be understood and explored through their descriptions, understandings and voices (Nieuwehuis, 2007). They understand their context and are able to construct their worlds in an attempt to address the needs which are best known to them. The researcher drew from the participants' understanding and from how they interpreted their worlds.

According Strydom and Bezuidenhout (2014) qualitative research and quantitative research differ mainly in terms of their flexibility. Quantitative methods of research are fairly inflexible employing procedures that have been carefully worked out; complicated and controlled methods while qualitative research methods are generally more flexible and explorative - allowing several aspects to emerge during the course of the research. This difference is evidenced among other things, in their general framework. In addition, quantitative research on the one hand, seeks to confirm a hypothesis about phenomena while qualitative research, on the other hand, seeks to understand and explain phenomena. Further, quantitative research and qualitative research vary in terms of their analytical objectives. Quantitative data emphasise quantity, answer the questions of how many and seek to quantify variation by asking closed ended questions and generating numerical data. Qualitative research methods on the other hand, seek to "explore, understand and describe" relationships between phenomena through asking open-ended questions thus generating textual data (Strydom & Bezuidenhout, 2014, p. 174). Nieuwenhuis (2007) posits that qualitative research is mostly about generating data that answer the 'why' and 'how' questions of research. In this instance, qualitative research was selected to generate data that would explain why there was an underrepresentation of females in learning Geography at the said college.

Given that understanding is the ultimate aim of qualitative research, the researcher wanted to generate rich descriptive data in respect of the particular phenomenon being studied and ensure that what was being observed and studied was clearly understood (Nieuwenhuis, 2007). In this study, typically, data to explore the experiences of female students learning Geography as a component of specialisation in the college were generated.

3.4.2. Research paradigm

For the purpose of this study, the first definition of a paradigm adopted is that a paradigm is the philosophical intent or motivation for undertaking a research (Cohen, Manion & Morrison, 2007). The next denotation is that a paradigm serves as "the lens or organising principles" by which reality is constructed (Nieuwenhuis, 2007, p. 48). The last connotation is that, it is a model for observing and understanding which shapes what we see and how we understand it (Babbie & Mouton, 2004). From the aforementioned definitions of a paradigm, it is evident that different scholars assign different roles to a paradigm in their varied research texts. While some will view a paradigm as the driving force for undertaking a research, others will see a paradigm as the 'spectacles' through which a certain phenomenon can be studied, and for others the paradigm will determine the researcher's understanding of the phenomenon under research (Babbie & Mouton, 2004; Cohen & Manion, 1994; Nieuwenhuis, 2007). The succeeding sections comprise of a brief discussion of three paradigms, that is, the positivist paradigm, the critical paradigm and the interpretive paradigm. The purpose of the short discussion of each the three paradigms is to clarify the highlight the differences between the paradigms and to show how the interpretive paradigm was seen as suitable for use in this study. In doing so, discussions of the other the two other paradigms were done to show that even though they exist, they were not best suited for this study. Therefore, in pointing out the differences between the paradigms the next section rationalises the researcher's choice of the interpretive paradigm.

3.4.2.1. The positivist paradigm

The positivist approach is mostly used in natural sciences. It can be broadly defined as "the approach of the natural sciences" (Du Plooy-Cilliers, 2014, p. 26), and is also sometimes referred to as the scientific approach (Mackenzie & Knipe, 2006). Positivists believe that it is through employing the scientific method that facts can be exposed or revealed (Nieuwenhuis, 2007). Further, the positivists submit that the end product of using the scientific methods of research is unbiased and methodological answers. Because such answers are comprehensive they can

therefore be generalised to all historical and cultural contexts (Nieuwenhuis, 2007). Positivists subscribe to the notion that, notwithstanding culture or history, theories must be commonly applicable because they are generally binding or accurate (Du Plooy-Cilliers, 2014). In the positivist view a binding explanation is one that cannot be proved otherwise despite repeated attempts to do so. Experiments and observation are employed to collect evidence in positivism. Studies carried out guided by the positivist approach will be dominated by quantitative techniques of generating and analysing data (Mackenzie & Knipe, 2006), because positivists prefer to record 'facts' using quantities and numbers that can be processed statistically (Du Plooy-Cilliers, 2014). The subject matter is studied factually and clinically (Maroun, 2012). With the positivist approach the researcher is also distanced from the research by being neutral and objective.

3.4.2.2. The critical paradigm

This part looks briefly at the critical paradigm. The researcher begins by explaining the critical theory. The critical theory is categorised by that it "is concerned with the issue of power relations within the society and interaction of race, class, gender, education, economy, religion and other social institutions that contribute to a social system" (Asghar, 2013, p. 3123). The key construct of the critical theory is that the way we know and perceive reality is a consequence of social conditioning (Du Plooy-Cilliers, 2014). The critical researchers insist that people experience reality based on how they perceive reality (Du Plooy-Cilliers, 2014). According to Cohen et al. (2007) the purpose of the critical paradigm is not simply about understanding situations and phenomena but also about changing them. Therefore, a critical paradigm strives to reform for a better world (Asghar, 2013). The critical approach focuses on bringing change for marginalised groups with little power and few opportunities. The critical paradigm therefore looks to liberate the disempowered and challenge excesses of power (Cohen, et al., 2007; Mahlomaholo, 2009; Nieuwenhuis, 2007). Asghar (2013), grants that the main aim of the critical theory is to uncover injustices and unfairness and bring about change. The critical researchers therefore aim at empowering people to build a better world by changing society and freeing people from all manner of oppression, through uncovering myths (Du Plooy-Cilliers, 2014). With a clear

understanding of these paradigms discussed in the preceding sections, in the subsequent section, the researcher presents the interpretivist paradigm, which was used as a 'lens' to understand the study.

3.4.2.3. The interpretivist paradigm

The basic construct of the interpretivist paradigm rests in that people are different from objects and therefore cannot be studied in laboratory settings as they (objects) are studied in positivism. Human beings are constantly changing and are continuously influenced by the environment in which they live. Consequently, it is what happens in people's environments that influences them (Du Plooy-Cilliers, 2014). An interpretive research generally attempts to comprehend phenomena through the connotations that people ascribe to them (Bertram & Christiansen, 2014). The interpretivist grants that the realities of phenomena are numerous and they will not be the same across time and place (Nieuwenhuis, 2007). The interpretivist researcher therefore, attempts to understand human experiences through relying on the subjective understandings of the people, how they conceptualise their world by sharing meaning and how they interact with each other (Nieuwenhuis, 2014). From the above discussion, it could be said that while positivism focuses on verifying theories, the critical paradigm focuses on bringing about change, and the interpretivist paradigm emphasises on how people experience and understand their world. From the preceding discussion it is clear that the interpretivist paradigm was the one most apposite for this study in view of that the critical question that the researcher wanted this study to answer.

In this study, the researcher followed the interpretivist paradigm, which was determined by the critical question that the researcher wanted this study to answer. To answer this critical question, the researcher had two objectives, namely to understand the experiences of girls studying Geography as an area of specialisation and to explore what informed the girls at the college when they chose Geography as a specialisation. In addition, the study lent itself to the interpretive paradigm because the study relied upon the views of the participants about the condition being considered (Creswell, 2013), – to understand the participants' experiences of learning Geography

as a minority gender. The researcher drew from the participants' understanding and from how they interpreted their worlds.

Another widely accepted interpretation of a paradigm is that the term paradigm describes "a cluster of beliefs and dictates which for scientists in a particular discipline influence what should be studied, how research should be done, and how results should be interpreted" (Du Plooy-Cilliers, 2014, p. 19). According to this view, a paradigm will guide you as to what kind of questions should to be asked; what can be identified and investigated; how data were to be generated; and how the findings can be interpreted. In line with this assumption the researcher felt that the reason for the lower enrolment of female students learning Geography at college could be uncovered by semi-structured questionnaires and focus group discussions with the girls that were involved in learning Geography.

The researcher's decision to select the interpretive paradigm was also informed by that understanding of human life can only come from within through looking at the individual experiences of people (Nieuwenhuis, 2007). Similarly, the fundamental concern of the interpretivist is the participants' perception of their world and the meaning they attach to their actions. The researcher was therefore guided by the first objective to select the interpretive paradigm as most apposite for this study. The interpretivist paradigm was used to understand the views of the participants regarding the situation being examined (Du Plooy-Cilliers, 2014) - which were the experiences of female students majoring in Geography as a choice component of specialisation.

Lastly, the researcher considered the interpretive paradigm most suitable because the interpretivists, unlike the critical researchers, do not want to bring about change but only want to understand the behaviour of human beings (Du Plooy-Cilliers, 2014). The researcher's need to explore and understand what informed the female students when they chose Geography as their component of specialisation, as articulated in the second objective, was what also guided the choice of the interpretive paradigm as the vehicle for carrying out this study.

3.4.3. Research design

The research design is a blueprint or a plan for systematically generating data, selecting the techniques for generating the data and the steps to be followed in analysing it to answer the research question (Bertram & Christiansen, 2014). In order for research to be systematic the research design has to be clear and succinct (Maree & Westhuizen, 2007). A research design is a plan covering all the steps a researcher will follow: from the underlying philosophical assumption, specifying how the participants will be selected to stating how data will be generated and analysed (Nieuwenhuis, 2007). A research design serves as the researchers' guide in all aspects of the research; from evaluating the philosophical ideas that are the basis of the inquiry to the exhaustive data generation and analysis process (Creswell, 2003). The research design, therefore, clearly lays out how the researcher plans to methodically generate the data, where to generate the data from and how the researcher plans to use the data to answer the research questions. However, in qualitative research; the research design cannot be structured and fixed because qualitative research attempts to see things through the eyes of the participants (Strydom & Bezuidenhout, 2014).

3.4.3.1. Research methodology

Methodology and method are terms that are often used interchangeably by scholars even though they are not the same. Methodology as a concept refers to a philosophy while method refers to the actual techniques or tools employed in generating data when conducting research (McGregor & Murnane, 2010). Somekh and Lewin (2005) describe methodology as the collective name given to the strategies or procedures that guide a researcher when undertaking a piece of research. Methodology according to Cram (2013) explains the tools, procedures and practices that are employed by a researcher to gain knowledge. MacKenzie and Knipe (2006) elucidate that method is about the organised approaches, processes and tools that are used for generating and analysing data. The difference according to Cram (2013) is that methodology refers to the guiding principles in our research practices while method denotes the practises and techniques

that are employed in the data gathering process. Essentially, while methods are the tools or processes used to generate data, methodology is the study of those tools and processes.

3.4.3.2. Case study

Literature suggests multiple definitions of case study research. According to Bertram and Christiansen (2014) a case study is an organised examination into an event or set of events with an ultimate goal of gaining a more complete understanding of the phenomenon of on one's concern. Furthermore, a case study according to Yin (2009) undertakes an exhaustive examination of an existing phenomenon within its real life context. The case study method provides a comprehensive understanding of a specific, lived experience of a participant through allowing a deep examination of that participant within a natural context (Strydom & Bezuidenhout, 2014). The researcher chose a case study because it allowed for in-depth examination of female students learning Geography as a choice component of specialisation, in one teacher training college in Swaziland. According to Nieuwenhuis (2007) a general observation has been that, over the years, researchers across a variety of disciplines have used the case study to answer the "how" and "why" question. The researcher also chose a case study guided by the research questions. A case study was most suitable to answer the "how" and "why" questions (Baxter & Jack, 2008). In this instance, the case study was the most suitable to answer the research question.

The researcher found the case study most appropriate because it is an approach to research that enables the exploration of phenomena within its setting using an assortment of data sources. Moreover, the use of multiple data sources is labelled the hallmark of case study research (Coyne 1997). Given that the study wanted to answer a "why" question a case study was best because it allows phenomenon to be looked at through various lenses which makes it possible for multiple aspects of the phenomena to be revealed. In this study a case study allowed for the examination of the students at the college in a natural setting while also allowing for various sources of evidence to be used (Yin, 2009; Strydom & Bezuidenhout, 2014). Viewing the students in a

natural setting was important because in qualitative research data are generated in the participant's setting to allow direct interaction with the people being studied (Creswell, 2013).

In this instance a case study was chosen because it was most suitable to view the phenomena the researcher wanted to examine through more than one lens. The case study by its nature allowed for the examination of the students of the college in their own setting. Since the case study allows the use of multiple data sources, the researcher was also able to not only answer the question of why there are more males than females learning Geography, but to delve deeper into their experiences of learning Geography as a minority gender and also find out how more girls could be enhanced to learn Geography.

3.4.3.3. Research setting

In this section the researcher provides information about the study participants and the college in which the study is being undertaken. Providing a thick description of the participants and the college will increase the possibility that the study can be inferred to other contexts (Chillisa & Preece, 2005).

3.4.3.3.1. The urban community

The study took place in Swaziland, a small country in South Eastern Africa with an approximate area of 17 360 km^2 and a population of about 929 718 after the 2007 National Housing and Population Census, according to the Demographic and Health Survey 2006/7, and an estimated population of 1 275 948 for January 2015 (Swaziland Central Statistical Office & Macro International Inc., 2008). Swaziland is a small country that is land-locked by Mozambique in the East and the Republic of South Africa on the North, South and West. Swaziland is ruled by a monarchy and governed through the constituency *(Tinkhundla)* system. In addition, Swaziland is a one party state that has a dual system of government; one traditional and the other modern. For this reason, culture and tradition are very important to the Swazis and most Swazi children

are brought up to respect their culture and tradition. Swaziland is divided into four administrative regions: Shiselweni, Lubombo, Manzini, and Hhohho. Swaziland only has two cities: Mbabane and Manzini. Mbabane, which is not only a commercial centre but also the administrative centre of the country, is the capital city. Manzini is located almost at the centre of the country, few kilometres away from the country's biggest industrial centre, is the "hub" of the country and the largest commercial centre in the country. The country has only these two cities and several other smaller towns due to its small size. Hence the city of Manzini is the busiest urban area and supports the largest population in the country. The case study was carried out in a college in Manzini. The college is located one kilometre outside the city of Manzini.

3.4.3.3.2. The college

Due to the small size of the country, the said college is one of three public teacher training colleges in Swaziland affiliated to the only University in Swaziland. It is one of two colleges that offer a Secondary Teachers' Diploma in the country. Apart from offering Secondary Teachers' Diploma, the College also offers Primary Teachers' Diploma, which makes it the only college in the country that offers both primary and secondary teachers' qualifications. There are 385 learners (both male and female) in the College. The College has 57 lecturers that are also of mixed gender. However, the College's staffs are predominantly female. Most of the lecturers are engaged in teaching both the Secondary Teachers' Diploma trainees and the Primary Teachers' Diploma trainees. The College's management team consists of a Principal, Vice Principal and 6 Heads of Departments. However, since the College is a government owned institution, it is administered by the Ministry of Education and Training. The College managers are under the supervision of the country's Chief Inspector of Colleges. Also, the College is administered according to government policies.

The College was built 51 years ago and has been a teacher training institution since then. Due to its age most of the buildings are in a state of disrepair. Initially, it was a well fenced compound that had the administration block, the lecture rooms, laboratories and hostels in one compound. However, the state of the College is now so dilapidated that there is no longer a fence around the

compound which allows people to walk into and out of the college through any part of the College. It is only motorists that enter and leave the college through the main gate that remains unsupervised for most of the time during the day. The College's lecture rooms are arranged in linear blocks that stand parallel to each other. Each block houses no more than two departments. The block where the Geography department is located, where the data generation sessions took place, is housed last but one in this linear arrangement. This causes it to be almost furthest from the administration block where there is the parking lot and reception area, and where there is always a lot of activity during working hours.

Attached to the administration block is the college's library. The state of the library, like the college, is old fashioned and it has a poor security system. Most of the shelves stand empty, and the few books that there are outdated and not of much use to both the students and the lecturers. The library however, has many desks and chairs and is therefore mostly used as a study hall by the students.

The socio-economic status of the students cannot be predicted because almost all the students reside on campus as full time students. Most of the students are on full government scholarships. This means the government pays for their tuition fees, housing, and meals and also get a once off personal allowance per annum. This is the reason for the students come from all four parts of the country and have different socio-economic backgrounds. The training in the College is fully sponsored by the country's government. All the students gain admission to the College on the merit of their Swaziland General Certificate of Secondary Education (SGCSE) results or the International General Certificate of Secondary Education (IGCSE) results without discrimination. The aforementioned is the curriculum offered in Swaziland public schools. The SGCSE and IGCSE are the highest levels of the school curriculum in public schools in the country. Students are admitted to specialise in subjects also on the merit of their specialisation results.

3.4.3.3.3. Selecting the participants

In this part the researcher describes and justifies the selection of the participants in the study. In qualitative research procedures of sampling are not as rigidly set as they are in quantitative research (Coyne, 1997). Purposive sampling was used for this study. Sampling refers to the procedure by which a portion of the population is nominated for use in a study (Bertram & Christiansen, 2014). According to Coyne (1997) a purpose is a fixed aim. Purposive sampling is the deliberate selection of participants who are thought to be able to yield the most or rich information about a topic (Denscombe, 2005; Leedy & Ormrod, 2005). According to Coyne, (1997, p. 624) "information rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling". In line with purposive sampling the researcher ensured that each of the individual students selected as part of the sample possessed the defining characteristics to meet the specific purpose of the research (Fraenkel & Wallen, 2000).

In this study 20 female students studying Geography as a choice component of specialisation at a college in Swaziland were selected. These students were selected because they were currently enrolled in a 3-year diploma course in teacher training. These students were also selected because they were currently experiencing learning Geography as a component of specialisation. The researcher chose to involve female students from all the levels of study, that is, from Level 1 (1st year) to Level 3 (3rd and final year). The researcher wanted to get the view of the 1st year students because they had been newly exposed to the phenomenon being studied. Also the researcher wanted to get the views of the 2nd and 3rd year students as they had been exposed to the phenomenon under study for some time. The participants were selected because they were all female students learning Geography as a choice component of specialisation which made them to have that essential characteristic that qualifies them to be holders of the necessary information for the research (Nieuwenhuis, 2007). The selected participants were viewed by the researcher to be holders of information rich data. The study was however carried with 18 participants, as 2 of 20 female students learning Geography as a specialisation declined to take part in the study.

Shown in Table 3.1 below are the biographic details of the participants of the study. Most of the participants were aged between 20 – 24 years and the rest between 25 – 29 years. The largest number of participants was in the second year of study as shown below.

Table 3.1: Age and year of study of participants

	20 -24	25-29	1st year	2nd year	3rd year
N	12	6	6	7	5

Most of the participants lived with their families (parents and siblings). Very few of them were married and lived with their spouses and even fewer lived with their guardians or some other unspecified person(s).

3.4.3.4. Data generation methods

Description and understanding were the researcher's ultimate intent, resulting in the researcher undertaking a qualitative research. Given that ensuring credibility is an important factor in establishing trustworthiness in qualitative research, as argued by Lincoln and Guba (1985), the researcher was driven to select semi-structured questionnaires and focus group discussions because they are well established methods of qualitative research (Shenton, 2004). The researcher used both semi-structured questionnaires and focus group discussion because it is generally accepted in qualitative research that trustworthiness is enhanced by the use of many methods of data generation (Nieuwenhuis, 2007; Shenton, 2004). Also, the researcher drew from Shenton (2004) who argues that using different methods of data generation facilitates triangulation which ensures trustworthiness in qualitative research. Furthermore, using more than one data source in qualitative research, allows the researcher to explore the phenomena through more than one lens which reveals many aspects of the phenomena and facilitates crystallisation so they can be understood (Baxter & Jack, 2008).

3.4.3.4.1. Semi-structured questionnaires

A semi-structured questionnaire was chosen as the primary tool for data generation. The participants filled in a semi-structured questionnaire that comprised of five sections (See Appendix 1). Section 1 recorded the biographical details of the student. Section 2 interrogated the student's experiences of learning Geography at the College. Section 3 sought information about the student's experiences regarding the support they get from the College which includes academics and the library. Section 4 investigated how the students got to choose Geography as a specialisation. The final section asked how more female students can be enhanced to do Geography.

A semi-structured questionnaire is characterised by more open-ended questions in the questionnaire. Questionnaires that are made of open-ended questions are one of the typical methods of data generation in qualitative research (Du Plooy-Cilliers, 2014). Cohen et al. (2007) afford that open-ended questions allow participants to freely give a rendering of a phenomenon in their own way and expound their responses without the confinement of pre-set categories within the questionnaire. With open-ended questions the participant has the freedom to answer in his/her own words. It is for this reason that the researcher opted for semi-structured questionnaires. It is this same freedom afforded the participants that allows for thick descriptive data which is the ultimate goal of qualitative research (Tedlock, 2003). A thick description is necessary in qualitative data generation because enhances the credibility of a qualitative research.

The questionnaire was administered to the participants as a group (Maree & Pietersen, 2007). This way of administering the questionnaire was the most convenient because it allowed the researcher the opportunity to help where the questions were not clear and this was a method that not only saved time, but was also cheap and easy to do (Maree & Pietersen, 2007). In this study the main focus was to obtain textual data. The questionnaire had spaces after each question that allowed the students to answer in as much detail as they liked. This was essential because the study relied on and required qualitative information. One of the prerequisites of qualitative

research is that descriptive data be generated because the ultimate aims are to "explore, understand and describe" the phenomenon under research (Strydom & Bezuidenhout, 2014, p. 174).

3.4.3.4.2. Focus group discussion

Focus group discussion (FGD) is a kind of interview where several participants discuss a defined topic with a facilitator. A focus group discussion is "a group interview used to determine the attitudes, behaviour, preferences and dislikes of participants who are interviewed simultaneously by a facilitator" (Strydom & Bezuidenhout, 2014, p.183). In a focus group discussion, the interview does not rely on backward and forward communication between the interviewer and the group, but rather on the group members interacting with each other to deliberate on a topic provided by the researcher (Morgan, 1988, as cited in Cohen et al., 2007). The distinguishing element of a focus group discussion is that emphasis is placed on the participants' interacting within the group and constructing meaning jointly (Bryman, 2004). Focus group discussion can be described as a form of group interview that enables communication between the researcher and research participants so that rich data can be generated (Bryman, 2004). A focus group was purposefully done so that the participants could communicate their experiences of learning Geography as a component of specialisation.

Despite that the focus group discussion was not the main tool for generating data, the researcher judged it useful to conduct the focus group discussions because they allowed the researcher substantiate the information obtained from the questionnaire by getting additional information, and to get clarification on issues that arose and the questionnaire responses. The researcher conducted interviews with the focus groups using a semi-structured interview guide (See Appendix 2). The researcher acted as facilitator with the intention of generating in-depth qualitative data about the experiences of the selected group (Nieuwenhuis, 2007). The researcher further strengthened the data by making video and voice recordings. The video recordings were meant to "capture non-verbal elements that may slip the attention of the moderator" (Nieuwenhuis, 2007, p. 92). De Vos, Strydom, Fouche and Delport (1998) also recommend

recording of the focus group sessions. Above and beyond generating in depth data, the researcher had to keep the discussions focussed on the topic, ensure that the discussions do not leave some issues hanging, and prevent some of the participants dominating the discussions. The researcher's intent was to keep the group's discussions focussed on the topic until saturation was reached.

3.4.3.5. Data analysis

This section briefly tells of how the data were generated and analysed in the field. Data generation and data analysis take place simultaneously in qualitative research design (McMillan & Schumacher, 1993; Nieuwenhuis, 2007). In this case data were generated and analysed in the field because how data are generated, ordered, and what is ultimately extracted from the data, are all products of the lens through which the researcher views the world and will as a result approach the data (Nieuwenhuis, 2007). Data from the semi-structured questionnaires were copied and compiled in preparation for reduction and coding. Data from the focus group discussions were also transcribed in preparation for reduction and coding. The data from the focus group interviews were transcribed verbatim as means to eliminate researcher bias. The data that emerged from the semi-structured interviews and the focus group discussions are descriptive The researcher divided the data into meaningful analytical units, organised, summarised, identified, and linked patterns and themes that emerged from the data. This was done through coding. Coding calls for the researcher to read the data sets line by line to identify similar ideas, and then tried to understand and explain the patterns. Generally, qualitative data analysis is an inductive process of systematically arranging data into classes and ascertaining patterns among the classes (De Vos, 2005). This process is done for the purpose of drawing conclusions which are in line with the critical questions, interest of the research and also reflect theories of the research (Babbie & Mouton, 2004.

3.5. PART TWO: PREPARING FOR THE FIELDWORK

3.5.1. Piloting data generation tools

A pilot study is a tool that allows a researcher to conduct a preliminary investigation before engaging in the actual research (Shuttleworth, 2010). Pilot studies are also referred to as "feasibility studies" (Koonin, 2014, p. 257). Given that the researcher was conducting a qualitative research which is often described as a research that tries to gain insight into a particular phenomenon through generating rich descriptive data (Nieuwenhuis, 2007) – the researcher, therefore, did a pilot study to refine and sharpen the data generation tools to ensure that sound data were generated.

Several scholars applaud pilot studies as they deem them fit to test the research methods and to ascertain potential problems which may have an effect on the trustworthiness of the investigation's conclusions (Blessing & Chakrabarti, 2009). In this instance, the piloting was intended to find out if the questions in the semi-structured questionnaire were actually what the researcher intended to ask. Cohen et al. (2007) insist that pretesting of a questionnaire is crucial to its success. The piloting exercise was meant to help the researcher to eliminate or rephrase questions that were irrelevant or were ambiguous in the manner in which they had been formulated. The piloting exercise was also meant to gain feedback on how valid the questionnaire items were: to identify oversights, redundancies, irrelevancies in the questionnaire items and to get an opportunity to test the coding system to be used in analysing the data (Cohen et al., 2007).

It is for a similar reason that the focus group discussions were tried out: to find out if the questions that had been asked in the interview guide were clearly phrased and not ambiguous. The researcher also wanted to find out ways of probing for answers that would yield rich information since the focus group would allow the exploring of new perspectives from other group members that would add value to the study. This was possible only through focus groups because participants in focus group interviews provide and in-depth opinion that cannot be

obtained from individual dialogues since they build on each other's ideas and observations during the discussion (Nieuwenhuis, 2007).

The piloting of the data generation tools was done with a group of five girls from the college. Two sessions were conducted. Both sessions took place one mid-week evening in the Geography lecture room. The sessions were conducted at this place and time because the researcher knew that at this time of day there was less likelihood of interruption since the lecture rooms were deserted in the evening. Also, the Geography lecture room was used because the researcher knew that the full attention of the participants was guaranteed since the room was familiar and there was nothing to be curious about in the surroundings that would distract their attention. On the first day, the meeting lasted for about three quarters of an hour. This time the participants spent filling in the semi-structured questionnaire they had been provided with. The researcher explained the objectives of the study to them and why it was necessary to pilot the instruments with them. Firstly, the participants were asked not to put their names on the questionnaire or anything that could identify them. It was explained that this was for reasons of total anonymity.

Next, it was explained to the participants that this was not a test and there was no right or wrong answer, and also, they were free to ask for clarification where the question was not clear. It was made clear that the study was only interested in their opinions. The researcher also encouraged the participants to take their time in responding to the questions, and explained to them that the study was only interested in their experiences and explanations. The participants were also told that if they ran out of space for answering, they were free to turn the page over and write their answers at the back of the questionnaire. Additionally, the participants were reminded that the answers that they gave were confidential and under no circumstances would they be divulged to anyone not directly concerned with the study, and would not be utilised for any other purpose except for purposes of the study. Lastly, the participants were further reminded that the answers were for the purpose of generating data for this study and would not reflect on their future interactions with the researcher.

The next session was a focus group discussion on the next day. The session on the focus group discussion was opened by explaining what a focus group discussion is. It was explained to them that firstly, a focus group discussion required that a certain topic be discussed while keeping focus on a defined topic. Secondly, it was also explained to them that they were free to deliberate

and build up on each other's answers because the ultimate goal of a focus group discussion was for them to construct meaning jointly (Bryman, 2004).

The piloting of the data generation tools demonstrated to be a valuable exercise. The exercise exposed that the participants did not give the responses that the researcher had anticipated, and this helped the researcher to acknowledge own biases as their lecturer, stand back and allow the participants to give their views, and further acknowledge that the initial intention had been to understand the phenomenon from the participants' point of view.

Conducting the pilot study of the questionnaire also helped uncover discrepancies that existed in the questionnaire. It transpired that in some cases, questions were ambiguous, not clearly phrased and not easily understandable; such questions were rephrased. For instance, in some instances, double barrelled questions had been asked and in such cases, the participants tended to respond to only the first part of the question, ignoring the second. This was corrected by separating most of the double barrelled questions into single questions for which more direct answers would be obtained.

Piloting the questionnaire also brought to the researcher's attention that satisfactory consideration had not been given to the last part of the questionnaire. It came to the researcher's realisation that the questions in this section required rephrasing to make them clearer, so as to ensure that complete responses were obtained. This was critical because the last part of the questionnaire was a section that was actually most crucial to the study, as it contained questions that answered one of the critical questions of the study to meet the main objectives of the study. Once again, the questions were left open to the scrutiny of the researcher's peers to increase their credibility.

A major challenge that was encountered in conducting the pilot study was that the meeting had to be rescheduled several times before it could actually occur. This was due to difficulty in finding a time that was convenient for everybody. The time at which the pilot study was conducted was a time that was close to examination time. The session had to be postponed several times before all of the participants selected for the pilot study could be available for the sessions, at the same time, due to pressure of work. The researcher, therefore, decided that the actual data generation

be carried out soon after the students re-opened for the following semester, before they were under pressure of work.

3.5.2. Data generation site

The sessions were held in one of the lecture rooms that are used to learn Geography. The researcher felt that the participants would be more comfortable meeting in this room. The researcher also knew that conducting the meeting in this room would guarantee the full attention of the participants in view of the fact that there was nothing new and nothing to be curious about in this room seeing that the surroundings were familiar. In addition, the researcher also knew that the lecture rooms were deserted in the evening and there would be little or no disturbance from any curious passer-by.

3.5.3. Ethical considerations

Notwithstanding that the researcher was dealing with consenting adults in this study, the necessary ethical issues were taken into consideration. Since this study was being carried out under the auspices of the University of KwaZulu-Natal, data generation only proceeded after ethical clearance was approved (See Appendix 3). The researcher also obtained permission from the principal of the College that was used as a case study (See Appendix 4). Written consent of the participants, although all of them were over 18 years of age, was also obtained (See Appendix 5). In the consent form, the conditions of informed consent were observed. That is, the researcher made sure that it was clearly spelt out and fully understood by the participants that their participation in the study was voluntary and that confidentiality was assured.

3.6. PART THREE: IN THE FIELD

This section gives a detailed account of what happened in the field. The researcher draws from Merriam (1998) who argues that a researcher should provide an audit trail that will specify and clearly explain how data will be generated. In qualitative research, it is essential that the researcher provides an audit trail to enhance the credibility of the study. For the mentioned reason therefore, the researcher provided an audit trail showing how the data were generated as well as how the researcher intended to derive themes and categories; giving reasons for the choices made. The most important matter in this study was for the researcher to explore what really causes the girls shy away from choosing Geography as their specialisation. To unearth their reasons, the researcher felt that it was essential to go back to the beginning and find out the mechanics of how they get to choose Geography as their specialisation. The researcher wanted to hear their views, and through their experiences find out how they feel about learning Geography as a minority gender. The researcher also wanted the participants' suggestions on how this phenomenon could be brought to an end through hearing from them what they thought could enhance more girls to learn Geography as a specialisation.

In this section, the researcher follows with a narrative description of how data generation in the field unfolded. Here, the researcher explains how semi-structured questionnaires and focus group discussions were used to get details of the experiences of the students as Geography learners in the college. The semi-structured questionnaires and the focus group discussions were also used to find out how the students had chosen Geography as a component of specialisation. The semi-structured questionnaires were employed because the researcher wanted to get detailed information from the participants without the limitation of pre-set responses. Focus group interviews were used to substantiate the data obtained from the semi-structured questionnaires and clarify pertinent issues that arose from the semi-structured questionnaire responses.

3.6.1. Sessions

Four data generation sessions were conducted. The filling in of the questionnaire made up the first phase of the data generation exercise. The next phase was a focus group discussion with a group of third (and final) year students. The third phase was a focus group discussion with a mixed group of first and second year students. The final session was also a focus group discussion which was a follow up session with a group of final year students.

3.6.1.1. Semi-structured questionnaire

This session started with the researcher being introduced to the participants. The researcher proceeded to explain the motivation for the study to the participants, following which the researcher clarified the objectives of the study to the participants. The researcher made sure that the participants not only understood the objectives, but also the reason why such a study was necessary. Further, the researcher explained that complete confidentiality was assured and explained that total anonymity was required of them before the actual filling in of the semi-structured questionnaire.

Session 1: Filling in of the semi-structured questionnaire

The filling in of the questionnaire was the first phase of the data generation exercise. The session was carried out in an empty classroom that is used to conduct Geography lectures in the college. This session was conducted in the late afternoon because there normally is less activity in the Geography block in the afternoons. The participants were required to fill in a semi-structured questionnaire. The semi-structured questionnaire consisted mainly of open ended questions. The researcher asked them not to write their names or anything that could identify them on the questionnaire. The researcher explained that this was for total anonymity. Next it was explained

to them that this was not a test and there was no right or wrong answer, and also, they were free to ask for clarification where the question was not clear. It was made clear that the study was only interested in their opinions. The researcher also encouraged the participants to answer in as much detail as they wished as there was no time limit and encouraged them to take their time in responding to the questions, as the study was interested in their experiences and explanations. The participants were also told that if they ran out of space for answering, they were free to turn the page over and write their answers at the back of the questionnaire. The researcher did not want the participants to feel they were confined to answer only in the space provided under the question in the questionnaire. Informing them that they were also free to turn the page and answer at the back of the page was meant to encourage them to answer in as much detail as possible. In so doing, the researcher was encouraging the participants to give descriptions that were as rich as possible - because qualitative research relies on detail and richness/depth of description. Lastly, they were reminded that the answers they gave were confidential and under no circumstances would they be used for purposes other than the study.

The researcher remained with the participants throughout the length of time that they took to respond to the questionnaire. Although the researcher remained with the participants throughout the answering session, the researcher sat quietly and unobtrusively in a corner, ensuring that the researcher remained unobtrusive. The researcher wanted the participants to know that although she was available to answer questions and give clarity if necessary, the researcher still did not want to be too visible and possibly intimidate the participants with her presence. The researcher avoided getting too close to the participants (except when necessary) because she wanted them to appreciate that their responses were totally anonymous. In this session there were few cases of when the students required clarification of the questions. The session lasted for approximately one hour.

3.6.1.2. Focus group discussions

Three focus group discussion sessions were conducted to keep the groups small. The groups were successfully kept small because, as already mentioned, there are fewer girls learning

Geography as a choice component of specialisation in the College. The groups were also deliberately kept small by the researcher to allow all the participants to get a chance to be heard during the focus group discussion. The researcher was aware that if the participants got heated up and emotional during the discussion, the quieter participants would be dominated by the more vocal ones and thus be deprived of the chance to state their views (Nieuwenhuis, 2007). The groups were also kept small because if the participants got emotionally involved in the discussion and had a lot to say, giving everyone a chance to air their view could prove difficult in a large group. Kelly (2006) argues that participants are likely to have a lot to say, and might be emotionally involved with the topic, and therefore recommends a smaller group. The researcher kept in mind and also continually reminded the participants that with focus group discussions "the question is not directed to one person: the researcher asks a question and the group members can deliberate with each other before answering" (Mnisi, 2014, p. 25). In between answers, the researcher would wait patiently, not only allowing the participants time to consider their answers, but also taking into consideration that the participants may need some time to deliberate before answering a question.

Session 2: Focus group discussion with 3rd year students

The first focus group discussion was held in the afternoon with the third (and final) year students. This was done, first, to keep the groups small (Kelly, 2006) and to ensure that all the students would get the opportunity to express their views. Secondly, the researcher did not want to mix the 'junior' with the 'senior' students for fear that the former may be intimidated by the latter, causing them not to freely express their views. Lastly, the researcher did not want to mix the students because the researcher wanted all of them to freely express their views without the junior students being influenced by the third year students who had been exposed to the phenomenon for a longer time. The session was held in the Geography lecture room which was the same room in which they normally took their lectures. The session was conducted in this room because the researcher felt that the participants would be more comfortable in this room since this was their home room; the room in which they attended their lectures every day. The

researcher also drew from Nieuwenhuis (2007) who states that focus group discussions are best held in a non-threatening environment.

The session began with introductions and the participants being reassured of anonymity and confidentiality. The participants were asked to pick short English names that they liked and wished that their parents had given them. They were then told that those names were only to be used in this session, and would not be referred to either by themselves or the researcher after the session. They were given pieces of paper where the names where written boldly using a marking pen. These they pinned (with pins provided by the researcher) onto their lapels. The girls had fun laughing and teasing each other about their English names. The researcher felt that this was good because by the time the discussion got underway, the atmosphere was very relaxed. The session lasted for approximately three quarters of an hour. The researcher acted as facilitator for this session. Another lecturer (who is experienced in research) recorded the session and carried out note taking. The session was video and voice recorded so that the video recording would capture non-verbal cues (facial expressions and other gestures) and the voice recording would act as backup in the event that there were parts that were not clear for some reason. However, at start of the session, there were problems with the voice recorder as it would not work. This was solved by doing the voice recordings using the researcher's mobile phone, which is a model that produces clear recordings. All of the captured information was later transcribed.

Session 3: Focus group discussion with 1st and 2nd year students

This session also began with introductions and the participants being reassured of anonymity and confidentiality. The participants were also asked to pick short English names that they liked and wished that their parents had given them. They were then told that those were the names that would be used in the session. Again, the participants were reassured that the names were only for purposes of this focus group discussion session and would not be used outside of the session. The participants were given pieces of paper where they wrote their 'new' names boldly using a marking pen and created makeshift name tags. They pinned these names (with pins provided) onto their lapels. They too were fascinated by their new names, which once again helped to relax

them before the start of the session. Once again, the session was voice recorded and video-recorded so that backup would be available in the event that there were parts that were not clear for any reason and non-verbal cues could be captured as well. The researcher acted as facilitator and made sure that the discussion remained focussed on the topic constantly encouraging dialogue. The researcher would encourage dialogue so that the participants would construct meaning jointly (Cohen et al., 2007).

Session 4: Follow up focus group discussion with 3rd year students

The final session was a follow up session that was conducted with the 3rd year students. This session was also conducted in the same room in which previous sessions had been carried out. This session was necessitated by that there were several key points that were raised in the semi-structured questionnaires and in the first and second focus group discussion sessions that the researcher felt the participants needed to clarify. Therefore, the last session was conducted as a follow up session, to clarify those issues that had emerged from both the questionnaires and the former focus group discussions. Given that data analysis in qualitative research is an ongoing process, the researcher, therefore, created a second focus group guide that was more suitable for this session. Unlike the first one, this second guide had questions revolving more around the clarification of issues (See Appendix 6).

Once again, the aim was to "hear" and "understand" the participants' view; therefore, this session was also video recorded to capture non-verbal cues, and the data generated transcribed.

3.7. DATA ANALYSIS

As alluded to earlier, data generation and data analysis take place simultaneously in qualitative research design (Nieuwenhuis, 2007). In qualitative research, the processes of organising, analysing and interpreting the data are integrated and called data analysis (McMillan & Schumacher, 1993). Qualitative data analysis and interpretation is the process through which raw

data are changed into findings (Bezuidenhout & Cronje, 2014). For a researcher to transform data into findings and interpretation, a lot of time is required to do a close and deep reading of the data (Bezuidenhout & Cronje, 2014). Before the researcher goes into the process of analysing and interpreting the data, it suffices to go through the characteristics of qualitative data again. Qualitative data is textual, iterative, hermeneutic and subjective (Bezuidenhout & Cronje, 2014).

Qualitative data analysis, according to Bezuidenhout & Cronje (2014) is the process of organising, arranging and extracting meaning from a mass of data. The process of qualitative data analysis involves cutting down large amounts of raw data, unravelling vital information from the not-so-vital, pointing out important patterns, and creating a framework for communicating the gist of what the data disclose (Bezuidenhout & Cronje, 2014). West (2011) points out that the main tenets applying across all forms of data analysis are that the data has to be prepared and structured in readiness for analysis, then condensed into themes through a process of coding and summarizing the codes, and lastly expressing the data in the form of an illustration or textual summary.

According to Nieuwenhuis (2007) qualitative data can be obtained in many forms from different sources. Therefore, it is useful to give a description of your participants in data processing firstly, as well as when reporting of findings (Nieuwenhuis, 2007). The researcher drew from Nieuwenhuis' (2007) suggestion to give a full description of the participants. In this study, purposive sampling was used to select 20 girls learning Geography as a choice component of specialisation at the College at which the study was being carried out. However, only 18 girls took part in the study. The girls ranged in age from 20 to 28 and 3 of them were married. The mean age of the participants was 23; the median and the mode were also 23 years of age. All of the girls were holders of SGCSE and IGCSE and were in the process of doing a diploma in secondary school teaching. The study was conducted at the college where the girls were trainee teachers. The girls that participated in the study were currently learning Geography as a component of specialisation. The aim of the study was to find out the experiences of the female students learning Geography as a specialisation. College records indicated that for the past three years, female students were smaller in number than the male students. The objectives of the study were to understand the experiences of the girls learning Geography as a specialisation, to

find out how the girls had chosen Geography as a specialisation, and also to learn from the girls how more girls could be enhanced to learn Geography as a specialisation.

Description and understanding are the ultimate intent of qualitative research and that is why the data generation methods must allow for thick descriptive data (Tedlock, 2003). Textual data were generated in the form of semi-structured questionnaires and focus group discussion interviews. According to Bezuindenhout & Cronje (2014, p. 230) text is "anything that we produce as an interpretation of something's meaning". Qualitative data is also iterative (Bezuidenhout & Cronje, 2014). This means that qualitative data analysis is ongoing and the steps of generating, processing, analysing and reporting are intertwined (Nieuwenhuis, 2007). In effect, therefore, the qualitative data analysis process in made of three intertwined vital features: "noticing, collecting and reflecting" (Nieuwenhuis, 2007, p. 100). Likewise, according to (Bezuidenhout & Cronje, 2014, p. 230) qualitative data are "hermeneutic". The founding of hermeneutics is on 19th century theory of meaning, which focuses on explaining human behaviour and societal occurrences through individual understanding and analysis, instead of quantitative clarification (Babbie & Mouton, 2001). Qualitative research is also subjective because the onus is on the researcher to conduct an analysis and interpretation of the data to come up with a knowledgeable decision pertaining to the findings of the research (Bezuidenhout & Cronje, 2014).

Before a researcher commences the process of qualitative data analysis, the first step is preparing the data (Bezuidenhout & Cronje, 2014). Preparing the data entails organizing, converting and transcribing raw data into written texts before the analysis process begins (Bezuidenhout & Cronje, 2014). To initiate the preparation process, the researcher read through the questionnaire answers and listened to the recordings of the focus group discussions several times so as to become familiar with them.

In the following section, the researcher draws from Merriam (1998) and provides an audit trail, through giving a detailed account of the steps followed when working with the data. It is important that the researcher provides an audit trail because this also enhances the credibility of the study. The researcher worked with the data in the succeeding manner:

Step 1 - Creating a master sheet.

The researcher read, and re-read the responses to the semi-structured questionnaires to get a feel of the data. Following that, the researcher created a master sheet of all the responses to the questions. In the process, the researcher grouped together the responses to each question in the semi-structured questionnaire. In this way, the researcher created a master sheet of the responses (See Appendix 7). The researcher then read through the master sheet over and over again.

Step 2 - Conducting of the focus group discussion session

The researcher went on to conduct the focus group discussion sessions. The researcher conducted two focus group sessions for reasons earlier stated in this same chapter – to keep the groups small, and to avoid the participants influencing each other's views.

Step 3 - Transcribing the data from the focus group discussion sessions

After each focus group session, the researcher would watch the video recordings of the interviews. The recordings were watched repeatedly by the researcher to get a feel of the data. The researcher then transcribed the discussions from the focus group discussions into written text. The discussions were transcribed verbatim to minimize researcher bias.

Step 4 - Conducting third focus group discussion

At this stage, the researcher found that some words that had been used by the participants in their responses and discussions that had meanings that were ambiguous. This led the researcher to conduct a third focus group discussion session so that the participants could clarify the meanings of words and phrases they had used whose meanings were not clear. For this follow up session, a new focus group interview guide was provided (See Appendix 6). The data were also transcribed verbatim into written text.

Step5 - Creating tables from questionnaire data

Following this, the researcher went back to the responses from the semi-structured questionnaire data and created tables indicating the quantities of each of the responses. The purpose of this exercise was not to turn the study into a quantitative one, but to assist the researcher quantify the participants that had responded in different ways to the questions in the semi-structured questionnaire.

Step 6 - Inductive coding of the semi-structured questionnaire data

The inductive process required the researcher to read through the data and come up with themes from the already existing data (Nieuwenhuis, 2007). To accomplish this task, the researcher went back to the hard copy of the master sheet of the semi-structured questionnaire responses, created earlier in Step 1. The researcher re-read through the data on the hard copy of the master sheet and highlighted words that were similar or phrases with similar meaning, in the same colour. These were transferred from hard to soft copy, and cutting and pasting was used to group them together (See Appendix 8). The researcher then printed a hard copy and kept it for later use.

Step 7 - Grouping of data into themes and categories

The researcher, again, read through the same hard copy. Using a pencil, the researcher wrote briefly on the margin and assigned summative words or short phrases to these groups of words and phrases (See Appendix 8). This process is known in qualitative research as coding (Saldana, 2008). Also, coding is the process of dividing your data into meaningful logical units after carefully reading through your transcribed data sets line by line (Nieuwenhuis, 2007). "A code in qualitative inquiry is most often a word, or short phrase that symbolically assigns a collective, salient, essence-capturing, and/or evocative attribute for a portion of language based or visual data" (Saldana, 2008, p. 3). These formed the themes and categories emerging from the study. As the researcher was going through the data, the researcher also kept in mind that "coding is not just identifying, it is networking; it leads you from the data to the idea and from the idea to all the data pertaining to that idea" (Richard & Morse, 2007, as cited in Saldana, 2008, p. 8).

Following this, the researcher created a table from the themes (See Appendix 9), and made a hard copy.

Step 8 - Matching themes with corresponding literature

On the hard copy of the table, the researcher used a pencil to note references of corresponding literature on the table.

Step 9 - Backing up responses with raw data from focus group discussions

The researcher went back to the transcriptions of the focus group discussions to find raw data to back up the various codes that are indicated in the table.

Step 10 - Themes and categories

The researcher then revisited the objectives of the study, identifying patterns and connections within the categories that answered critical questions of the study, using the codes. The table (See Appendix 9) was refined for presentation in the next chapter.

Step 11 - Filtering through the conceptual framework

Lastly, the researcher filtered the themes through the conceptual framework of the study. The framework used for analysis in this study suggested that the selecting of subjects is influenced by student interest, self-efficacy, gender bias and stereotyping, pedagogy and curriculum, teacher-student relationships, family and friends and the institution's policy and practice**.**

3.8. TRUSTWORTHINESS

How you justify the issue of trustworthiness depends on the paradigm you have chosen as a researcher (Mnisi, 2014). The researcher has chosen the interpretive paradigm; where the idea is to understand phenomena that are being studied through the meanings that people assign to them (Nieuwenhuis, 2007). Therefore, the objective was to understand the phenomena that were being studied. In qualitative research, the key criteria for trustworthiness are credibility, applicability, dependability, and confirmability (Lincoln & Guba, 1985).

The key factor in credibility is congruence of the findings with reality. Credibility is concerned with how a researcher can persuade the audience that the conclusions illustrate accounts or understandings of the views of the contributors, such that people who have had the same experience can identify with the descriptions (Mnisi, 2014). The researcher has used different methods of data-generation to facilitate crystallisation. In this case, focus group discussions and semi-structured questionnaires were used to ensure that multiple facets and aspects of the experiences of the students are revealed, thereby increasing the trustworthiness of the study (Maree & Van de Westhuizen, 2007). In addition, using semi-structured questionnaires and focus group discussion interviews allowed the researcher to penetrate the human understandings and constructions of the phenomena under study, since a qualitative study on humans was being conducted. According to Creswell (2009) qualitative research deals with the lived experiences of human beings, which can never be the same.

To ensure credibility, the study was left open to the scrutiny of the researcher's peers who authenticated the data to ensure that the instruments measured that which they were purported to measure (Shenton, 2004; Straits & Singleton, 2011). Following Maree and Van de Westhuizen (2007), the instruments used to generate and analyse data were reviewed by a panel of experts to ensure that the data were trustworthy and credible. During the focus group discussion, the discussions were video recorded, transcribed verbatim, and notes were taken in order to accurately capture everything that was revealed. The instruments were deemed credible and trustworthy only after piloting the study. Blessing and Chakrabarti (2009, p. 114) state that the aim of a pilot study is "to try out the research approach to identify potential problems" which may impact on the trustworthiness of the research findings.

Guba (1981) refers to transferability as the measure against which applicability of qualitative data is assessed. Transferability is the degree to which findings can be applied to other contexts and settings (Poggenpoel, 1998). However, in qualitative research demonstrating wide applicability is difficult since the findings are "specific only to a small number of participants and to a specific context" (Mnisi, 2014, p.60). In this study a small group of students participated and were specific to a certain context. Hopefully the findings of this study could be transferred to another college. For this to be possible a thick description was provided; that is, "dense circumstantial information about the participants, research context and setting" was provided (Chillisa & Preece, 2005, p. 170). This could make it possible for other researchers to duplicate this study and take accountability for transferability in their own contexts.

Dependability refers to obtaining similar results, using the same instruments, in the same context, and using similar methods with the same participants (Shenton, 2004). The dependability of the data generation tools was tested to see if they produced similar results on retesting (Straits & Singleton, 2011). The authenticity of the focus group discussion interview guides and semi-structured questionnaires were put through consistency checks by coding the data into categories and/or themes. Producing the same results in cross-checking (using information from one source and finding similar results in another) enhanced dependability and was assumed to be evidence of trustworthiness in the instruments.

Confirmability is defined by Shenton (2004) as a qualitative researcher's equivalent to the quantitative researcher's concept of objectivity. Shenton (2004) elaborates that objectivity may prove difficult in qualitative research since it is inevitable that the researcher's biases will intrude. In this case, such bias was inevitable since some of the participants were the researcher's students. Nevertheless, the researcher minimised such bias during the focus group discussions through employing the services of an experienced assistant who recorded the sessions and 'observed' to minimise such intrusion.

In addition to the above, the data generation method in use, that is, focus group discussions, has been commended for yielding results of high levels of trustworthiness because the method is readily understood; more people pool their views at the same time and so their findings appear to be believable (Flick, 2008).

3.9. SYNTHESIS

This chapter explained why the interpretive paradigm was chosen as the organising principle for this study. It further went on to elucidate how this same paradigm determined the methodology which in turn governed the methods of generating data that were used in this study. It also explained how the participants were selected for the study, and how data were generated and analysed. The next chapter presents the findings with reference to the literature review.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1. INTRODUCTION

In the preceding chapter, the researcher outlined the research design and methodology used in the study to generate and analyse data obtained to answer the three critical research questions. The researcher also detailed how data were produced from four data generation sessions to answer the same questions: What are the experiences of girls learning Geography as a specialisation? What factors inform girls' choice of Geography as a specialisation? How can girls' participation in Geography be enhanced?

In this chapter, the researcher presents and discusses the data that were produced from the responses of the participants who took part in the four data generation sessions. The data are presented according to themes and categories that emerged from the participants' responses and discussions to the three critical questions of the study. The themes and related categories (See Table 4.1) are presented and supported by direct quotes from the focus group discussions. Using the relevant themes, these findings are supported or refuted by relevant literature as suggested by Poggenpoel (1998).

Table 4.1: Themes and categories emerging from the data

THEMES AND CATEGORIES RESPONDING TO QUESTION 1 "What are the experiences of girls learning Geography as a specialisation?"	
THEMES	**CATEGORIES**
1. INTERESTING	• **Nature of the subject -** *multifaceted nature of Geography*, *learning new skills and better understanding of environment*
	• **Pedagogic strategy –** *fieldtrips*
2. CHALLENGES FACED BY STUDENTS	• **Curricula issues**
	• **Teaching methods**
	• **Shortage of learning materials** • **Lecturers' attitudes -** *gender discrimination*
THEMES AND CATEGORIES RESPONDING TO QUESTION 2 "What factors inform girls' choice of Geography as a specialisation?"	
3. CURRICULAR INFLUENCES	• **Channelled by high school results**
	• **Channelled by college policy on subject selection**
4. PERSONAL INTEREST	• **Multidisciplinary nature of Geography**
	• **Interesting**
5. INFLUENCE OF PERSONAL RELATIONSHIPS	• **Family and friends**
	• **High school teachers**
THEMES AND CATEGORIES RESPONDING TO QUESTION 3 "How can girls' participation in Geography be enhanced?"	
6. PEDAGOGICAL ISSUES	• **Use of technology**
	• **More fieldwork**
7. CURRICULA ISSUES	• **Change of subject combinations in high schools**
	• **Encourage girls in high school to do Geography**
8. MARKETING/PARTNERSHIP	• **Marketing** • **Partnership between schools and colleges**

4.2. THEMES AND CATEGORIES REGARDING EXPERIENCE OF LEARNING GEOGRAPHY

Eight themes, as shown in Table 4.1, emerged in answering the three critical questions of the study. The themes respond to questions regarding girls' experiences of learning Geography, rationale behind the girls' choice of Geography as a choice component of specialisation and suggestions on how girls' participation can be enhanced. They expressed that they were frustrated and a few echoed that the subject is interesting. They claimed their choice was informed by the curriculum, personal interest, as well as influence from personal relationships. They however pointed out the need for encouraging more females to specialise in Geography. Some suggestions were made; such as improving pedagogical strategies, addressing of the curricula issues, and marketing career possibilities which Geography can bring.

4.2.1. THEME ONE: INTERESTING

There was general agreement among the participants that the experience of learning Geography was interesting - although some felt it was bad, and others were ambivalent in their responses. In their responses to the semi-structured questionnaire, the participants indicated that they found learning Geography interesting due to the nature of the subject and some few pedagogic strategies employed in Geography teaching. Also, in the questionnaire responses, very few of the participants, pointed out that they found learning Geography interesting because of the relaxed classroom atmosphere that prevailed in their classrooms.

Nonetheless, some of the participants in their questionnaire responses differed and went on to mention that their experience of learning Geography at the College was different from what they had expected. The participants stated that the experience of learning Geography at the College was different from high school, as they now found themselves engaging more in independent work.

4.2.1.1. Nature of the subject

The students alluded to the multi-faceted nature Geography and the learning of new skills as well as better understanding of environment which comes with learning Geography.

Multifaceted nature of Geography

According to a majority of the participants, they found Geography interesting because they liked the multifaceted nature of the subject. Taking from their responses to the questionnaire and focus group discussion renditions, many of the participants liked Geography because it is a subject that, by its nature, affords them the opportunity to learn a lot and develop a better understanding of the environment. The participants made it clear, taken together from their responses to the questionnaire and renderings in the focus group discussion that they found Geography interesting because of its wide and multifaceted nature that allows it to cover a lot of aspects which allow one to find a section of Geography that they will find interesting and enjoy.

Referring to the nature of the subject, one participant stated:

> *I have found that Geography is not just about figures and map reading, but it is wide. (Explaining further the participant added) for instance, there is physical Geography and human Geography. Everybody can find an aspect that she likes and is good at…. in that way it is good for everybody.*

This participant's observation about the nature of Geography echoes many scholars' definition of Geography; that as a subject, it covers many disciplines which makes it interesting. According to the observations made by the participants, it is difficult not to find Geography interesting once you start learning it. The participant quoted above implies that even though there may be some sections of Geography you may not like; Geography is so wide that everyone can find a section that will capture their interest. This is because Geography, by its nature, overlaps with many other subjects. This observation relates with the view of Ozdemir (2012) that Geography is multi-disciplinary in nature and relates with both Natural and Human Sciences.

Learning new skills and better understanding of environment

From some of the participants' responses to the questionnaire, it was also revealed that by its nature, Geography was a subject that afforded them the opportunity to learn new skills and develop a better understanding of their environment and the empirical environmental changes that are evident in the 21st century.

One participant was quoted in the focus group discussion saying:

> *It deals with things that we can see. In addition, it enables us to explain the things that happen around us…*

Another participant added:

> *Geography is very interesting because it helps us understand our environment. For instance, we are able to better understand global warming and the issues around it.*

One participant stated that she found Geography real because what she learnt in the classroom she did not just leave there, but was able to follow and apply even outside of the classroom:

> *Of all the subjects that I do, Geography is the one that I find most interesting. Interesting from the time I am in class, to when I am outside of the classroom and alone. I am able to keep up with and follow Geography even when I am outside the classroom.*

One of the participants made this observation pertaining to the current environmental changes

> *Geography opens one's mind to the environment around you, after you learn it, you feel inspired to change the world.*

Clearly, the participants understand the importance of Geography teaching about environmental issues. They also understand that environmental issues are not only a global concern, but should also be a personal concern as every individual has a responsibility to preserve the environment. They understand that it is important to learn Geography in order to make the connection between the environment and the responsibility one has to it.

These views conform with Hopwood (2004) who pronounces that students see Geography as a subject that is dynamic; responding to the changing nature of the world around them. In addition, they replicate the view of Akintade (2012) that Geography as a subject is not only very wide, but interesting; it also touches on other matters such as the social studies or the environmental social studies, and the observation made by Kubiatko et al. (2012, p. 67) that as a science, Geography links natural and human phenomena.

The above also indicates that the participants not only valued the opportunity to learn a lot, but they also valued the quality of what they learnt. The participants valued the skills that they learnt in the Geography classroom and could also use in everyday life. For them, this made Geography valuable. These findings are consistent with Waugh (2011) who alleges that students value the opportunity to gain a lot of knowledge from their classes.

4.2.1.2. Pedagogic strategy

Some of the participants indicated in their questionnaire responses that the pedagogic strategies that were sometimes (though not often enough times) used in Geography teaching also contributed towards making the experience of learning Geography interesting. Emphasizing the significance of the pedagogy in Geography teaching, one participant in the focus group discussion said:

> *I find it interesting because the teaching strategies that are used in Geography make the class lively, for example, the role playing method which makes Geography classes very exciting and is very informative.*

These above declarations endorse the findings of Weeden (2012) which testify that students do not like to be passive recipients of knowledge, but instead, enjoy lessons where they are kept actively involved. Also, a relaxed classroom atmosphere and committed teachers who use interesting teaching methods and are friendly in their teaching will also make a class interesting. This also confirms the findings of Ndalichako and Komba (2014) who pointed out that teacher effectiveness enhances their students' chances to learn, and approaches used by teachers impact strongly on a students' interest in the subject.

In addition, this emphasises the importance of using various and innovative teaching strategies. It makes it clear that no matter how interesting subject matter may be; the overall effect can easily be 'spoilt' if the inappropriate strategy is used to deliver the matter. This can be especially true if the strategy employed does not involve the students, but only makes them passive recipients in the learning process.

Fieldwork

Fieldwork in Geography refers to any practical Geography work happening outside the constraints of the Geography classroom walls where supervised learning occurs first hand. Fieldwork may embrace field teaching, field trips and field research. According to many of the participants, fieldwork is the key reason why the girls found Geography learning interesting. According to their questionnaire responses, many of the participants liked learning Geography because of the fieldwork that often required them to take fieldtrips (going out of the classroom and school to learn Geography outside in the field) that were undertaken as part of the Geography syllabus. In their questionnaire responses and focus group discussion renditions, the participants clarified that they especially liked fieldwork because it helped them to better understand their environment. Most stated that when they went out to the field and identified what they had learnt in class; they saw it brought to life in the field. This assertion is backed from the focus group discussion renditions as one of the participants was prompted to say:

> *For me interesting means that we go out on fieldtrips. When we get to the field we actually find the things that we learn about in class.*

One can understand from what the participant says that what she means is that when they go out to do fieldwork, Geography ceases to be just another subject, but becomes real as she gets that opportunity to see, and maybe even touch, some of the things she has learnt about in class. This is evidence that taking the participants out of the classroom to do fieldwork helps make Geography interesting as a subject and contextualises what the participants have learnt in class. Getting the participants out of the classroom and taking them out to the field makes the use of fieldwork different from other modes of imparting knowledge. Therefore, by virtue of the teaching strategy employed, Geography becomes more exciting for the participants. These findings are consistent with Hope (2009) who suggested that a number of pedagogical benefits are provided by fieldwork, and Fuller (2006, p. 215) who observed that fieldwork contextualizes Geography and brings it to life as the students get to experience the 'geographical reality' in their learning. So what is theory in the classroom becomes real in the field.

Another remarkable aspect of fieldwork is that it brings together two aspects that jointly contribute to making learning Geography more interesting. That, as, geographical phenomenon is

brought to life, learning occurs in a relaxed informal environment that enables students to socialize and build important interactions not only among themselves, but also with their teachers. This was revealed in the focus group discussion renditions by one of the participants who said:

> The *field trips normally expose us to the social aspect of learning. That I like.*

Another participant said:

> *...we get to visit places like Maguga Dam so we get an opportunity to socialize.*

From the focus group discussion rendering, it also appears that the participants perceive fieldwork as a teaching/learning method that offers a more valuable learning experience compared to other teaching methods because of the dual benefit that it has. It is clear that the participants appreciate that fieldwork combines the occasion to socialise and the opportunity to learn in real life, thus making Geography learning fun and interesting for students. This assertion correlates with Weeden (2007) who points out that mostly students will be interested in learning Geography because of the activities that are undertaken in Geography lessons. In addition, Fuller (2006) also points out that another of the perceived benefits for students is the opportunity to interact socially with lecturers and peers. This is a benefit that the participants of this study also pointed out in their focus group discussion renditions.

4.2.2. THEME TWO: CHALLENGES FACED BY STUDENTS

When asked to describe their experience and how they feel about being a minority gender in the Geography class, the participants were varied in their responses drawn from the semi-structured questionnaire. A majority of them expressed that they found learning frustrating and the remaining few were divided between being bored, undermined or challenged. Very few claimed to be comfortable with the experience. The participants however, declared that these mixed feelings did not stop learning Geography from being interesting.

Inasmuch as the participants found the experience of learning Geography interesting, they also revealed that they faced several challenges. According to their questionnaire responses and the

focus group discussion renderings, the challenges encountered could not, however, overshadow the positive aspects of learning Geography. When responding to the questionnaire, the participants revealed that the challenges that they faced revolved around curricula issues, pedagogic issues, the shortage of learning materials and the attitudes of lecturers.

4.2.2.1. Curricula issues

Most of the participants revealed in their questionnaire responses that as female students, they were challenged by drawings and calculations involved in Geography. Although drawings and calculations are an integral part of Geography, most of the participants expressed an intense dislike for them in both the questionnaire responses and the focus group discussion. In the focus group discussion renderings, the participants emphasised that as female students they found drawings and calculations a challenge. From their renderings, the participants implied that the calculations and drawings challenged them because they were females, as one of them said:

> *Geography is an interesting subject. But it is full of drawings and calculations. You find that we girls have a challenge when we have to draw and calculate.*

So intense was their dislike for drawings that the participants would get emotional when talking about them in the focus group discussions. During one session one of the participants lamented:

> *I am poor in drawings. In Geography it is always drawings, drawings, drawings! No lesson goes by without drawings.*

The participants expressed an equally strong dislike for the calculations that are involved in Geography. Again, the participants appeared to be harbouring a dislike for calculations because of their gender. One of the participants in the focus group discussion pointed out that they did not like calculations because females are weak at calculations and males do better at calculations than they did as females:

Geography is a good subject and is interesting. However, there is a lot of scientific material and mathematical stuff which is a weakness for most girls. I think it is a well-known fact that guys are better at math and science.

However, another participant ruled out their argument that females found calculations difficult, and pointed out that what they articulated was 'just an unfounded mentality', and that it was such a way of thinking that discouraged females from doing and enjoying calculations. She stated emphatically that there was nothing difficult about calculations and it was just their way of thinking as females. She stated:

With the calculations there is a mentality that the girls do not manage them. Not necessarily that they do not... it is because of such statements as 'math is not meant for women' that girls are discouraged from enjoying calculations. The calculations are not necessarily difficult. We just think that they are difficult.

Another participant argued differently from the former and the latter. Although she did not dispute that women were not good at calculations, she offered a different reason for their not doing well at calculations. She neither attributed the fact that the females did not do well at calculations to gender, nor did she totally dispute it as a myth; she simply pointed in a divergent direction and interjected:

It is because women are not hard workers!

On this one issue the participants were divided. Although the participants agreed that they neither liked nor enjoyed calculations, there was, however, some disagreement on their reasons for not liking the calculations. In the focus group discussion renditions an argument ensued as some of the girls strongly expressed their feelings about their apparent failure to do drawings and calculations. While some of the girls felt that they were not good at calculations because calculations are not meant for women - an argument that is supported by Niederle and Vesterlund (2010) who assert that boys are better than girls at calculations- others argued that the assertion was just a myth and anyone can do calculations, and be good at them, if they put their minds to it. The latter argument is supported by Felson and Trudeau (1991) who argue that the fact that girls are not as good as boys at calculations is just a myth.

The above argument that the participants had about their ability to do calculations concurs with the findings of Lackland and DeLisi (2001) that students have gender based perceptions on their aptitudes for different majors. The argument further implies that the dislike for calculations and drawings that the girls harbour is a consequence of a low self-efficacy for calculation, which could also be a response to society's gender based expectations that women are not good with calculations.

4.2.2.2. Teaching methods

The lecture method is the teaching strategy that is predominantly used in the college. The participants, however, generally conceded in their questionnaire responses that they did not favour this method of teaching as it was a method that was teacher centred. Although this issue was not raised in the focus group discussions most of the students had indicated in the semi-structured questionnaires that they would be happy to see more use of the teaching methods that made them more active participants in learning. They felt, as a result, that Geography teaching at the college would be much improved if they were exposed to more fieldwork, more practical work, and more use of modern technology in their learning. Although this did not appear in the focus group discussion renderings, half of the participants stated clearly in their questionnaire responses that the methods used to teach them in the college could still be improved. Explaining this further in the questionnaire, most of the participants clearly stated that they would be happier with more practical work and more variation in the methods used to teach them.

Although previously the participants had stated that they found Geography interesting because of the methods employed in teaching them, the same participants when asked about challenges they faced in learning pointed out that the methods they liked were not used often enough in Geography teaching in the college. Consequently, they felt that the teaching methods in the college could still be improved and more of the methods that they preferred used. They wanted to be more involved in their learning instead of being passive recipients. This is a clear indication that the participants appreciate the importance of keeping your students actively involved in the learning process as a teacher. These findings are consistent with Weeden (2007) who observed

that most students reported that the times when they were actively involved with activities such as videos, undertaking fieldtrips, practical work and oral presentations were when they most enjoyed the Geography lesson.

4.2.2.3. Shortage of learning materials

From the questionnaire, the participants were asked about the challenges they encounter in learning Geography. All of their responses pointed to the acute shortage of learning materials. The participants highlighted the lack of access to the internet and poorly stocked library. In their questionnaire responses, the participants pointed to the library which despite having sufficient opening hours was ill equipped and lacked contemporary sources of material.

This was backed up in the focus group discussion when one of the participants said about the library:

> *We have a problem of books that are too old and when we write assignments the lecturers say that we have used references that are outdated.*

Likewise, all of the participants in their questionnaire responses pointed to lack of access to the internet as another challenge that they encountered in learning Geography. When asked about internet access, in the focus group discussion, the participants responded unanimously that they rarely had access to the internet. Most of the participants when asked how they overcame these barriers to learning responded that they obtained books from neighbouring institutions and mostly accessed the internet using their mobile phones. Also, a few pointed out that they sometimes worked in groups to share whatever little information they had. Another few pointed to that they accessed the internet through public internet cafes in town.

The poorly stocked library that shelved mostly outdated books coupled with the lack of internet access, are a serious challenge in the learning of Geography at the College. As pointed out in the focus group discussion rendering, this shortage creates problems with the lecturers when the participants submit substandard work to them. This is a serious challenge for the participants because in order for learning to go on smoothly learning resources have to be available. These

findings are consistent with Ndalichako and Komba's (2014) assertion who observed that the availability of learning resources is very important in school not only for learning, but also for keeping the students interested in a particular subject.

4.2.2.4. Lecturers' attitudes

The lecturer is a very important factor in the learning process for a college student. The lecturer is the one person whom the student asks questions from, expresses ideas to, and discusses with in class. This makes for an open and comfortable interaction with the person key to the student's experience of learning a subject. A few of the participants in the questionnaire responses revealed that they were challenged by the attitudes of some of their lecturers.

Gender discrimination

From the focus group discussion renderings, it was revealed that the female students were subjected to some uneasiness by some of their male counterparts and male lecturers. According to some of the participants they were not supported by male lecturers and were sometimes subjected to ridicule by male lecturers. The general feeling of the participants was that they did not get sufficient attention from their male lecturers and the male lecturers tended to prefer the male students in the class over them. Referring to this situation one of the participants in the focus group discussion said:

> *...the teacher joins the boys in laughing at your wrong answer.*
>
> *...they would all laugh even the teacher...you know*

Another participant in the focus group discussion, however, revealed that they did not experience the aforementioned problem in the college but they had experienced it in school. She said:

> *Way back in school where we started learning Geography, there was a tendency to pay more attention to the boys, especially those that were good in Geography. For instance, the teacher would ask a specific boy if he had understood. If he responded positively the*

teacher would go on with the lesson without taking the rest of the students into consideration.

From the discussions, it appears that the male lectures tend to identify with and favour the male students. The girls also reveal that they have been subjected to discomfort in the Geography classrooms for a long time. This according to Porter and Umbach (2006) is not uncommon especially in areas where females are underrepresented. Clearly this is a cause of concern as this problem results in the smaller number of girls enrolling for Geography over the years. This has caused the males to feel that this was a male dominated domain. A similar problem has been identified in other fields where females are underrepresented. Further minor injustices resulting in discomfort within the learning environment are common.

4.3. THEMES AND CATEGORIES REGARDING PARTICIPANT'S CHOICE OF GEOGRAPHY

According to the responses of the participants to the semi-structured questionnaire, their choice of Geography was informed by curricular influences, personal interest as well as personal relationships.

4.3.1. THEME ONE: CURRICULAR INFLUENCES

Half of the participants were channelled by high school results whilst most were informed by personal interest, and a few were channelled by college subject combination.

4.3.1.1. Channelled by their high school results

According to the questionnaire responses, half of the participants were channelled by their good high school results into selecting Geography as their component of specialisation in the college. Similar sentiments about admission into the college and the good grades in high school were shared in the focus group discussion when one of the participants said:

> *I did not choose Geography. It was just a subject I did well in. It chose me. My high school results were very good.*

Another participant said:

> *I enjoy doing Geography and I found myself doing it at college level because I got very good results at high school. I had been placed in the Geography stream at high school and I found that Geography was my best subject. I made up my mind to study it at college and worked hard at it.*

The above indicates that previous performance in high school has a significant impact on the choice of major one makes in college. The above also clarifies that although a student may choose to specialise in a subject because she is good at it, the reverse may sometimes occur when the student's performance in the subject is so good that it is the performance that channels the student's choice of specialisation. These findings are consistent with Lackland and DeLisi (2001) who found that course and major selection for students is based on past academic performance.

4.3.1.2. Channelled by college's policy on subject selection

The college under study (like all other colleges in the country) has an option choice system that is, the policy of the college which dictates how subject combinations may be selected. A few of the participants indicated in their questionnaire responses that their choice of Geography as a choice component of specialisation was channelled by the college's policy on option choice of

subjects. College policy does not permit the students to select subjects independently but constrains the student to choose their subjects within the college's option choice system.

The college's policy on subject choice dictates that subjects can only be selected and done in pairs in the various departments. In the college, Geography is offered in the social studies department. In the department Geography is paired with History. It is for this reason that even those participants who did not particularly favour Geography ended up taking it as a major. Some of the participants, for instance**,** alluded to that they found themselves having to learn Geography because the choice system of the college paired Geography with History. Such participants were either interested in History or had done very well in History, but due to the college's policy on the choice system could not pursue History without Geography in their subject combination. As one of the participants said:

> *I do not like Geography much because it requires us to think a lot and do drawings. I am poor with drawings. I only do Geography because in this college it is paired with History and I like History.*

And another also said:

> *I found that in this college Geography is paired with History and I love History. So to be able to do History I had to do Geography as well.*

For this reason, too, there are some participants that ended up majoring in Geography when they lacked the inclination to do so but were forced into Geography by the college's policy. When such students have done well in History, and want to do History they have to learn Geography as their other major as dictated by college policy. This finding is corresponding with Weeden (2007), that subject selection for students will be directed by the institution's policy and practice.

4.3.2. PERSONAL INTEREST

Responding to the question of how they chose Geography as their component of specialisation, in the questionnaire, a few of the participants pointed out that Geography had always been their

favourite subject and they had always been interested in it. This was backed in the focus group discussion renditions as one of the participants noted:

> I *enjoy doing Geography and I found myself doing it at college level... from high school I made up my mind to study it at college and worked hard at it.*

For participants such as the one quoted above, the participant needed neither encouragement nor coercion to do Geography as a specialisation. Such participants had always fostered a fundamental interest to take up the subject. The above quoted participant represents a group of participants that were neither influenced by the people close to them, nor forced by the college system to take up Geography. These were participants that were driven by only their personal interest in the subject.

Although personal interest in a subject was not ranked topmost in this study, previous studies on subject selection by students have rated personal interest in a subject top of the list of the reasons for choosing the subject for specialisation. The fact that personal interest in a subject is a significant reason for selecting a subject is consistent with the findings of Beggs et al. (2006); Malgwi et al. (2005); Waugh (2011).

4.3.2.1. Multi-disciplinary nature of Geography as a subject

Many participants when asked why they chose Geography as their component of specialisation, declared in their questionnaire responses and focus group discussion renderings, that they fostered an inner aspiration to take up Geography that emanated from the multi-disciplinary nature of Geography as a subject, which makes it exciting and interesting to learn. They asserted that Geography is not narrow as a discipline, but tends to cover many different fields of study.

One participant referring to why she chose Geography as her component of specialisation said in the focus group discussion:

> *For me it goes back to the reason why I like it... I find that Geography covers many practical subjects. For instance, it covers agriculture, and interesting aspects like*

tourism which one can study further independently. If you study Geography you have the option to branch out to many other fields; you can choose to further your studies in many diverse fields if you have studied Geography.

Another participant in the focus group discussion said about Geography:

It is different from other subjects because we learn a whole lot of new things that make us want to study more. It is different and not boring like other subjects.

Here the participants recognise the many components that are covered in Geography. The participants appear to appreciate that Geography is not limited to one component, but has many sides which they perceive as the cause of their interest in the subject. The participants go on to recognise the unique ability to 'open many doors' that Geography has because of its multifaceted nature.

This assertion about Geography confirms the findings of Akintade (2012), who maintains that Geography is a subject that encompasses most other subjects such as the social studies and environmental studies which makes it a wide subject. Akintade (2012), also points out that due to its multidisciplinary nature, Geography has many job prospects in Geography related professions.

4.3.3. INFLUENCE OF PERSONAL RELATIONSHIPS

Half of the participants in this study indicated in their responses to the questionnaire that they were influenced by relatives to do Geography as their component of specialisation. Some were influenced by other people that they interacted closely with, while very few were influenced by friends.

4.3.3.1. Influenced by family and friends

Although this issue was not raised in the focus group discussions, most of the participants indicated in their questionnaire responses that they were influenced by people close to them to learn Geography as a component of specialisation. In the questionnaire responses, half of the participants indicated that they were influenced by family members. These findings concur with the findings of Walmsely, Wilson and Morgan (2010) who found in a study of influences on a student's college major that parents exert a strong influence when a college student selects a major.

However, for the participants that indicated that they were influenced by relatives, there was no specific group of relatives – classified either by gender, closeness of relationship to the participant, or otherwise – that was indicated in the questionnaire responses to have particularly influenced the participants. These findings clash with Kochung and Migunade (2011) who found that parental influence was so strong on student's major selection that children may select what their parents desire, to please them. The findings by failing to identify a specific group that has a strong influence on the subject choices that students make also clash with Esters and Bowen (2005) who had previously noted that female family members exert a stronger influence on student's choice of major.

A few of those that were not influenced by family members, but still influenced by people that they closely interacted with, were influenced by friends. The same findings were made by Walmsley et al. (2010) when studying the influences on a student's college major. Walmsley et al. (2010) found that family members and friends exert influence on a student's choice of a major through acting as sources of support, and information brokers on what major to choose.

4.3.3.2. Inspired/influenced by high school teachers

Most of the participants that indicated, in their questionnaire responses, that they had been influenced to select Geography as their component of specialisation by other people that they

closely interacted with, pointed to their high school teachers. The large number of participants that were influenced by their high school teachers to select Geography as a choice component of specialisation for further research is indicative of the strength of the influence exerted by their high school teachers. These findings, therefore, dispute the findings of Malgwi et al. (2005) that reported that there is a lower degree of influence from advisers such as parents, guidance counsellors and high school teachers when a student chooses a major. This finding is however, consistent with Adeyemi (2010) who found that teachers provide role models for students which might make students want to select the subjects that are taught by those teachers.

4.4. THEMES AND CATEGORIES REGARDING HOW GIRLS' PARTICIPATION CAN BE ENHANCED

When the participants were asked in the questionnaire and in the focus group discussion how more girls could be enhanced to learn Geography most of them responded by raising some pedagogical and curricular issues.

4.4.1. PEDAGOGICAL ISSUES

Most of the participants in both the questionnaire and the focus group discussions advocated for making learning Geography more attractive to girls, which could be facilitated through a transformation of pedagogical strategy.

4.4.1.1. Use of modern technology

In the questionnaire responses and the focus group discussion renderings, the participants advocated for the transformation of teaching strategies in Geography. In the questionnaire

responses, some of the girls suggested that girls understood Geography differently from boys and it would be made more attractive for them if the lecturers employed modern technology in teaching, especially in the fast changing world of the 21st century. According to the participants in their focus group discussion renderings, the use of technological gadgets would make Geography lessons more exciting; give them a chance to see Geography in action, and in that way make it more attractive to girls.

One of the participants said:

> *The use of projectors and videos would help us get more vivid pictures of geographic occurrences.*

Another participant said:

> *Using videos and projectors would make Geography more interesting than reading textbooks. It would give us a chance to see Geography in action.*

From their responses in the questionnaire and discussion in the focus group discussions, the participants feel that Geography teaching is incomplete without modern gadgets to aid teaching. For some reason they feel that a certain degree of excitement, which would be provided by the use of technological gadgets, would make Geography learning more attractive to girls and in that way enhance more girls to learn Geography. These findings are consistent with Biddulph and Adey (2004, as cited in Kubiatko et al., 2012) who are of a similar opinion that the use of information and communication technologies will enhance Geography learning.

4.4.2. CURRICULA ISSUES

In the questionnaire responses and focus group discussion renderings, the participants also indicated that more girls could be enhanced to learn Geography as their specialisation if the root cause of the phenomenon was addressed by looking into the following curricula issues.

4.4.2.1. Subject combinations in high school

Further discussion during the focus group discussions emphasised that the origin of the problem was founded in high schools, where girls were offered subject combinations that were not compatible to those that were undertaken in colleges. One of the participants stated:

> *I feel that the problem does not begin here at college. It begins with wrong streaming in high schools where Geography is made a supporting subject in the curriculum and fewer girls get the opportunity to do it... it is blocked with subjects that are mismatched to it and do not allow the students to continue with it to college level. They should not be made to do Geography with subjects that it will not be compatible with in college.*

Another participant added:

> *The teachers in the schools should motivate the students to do the right subject combinations. The classes should be streamed accordingly; especially for the girl child. ...they should not be made to do Geography with subjects that it will not be compatible with in college...*

Furthermore, the participants indicated that they felt the teachers in the schools lacked knowledge on the subject combinations in the institutions of higher learning and the career guidance officers who have better knowledge of subject combinations in colleges and universities should step in to help solve the existing problem.

One of the participants stated in the focus group discussion:

> *The career guidance officers should teach the teachers in schools about subject combinations in colleges and universities.*

The participants expressed in their questionnaire responses and focus group discussions that to find ways to enhance more girls to learn Geography as their component of specialisation one had to address the core of the issue. The participants largely felt that Geography was devalued in high school where its versatility and significance were not realised, and consequently it was not accorded its due recognition. The participants noted that in high school Geography was used as a

supporting subject for other subject which resulted in its being learnt in combinations that rendered it useless to school leavers because of its being a misfit in those combinations. They suggested ignorance of the versatility of Geography as the key cause for this failure to match Geography with suitable subjects. The participants suggested that more girls would be encouraged to learn Geography if career guidance officers helped with structuring the subject combinations in the schools and ensured that Geography was taken with the relevant subject combinations.

4.4.2.2. Encourage more girls to do Geography in high school

In the focus group discussion participant suggested that motivating and encouraging girls as early as Form 1 in high school was what could enhance more girls to take up Geography in college. The participants, in the focus group discussion, felt that the girls in high school were neither motivated nor encouraged to learn Geography. They felt that the girls were discouraged by that Geography in high school was 'looked down upon' which uninspired the young girls from learning Geography as a subject. One of the participants said:

> *I think that in the schools the teachers and the administrators should stop thinking that Geography and History are meant for the less brilliant children... this leads to Geography being looked down upon because it is seen as a subject for the less talented students.*

The participants indicate that giving Geography its due recognition would enhance more girls to learn Geography. The feeling is that, as Geography is seen as a subject for the less talented students that discourages the students from learning it from high school. Highlighting its importance is what would make the subject more attractive to girls.

Further discussion in the focus group discussions also revealed that what would enhance more girls to learn Geography would be to sensitize them on what they are missing out on when they did not learn Geography. One of the participants suggested:

I think we should create a Geography society here in the college and then go out to the schools and motivate those learners as to what they will be missing out on if they do not do Geography.

And another said:

We, as Geography teacher trainees are also stakeholders in this matter. When we get to the schools we should also encourage more female students to do Geography.

The participants felt that if the girls were not motivated to learn Geography because they were unaware of its importance and versatility and hence did not know what they were missing out on by not learning Geography. The participants felt that if the young girls were made aware of the versatility of Geography they would appreciate and learn to love it.

4.4.3. MARKETING AND PARTNERSHIP

The students suggested that there should be strategies to market Geography as a subject and the possible future careers which can be obtained through doing the subject as a major. The participants also strongly suggested a partnership between high schools and colleges to encourage girls to do Geography as a major.

4.4.3.1. Marketing

Although the issue of marketing Geography as a subject was also not covered in the semi-structured questionnaire, the participants expressed in the focus group discussion renderings, that Geography was not marketed to the girls at high school. From the focus group discussion rendering some of the participants pointed out that in order to enhance more girls to do Geography the subject had to be marketed to the girls in school. The participants proposed that getting people who have succeeded in the field of Geography to market the subject to the girls would effectively enhance the girls to take it up a component of specialisation in later life.

One of the participants said:

> *When all else has failed, we have female lecturers in the Geography department who could also go out to the schools and market Geography to teachers. They could explain the importance of Geography to them.*

According to the participants Geography would be perceived more meaningfully if the girls were made aware of its importance at an early age. The participants appeared to feel that if the girls were not attracted to Geography early in life there would continue to be a low enrolment of female students at college level. This is consistent with the findings of Kubiatko et al. (2012), whose findings were that the multidisciplinary nature of Geography and its capacity to explain everyday situations has to be advertised in order for Geography to be perceived more meaningfully by students.

4.4.3.2. Partnership between high schools and colleges

The key to enhancing more girls to do Geography at the college, the participants felt, was rooted in co-operation between the high schools and the institutions of higher learning. The participants felt, as expressed in their focus group discussion renderings, that the answer could only be found in the high schools and the colleges coming to an agreement as to how subject combinations could be offered in high schools. The high schools together with the colleges could look at the practicality of a subject combination, and in that way avoid situations where the students passed subjects that would be of no use to them because the subject combinations they had did not exist in college.

One participant was quoted saying in the focus group discussion:

> *I think the teachers in the schools should liaise with the colleges and universities to find a way to match the subject combinations appropriately.*

A liaison between the schools and the colleges was seen by the participants in the focus group discussion as the answer to enhancing more girls to do Geography. From their renditions it seems

the participants felt that if the teachers were made aware of the college requirements they would not commit the students to subject combinations that were useless in the schools. From their renderings one would assume that the participants felt that such mistakes were a consequence of ignorance, in the part of the teachers, of the working subject combinations in the colleges. This leads one to understand that students may find their choices confined at college level be choices made earlier in their academic lives. Consequently, the choice that the student makes at college is governed by many factors which touch on school, society and the individual (Weeden, 2007).

4.5. SYNTHESIS

The study revealed that female students learning Geography at the college found it to be an interesting experience because of the multidisciplinary nature of the subject and some of the pedagogic strategies employed in teaching it. However, the study also revealed that at the same time that the experience is also fraught with challenges. The biggest challenge that the participants encountered was the lack of resources; a poorly stocked library and lack of internet access; certain components of Geography that they felt that as females were challenging for them; being discriminated by male lecturers as females and that the pedagogic strategies that enhanced learning were not used enough. The study also discovered that although some of the participants opted for Geography as their component of specialisation because of an intrinsic personal interest in the subject created by its nature, influenced by people close to them, whist others were channelled to learning Geography by their high school results and the subject option choice system within the college. This led to a low number of girls to taking up Geography in the college; a situation that was a consequence of the lack of information in the high schools about the versatility of Geography, which lead to a low interest in Geography in the schools and a smaller number of girls learning it in high schools. To enhance more girls to learn Geography at college the girls would have to be encouraged from high school, after the teachers in high schools consult with colleges on how best to combine the subject in high school. Geography should also be marketed in the schools to make the high school girls aware of its versatility.

CHAPTER FIVE

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

This study explored the experiences of female students learning Geography at a teacher training college, as a gender minority. Using semi-structured questionnaires and focus group discussions, the study also looked at what had initially prompted the said students to select Geography as their component of specialisation. Further, the study sought the opinions of the participants about ways in which more girls could be enhanced to do Geography as a specialisation. This chapter presents conclusions about the key findings in response to the critical questions of the study – What are the female students' experiences of learning Geography at the college? What factors informed the girls to choose Geography as their component of specialisation? How can more girls be enhanced to do Geography as a specialisation? This chapter also presents the implications of the findings and the pertinent recommendations. In addition, the limitations of the study are put forward and suggestions for further research made.

5.2. CONCLUSIONS

5.2.1. Interesting

From the themes that emerged on the experience of the participants on learning Geography as a component of specialisation, the study highlighted that the experience in itself is interesting. The study revealed that the participants found learning Geography interesting not only because of the multifaceted nature of the subject and the pedagogic strategies that were sometimes employed in Geography teaching but also because Geography allowed them the opportunity to learn new skills and to go on field trips which gave them the chance to socialise with each other and to explore new places.

5.2.2. Challenges faced by students

The study, however, further revealed the participants faced some challenges in learning Geography. Highlighted among the challenges were curricula issues, pedagogical issues, shortage of learning materials and lecturers' attitudes towards female students specializing in Geography. The participants disclosed an intense discomfort with some of the curricula activities (drawings and calculations), which were an integral part of Geography and were carried out in Geography. Although the participants had earlier expressed that they found Geography interesting, there were some parts of the subject they did not like.

In addition, the participants revealed that they were sometimes discriminated against, as female students, especially by some of the male lecturers who displayed more confidence in their male counterparts. What became clear was that gender discrimination exists in the Geography classrooms in the college. In addition, the participants were displeased with being discriminated against as females by the male lecturers.

Furthermore, the participants expressed some uneasiness about some of the pedagogical strategies employed in teaching them. They felt the strategies employed in teaching the subject could be improved through engaging more learner-centred teaching methods that involved more use of technology and fieldwork. This shows that despite that previously the participants had expressed that some of the pedagogic strategies made the learning of Geography interesting, it was not all of the strategies that they were pleased with.

5.2.3. Curricular influences

In relation to what influenced the participants to select Geography as a component of specialisation the study revealed that the girls were swayed by curricular influences, personal interest and personal relationships. The study showed that, primarily, their choice of Geography as a component of specialisation was dictated to them by their high school results and the college's policy on subject choice. This speaks to that some of the students got to learn

Geography because college policy on subject choice required that they learn Geography with the high school grades that they attained.

5.2.4. Personal interest

The study further revealed that some of the participants chose Geography as their component of specialisation because they harboured an intrinsic interest in the subject. The interest emanated from the multidisciplinary nature of the subject. This further emphasises the importance of the multidisciplinary nature of the subject. The multidisciplinary nature of the subject not only makes it interesting but is also cause for the students' interest in the subject.

5.2.5. Influence of personal relationships

Additionally, the influence of personal relationships is revealed by the study as another reason for choosing Geography as a component of specialisation. The study revealed that participants were influenced to select Geography by family and friends, and also by high school teachers. This goes to tell that personal relationships continue to bear a strong influence no matter the nature of the subject or the policy of the college. The study showed that for each individual student the aforementioned factors carried a varying weight. From this, it can be concluded that the reasons for choosing a subject are interactive and none of them operates in isolation.

5.2.6. Pedagogical issues

Concerning how more girls can be enhanced to learn Geography as a component of specialisation the findings of the study pointed to some pedagogical issues that needed to be reviewed. The participants felt that improving the currently employed pedagogical strategies to include more contemporary strategies of teaching would enhance more girls to learn Geography.

5.2.7. Curricula issues

In relation to how more girls can be enhanced to learn Geography as a component of specialisation, the findings of the study have shown curricula issues as an area of concern that needs to be addressed. It was uncovered that the girls were not encouraged or motivated to do Geography in high school which caused fewer girls to be available in college to choose Geography as their specialisation. Another concern that was raised is that, the curriculum in high schools did not emphasise the importance of Geography but only offered Geography as a supporting subject, in a curriculum where the subjects were not related. These findings show that Geography as a subject was not accorded its due significance in the curriculum.

5.2.8. Marketing and partnership

Co-operation between the high schools and the institutions of higher learning was, according to the findings of the study, what would enhance more girls to learn Geography as their component of specialisation. Moreover, the findings of the study revealed that ignorance of the subject combinations in the colleges was what caused high schools to offer subject combinations that did not exist in the colleges. The participants suggested a liaison between the high school teachers and the college lecturers that would ensure that viable subject combinations were offered in the high schools. This same partnership would also help with the marketing of Geography, especially to the girls, in the high schools. This emphasises that co-operation between the high schools and the college is an absolute necessity.

5.3. CONCEPTUAL CONTRIBUTION

In this section the researcher attempts to relate the findings of this study to the conceptual framework. This study does not totally discard Weeden's conceptual framework, it actually relates more to it, but offers a different perspective as more factors seem to influence the choice of Geography by female students as a specialisation in college. As per the conceptual framework

in this study a student's choice of any subject as their component of specialisation is governed by personal concerns, academic considerations, personal relationships and external factors. The study did reveal that a participants' choice is governed by personal concerns through interest; when participants revealed that they were learning Geography because they found in it interesting because of it multidisciplinary nature, further revealing that gender bias and stereotyping negatively influenced their choice; when they pointed out that their male teachers did not treat them with respect. Also, the participants revealed that they were also influenced by academic considerations, where they pointed out that some of the pedagogy like fieldwork – which was their favourite, made them like Geography. The Geography curriculum with its varying components also led to their liking Geography. Further, the study revealed that personal relationships, in addition to the other influences, also held an important position in influencing the participants in choosing to learn Geography through the influence of parents, family and peers, and former teachers. Lastly, in compliance to the conceptual framework, the study exposed that the participants were equally influenced to choose Geography as their specialisation component by external factors in the form of the institution's policy and practices on choice. In keeping with the conceptual framework, all of these factors did not operate in isolation but were intertwined.

In addition to these intertwining influences, the findings of the study further unearthed some other influencing factors that were not within the participants' control, which are not accounted for in the conceptual framework. The findings revealed that the choice of Geography as a choice component of specialisation component was negatively skewed by that the girls were not encouraged to learn Geography in high school, as it was not accorded its due significance. It was further revealed that at high school level Geography was treated a 'filler' in the curriculum. Geography was not given its rightful place of importance in the curriculum, and was only used to support other subjects when students had already made their choices. Geography would be used to increase the number of subjects that a student was learning, without having any specific significance accorded to it. As a consequence, students are not encouraged to undertake Geography from the early and crucial stages of high school hence are not allowed the opportunity to discover the multi-disciplinary nature of discipline.

As revealed by the findings of the study; apart from the factors mentioned in the conceptual framework, by Weeden the subject choices made by a student in high school are also key in determining the college subject specialisation choices, as illustrated in the diagram below:

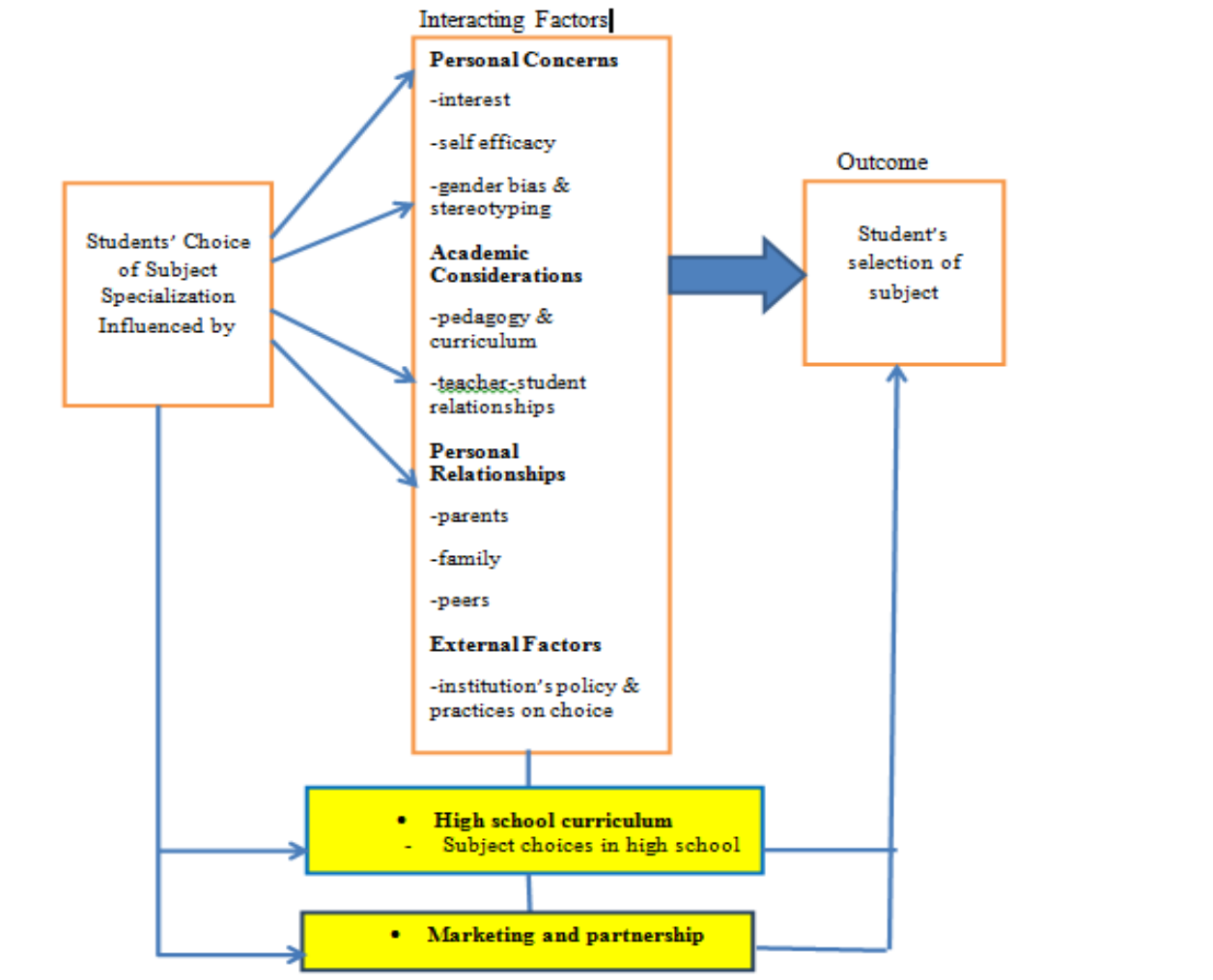

Fig. 5.1 Contributed conceptual framework

The contribution made by this study is that over and above what Weeden (2007) says this study includes subject choices in high school and co-operation between high schools and institutions of higher learning as factors that influencing the choice of a subject as a component of specialisation in colleges which were previously excluded in the conceptual framework (See Figure 2.1). This talks to the fact that there are some contextual factors which were experienced by this particular college's student which may not be experienced by other students in a different

context. The contribution made to the existing conceptual framework is additional factors which are linked solely to Swaziland's curriculum for the school and the experience of Swaziland's college students. The contribution made here, is the contextual and talks to Swaziland as a country with its unique curriculum and challenges.

5.4. RECOMMENDATIONS/IMPLICATIONS OF THE STUDY

From the findings of the study it was revealed most of the participants found learning Geography at the college interesting. Their interest emanated from the multidisciplinary nature of the subject and the pedagogic strategies employed in teaching. This implies that more students would be interested in Geography if they were made aware of its multidisciplinary nature and if the strategies employed in teaching it were made even better.

The findings of the research, however, further revealed that it was not all the participants that were happy with the teaching strategies. Some of the participants were not pleased with some of the teaching strategies employed in teaching them. This infers that more varied approaches to teaching are essential. This, further points to a need for the Geography lecturers at the college to improve upgrade their pedagogy to engage more learner-centred teaching methods and involve more technology and fieldwork in their teaching. The use of learner centred methods of teaching and use of modern technology in teaching was also suggested by the participants in the focus group discussions and questionnaire responses. The lecturers of Geography at the college could be engaged in periodic in service workshops to apprise them on contemporary methods of Geography teaching and use of technology in teaching as suggested by the students.

It was also revealed in the findings that the participants were sometimes discriminated against as females, by some of the male lecturers. The implication is that the participants are displeased with being discriminated against as females. The participants suggested that the class allocation system be changed to allow for a group to be taught by different people and not be taught by one person for the full duration of their course, as was the case in the college. In this particular instance, however, the girls suggested that this was a problem for which they could only suggest

that the college revisit the policy about teacher allocation. They felt that maybe this could be sorted by having the students rotate lecturers instead of having one person stick with a particular group throughout the duration of the course.

In addition, the findings revealed that the students are greatly challenged by the college's shortage of learning materials: an outdated library and poor internet access, at a time when there is dire need for students to research and contribute in knowledge production. This implies a shortage of the essential sources of knowledge. Such knowledge sources could be accessed through the setting up of an e-library in the college that would help the participants easily access of the rest of the academic community through scholarly electronic journals, e-books and other electronic source of information.

The research findings also exposed that, primarily, the choice of Geography as a component of specialisation was dictated by the participants' high school results and the college's policy on subject choice. This speaks to that some of the students got to learn Geography because college policy on subject choice required that they learn Geography with the high school grades they attained. This led to some of the participants either learning Geography when they had no interest in it; or being barred from selecting Geography because they lacked the other subject required by policy, to do Geography. This implies that there is a need for policymakers in the college to revisit the college's policy on subject choice to make it more flexible and allow Geography to be learnt with any other subject chosen by the student; without tying it to a specific subject.

Lastly, the findings of the research indicate that the students were not exposed to Geography enough at high school level or made aware of the importance of Geography as a subject. The findings imply that the importance of learning Geography was not stressed to the participants at high school. This further implies that Geography was not accorded its due significance in the schools. The participants suggested that the female lecturers at the college give motivational talks to the female students in the schools to stress out the importance and advantages of learning Geography. This implies that to boost the potential of Geography being selected the subject must be marketed to both the teachers and the students in the school and also that there is a need for

sensitization that Geography is for all, as suggested by the participants. This, however, can only be attained through co-operation between the high schools and colleges. Such co-operation could mean promoting Geography learning in high schools, in preparation for college, through involving the national Geography panel, which the college lecturers are a part of. The Geography panel could emphasise the importance of Geography in the schools and also promote Geography nationally, for instance, through hosting a national Geography day where Geography could be promoted and marketed.

5.5. DISSEMINATION OF THE STUDY

Although this study is meant to fulfil the requirements for a Master of Education degree the findings touch on the policymakers in the high schools and the college. For this reason then, the researcher will take the following steps to disseminate the findings:

- The college that participated in the study will receive a copy of the research report.
- The National Geography Panel through Senior Inspector of schools (Geography) will also receive a copy of the research report.
- The study participants will also receive a copy of the research report.
- The findings of the study may be presented to at least one appropriate journal for publication.

5.6. SUGGESTIONS FOR FURTHER RESEARCH

Considering that the study was a small scale study, carried in one college the researcher would suggest that a study of the same nature be carried out to include other colleges. The researcher also recommends that given that the study covered only one country, the study could be repeated to cover other countries. Moreover, the study could also include the male population that is learning Geography with the female students.

5.7. DELIMITATION OF THE STUDY

The researcher acknowledges that the themes that emerged from the study might not comprehensive. The researcher particularly acknowledges that the study was limited particularly in relation to sample size.

- The study is limited to one country whereas teacher training is an occurrence that is worldwide.
- The study is limited to one teacher training college in the country.
- The study is limited to the female population learning Geography as a choice component of specialisation in that college, at that time.

5.8. SYNTHESIS

The study has revealed that the experience of learning Geography is an interesting one because of the multidisciplinary nature of the subject and the activities that are carried out in Geography learning. This however does not stop the experience from having its challenges. The study has shown that the participants, who are trainee teachers at a college, experience curricula and pedagogic challenges in their learning. The study further revealed that when the participants choose Geography as a choice component of specialisation there is a convolution of curricula, pedagogic and social factors that influence them. Lastly, the study revealed the opinions of the participants on how they felt more girls could be enhanced to learn Geography as a specialisation. In this part they pointed to the college policy that guides them when selecting their subjects in the college; the manner in which they select their subject combinations in high school and the fact that Geography is not accorded the due significance it is entitled to, but is instead made a supporting subject for other subjects in the high school curriculum and also in the college curriculum.

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Appendix 1 – Semi-structured questionnaire

Students' Written Interview Questionnaire

1. This questionnaire asks you to describe your experience of learning Geography in this college. This is not a test. There is no right or wrong answer. Only your opinion is wanted.
2. Do not write your name. Your answers are confidential and anonymous.

SECTION 1

Please provide details in the box below.

1. Your age _____
2. Your marital status_____
3. What is your current year of research? _____
4. Do you stay with any of your parents/guardian/spouse?

   _____
5. List the people you are living with and their relationship to you (*mother, father, grandmother, grandfather, uncle, aunt, guardian, brother(s), sister(s), spouse).*

   _____

   _____

   _____
6. What is his/her occupation? _____
7. How many are you in your family?_____Boys?_____Girls_____

8. Your place of residence

_____

SECTION 2

1. How can you describe your overall experience of learning Geography at the college?

_____

_____

2. Please tell me about some of the things you like about learning Geography at the College.

_____

_____

_____

3. Kindly explain, giving specific examples, why you say you like the thing you do.

_____

_____

_____

4. Please tell me about the things you dislike about learning Geography at this college.

_____

_____

5. Kindly explain, giving specific examples regarding the reasons why you dislike the things you say you do regarding the Geography in the college.

_____

_____

_____

6. Do you think that as females you get a fair go at learning? *(Equity in workloads*, *tasks, treatment)*

_____

_____

_____

SECTION 3

1. How do you feel about the way Geography is taught at the college?

New ideas of teaching,

_____

_____

_____

_____

Methods of evaluation

_____

_____

_____

_____

Fieldwork,

_____

_____

_____

2. What changes would you like to see in the way you are being taught?

_____

_____

_____

3. What other activity do you think would make learning Geography more stimulating?

_____

_____

4. Do you feel about the times you have for contact sessions are sufficient?

_____

_____

5. a) Do you face any challenges regarding the time you get to use the library?

_____

_____

_____

_____

b) The internet?

_____

_____

_____

6. Can you please explain how you get to overcome those challenges?

_____

_____

_____

_____

7. Do you feel the amount of time you get for personal research is sufficient?

_____

_____

8. What challenges do you encounter as you learn Geography?

_____

_____

_____

_____

_____

SECTION 4

1. How did you choose Geography as a component of specialisation?

_____

_____

2. Who influenced your choice of Geography as a specialisation?

_____

_____

_____

_____

3. If you were influenced by any of your relatives, please specify who did.

_____

_____

4. If not your relatives, then who?

_____

_____

_____

SECTION 5

1. How do you feel about being a minority gender in your class?

   _____

   _____

2. What do you think could be done to enhance more girls to do Geography?

   _____

   _____

   _____

   _____

Appendix 2 – Open ended prompt for main focus group sessions

Main Focus Group Sessions Guide

This will be guided by an open ended prompt:

1. What is your experience as a Geography female student in this college?

   (The question will also have follow- up or guiding questions such as :)

   a) How have you liked learning Geography at this college? *(What is it that you have liked especially*?)

   b) What have you not liked about learning Geography at this college? *(That is it that you have not like especially?)*

   c) What challenges have you faced in your learning? Who has helped you? Lecturers, male or female colleagues?

2. What made you choose to learn Geography as your component of specialisation?
3. What do you think could be done *(by everybody concerned)* to enhance more girls to learn Geography?

Appendix 3 – Ethical clearance

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

24 February 2015

Ms Lindiwe Ncane Magagula (214584649)
School of Education
Edgewood Campus

Dear Ms Magagula,

Protocol reference number: HSS/0056/015M
Project title: Female students' experiences in learning geography as a major at tertiary education level: A case study of a Teacher Training College in Swaziland

Full Approval – Expedited Approval

With regards to your application received on 03 February 2015. The documents submitted have been accepted by the Humanities & Social Sciences Research Ethics Committee and **FULL APPROVAL** for the protocol has been granted.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Dr Shamila Naidoo (Deputy Chair)

/ms

Cc Supervisor: Dr Thoko Mnisi
Cc Academic Leader Research: Professor P Morojele
Cc School Administrator: Ms Bongi Bhengu / Tyzer Khumalo

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** kimbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za

Appendix 4 – Principal's consent

DECLARATION BY COLLEGE PRINCIPAL

I _____ (full name of college principal),

_____ (full name of college), hereby confirm that I understand the full contents and the nature of the research project, and I hereby give my full consent for my students to participate in this research project.

I understand that I am at liberty to withdraw my students from the research project at any time should I so desire, and any participant is at liberty to withdraw from the research project should the participant so desire.

_____ _____

Signature of Principal

Appendix 5 – Consent form for participants

INFORMATION AND CONSENT FORM

Project Title: Female students' experiences in learning Geography as a major at tertiary education level: A case study of a Teacher Training College in Swaziland.

Dear Student

I, Ms. Lindiwe Ncane Magagula, under the supervision of Dr Thoko Mnisi, an academic and research staff member at UKZN, would like to invite you to participate in the research: *Female students' experiences in learning Geography as a major at tertiary education level: A case study of a Teacher Training College in Swaziland*.

We are conducting research into female students experience learning Geography as a major at tertiary education level. We are particularly interested in how they get to select Geography as their major and how more girls could be enhanced to do Geography. To do this we are conducting a case study which will be carried out through having the participants fill in an unstructured questionnaire and they will also be required to attend focus group sessions where they will tell about their experiences of learning Geography as a major at tertiary education level.

Your participation

We are asking you whether you will respond to a semi-structured questionnaire and sit in a focus group session to tell us about your experiences of learning Geography at tertiary level. We may ask you to participate in a follow up session to clarify some issues which may arise. We anticipate that the sessions may last for one hour each. If you agree, we are also asking you to give us permission to video-record the group interviews that you will be part of. We record interviews so that we can accurately record what you say.

Please understand that **your participation is voluntary** and you are not being forced to take part in this research. The choice of whether to participate or not, is yours alone. If you choose not to take part, you will not be affected in any way whatsoever. If you agree to participate, you may stop participating in the research at any time and tell us that you don't want to continue. If you do this there will also be no penalties and you will not be prejudiced in any way.

Confidentiality

The two of us are required to keep your identity confidential. Kindly note that everything you will say in the interviews will be treated in a strictly confidential manner. Any research records (e.g., our notes and interview transcripts) that identify you will be kept confidential to the extent possible by law. Such records that identify you will be available only to people working on the research, unless you give permission for other people to see the records.

The information you provide will not be published **unless you give your specific permission by signing at the end of this consent form**. We will refer to you by a code number or pseudonym (another name) in all our reports and any publications that may come out of them.

Risks/discomforts and Benefits

At the present time, we do not see any risks in your participation. The risks associated with participation in this research are no greater than those encountered in daily life.

There are no immediate benefits to you from participating in this research. However, this research will be extremely helpful to us in developing a research report on this topic that we hope will promote understanding of the issues that impact on girls learning Geography as a major in Swaziland.

If you would like to receive feedback on our research, we will record your email address on a separate sheet of paper and can send you the final report from the research when it is completed sometime after April 2015.

If you feel that you have been harmed in any way by participating in this research or have any concerns, please contact the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics at the Govan Mbeki Centre. Their telephone numbers are: 031 260 4557 and Fax number: 031 260 4609. You may also contact the research office through Mr. Prem Mohun.

Questions about the research may be directed to:

Ms. Lindiwe Ncane Magagula

Email: ncanemagagula@yahoo.com

Tel: 00268 76270038

Dr. Thoko Mnisi

Email: Mnisi@ukzn.ac.za

Tel: +27 (0) 312607476

Mr. Prem Mohun

Email:mohunp@ukzn.ac.za

Tel: 031 260 4557

CONSENT

I hereby agree to participate in research: *Female students' experiences in learning Geography as a major at tertiary level: A case study of a Teacher Training College in Swaziland.* I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally in the immediate or short term. I give my consent for the interviews to be video-taped and for these to be used in compiling final reports and any publications that may arise.

I understand that my participation will remain confidential.

1. I hereby agree to participate in the research:

……..

Signature of participant **Date**: ……

2. I hereby agree to the tape-recording of the interviews in which I participate:

……..

Signature of participant **Date:** ……..

Appendix 6 – Guide for follow up focus group discussion session

Follow up focus group discussion session guide

This will be guided by an open ended prompt.

1. When you describe Geography as interesting, what exactly do you mean?
2. When you say Geography involves calculations, which part of it are you referring to? What is wrong with the calculations?
3. Why do you dislike math and calculations?
4. When you say Geography teaching could be made better by using technology, what exactly are you referring to?
5. How do teachers show more confidence in boys in the Geography classroom?

Appendix 7 – Example of questionnaire responses

Questionnaire responses	Theme
SECTION 2 Question 1 *(Describe your experience of learning Geography)* • *Much deeper and challenging* • *Expected to explore things but is not getting any experience* • *Different from high school* • *Not good. Library is poor and lacks resources. Knowledge of subject not developing* • *Not as easy as expected* • *Fair* • *Interesting* • *Enjoyable* • *Interesting* • *Great* • *Interesting* • *Interesting* • *Average* • *Interesting* • *Good, subject is enjoyable* • *Mixed feelings about it.* • *Mixed feelings about it.* • *A good experience.*	

- *Serious work.*

Question 2 (things you like about Geography)

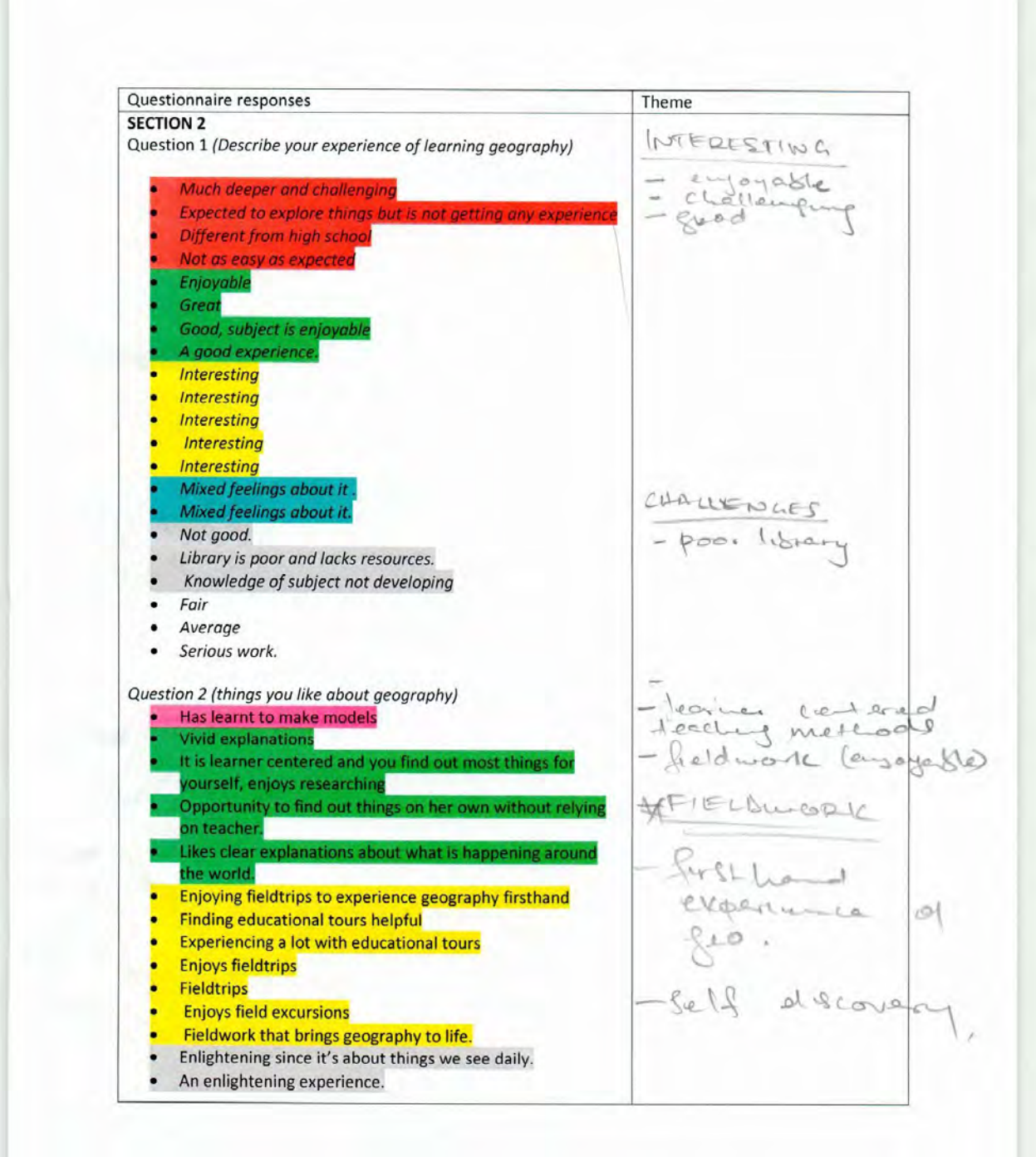
- Vivid explanations
- Enjoys field excursions
- Has learnt to make models
- It is learner centred and you find out most things for yourself, enjoys researching
- Opportunity to find out things on her own without relying on teacher.
- Initially classroom environment was good
- Likes clear explanations about what is happening around the world.
- Has learnt a lot
- Enjoying fieldtrips to experience Geography first-hand
- Finding educational tours helpful
- Experiencing a lot with educational tours
- Has a good lecturer which facilitates understanding of subject
- Enjoys fieldtrips
- Fieldtrips
- Enlightening since it is about things we see daily.
- An enlightening experience.
- Fieldwork that brings Geography to life.

Question 3 (*Explain why you like the things you do)*

- They make learning practical

• We get chance to touch and manipulate things we learn about • It opens our minds • Improved marks after field trips • Skill learnt is useful • Exposure to various sources of knowledge • Exposure to research • Can now better understand my environment • Approachable teachers. • Seen places of interest. • Has fewer periods. • Things are easier to understand when you see them. • Fieldtrips make students understand things better. Question 4 ***(Things you dislike about learning Geography at the college)*** • Disorganized lectures • Sometimes involves figures and calculations • Too many figures and calculations • Too many drawings • Shortage of tertiary level textbooks • There is little fieldwork to substantiate what is learnt in class	

Appendix 8 – Example of coded questionnaire responses



Questionnaire responses	Theme
SECTION 2 Question 1 *(Describe your experience of learning geography)* • *Much deeper and challenging* • *Expected to explore things but is not getting any experience* • *Different from high school* • *Not as easy as expected* • *Enjoyable* • *Great* • *Good, subject is enjoyable* • *A good experience.* • *Interesting* • *Interesting* • *Interesting* • *Interesting* • *Interesting* • *Mixed feelings about it .* • *Mixed feelings about it.* • *Not good.* • *Library is poor and lacks resources.* • *Knowledge of subject not developing* • *Fair* • *Average* • *Serious work.*	INTERESTING – enjoyable – challenging – good CHALLENGES – poor library
Question 2 (things you like about geography) • Has learnt to make models • Vivid explanations • It is learner centered and you find out most things for yourself, enjoys researching • Opportunity to find out things on her own without relying on teacher. • Likes clear explanations about what is happening around the world. • Enjoying fieldtrips to experience geography firsthand • Finding educational tours helpful • Experiencing a lot with educational tours • Enjoys fieldtrips • Fieldtrips • Enjoys field excursions • Fieldwork that brings geography to life. • Enlightening since it's about things we see daily. • An enlightening experience.	– – learner centered teaching methods – fieldwork (enjoyable) ~~FIELDWORK~~ – first hand experience of geo. – self discovery.

- More fieldwork required.
- More fieldwork required.
- Methods okay.
- Learning new ways of teaching.
- Not enough fieldwork.
- More fieldwork required.
- More fieldwork required.
- More fieldwork required.
- Methods same as high school.
- College needs more resources.
- Tasks favour males.
- Tasks favor males.
- Good teaching methods. More fieldwork needed.
- Lecture method not good. More fieldwork required.
- Change lecture method to other more contemporary teaching methods.
- Like new methods of teaching learnt at the college.
- Change lecture method for more contemporary methods.
- More fieldwork should be used.

Question 2 (***What changes would you like to see in the way you are being taught)***

- Introduction of the use of technology.
- More practical work.
- More organization in the way we work.
- More practical work.
- Less calculations.
- More fieldwork.
- More use by lecturers of the teaching methods we are taught.
- More assignments and practicals.
- Subject divided into courses and taught by different people.
- More explanation and clarification of what is being taught.
- More practical work.
- More practical work.
- More fieldwork
- Lecturers should vary teaching methods
- We should all be heard if we have excuses about work not done.
- Lecturers should vary teaching methods.
- Lecturers should vary teaching methods.

Question 3 (***What kind of assistance do you get from staff?)***

- No help from staff. No help with projects as internet is unreliable.
- Guidance with projects.

*more fieldwork -8/18
- Not want lecture method.
-

*fieldwork! fieldwork! fieldwork!!!

TECHNOLOGY

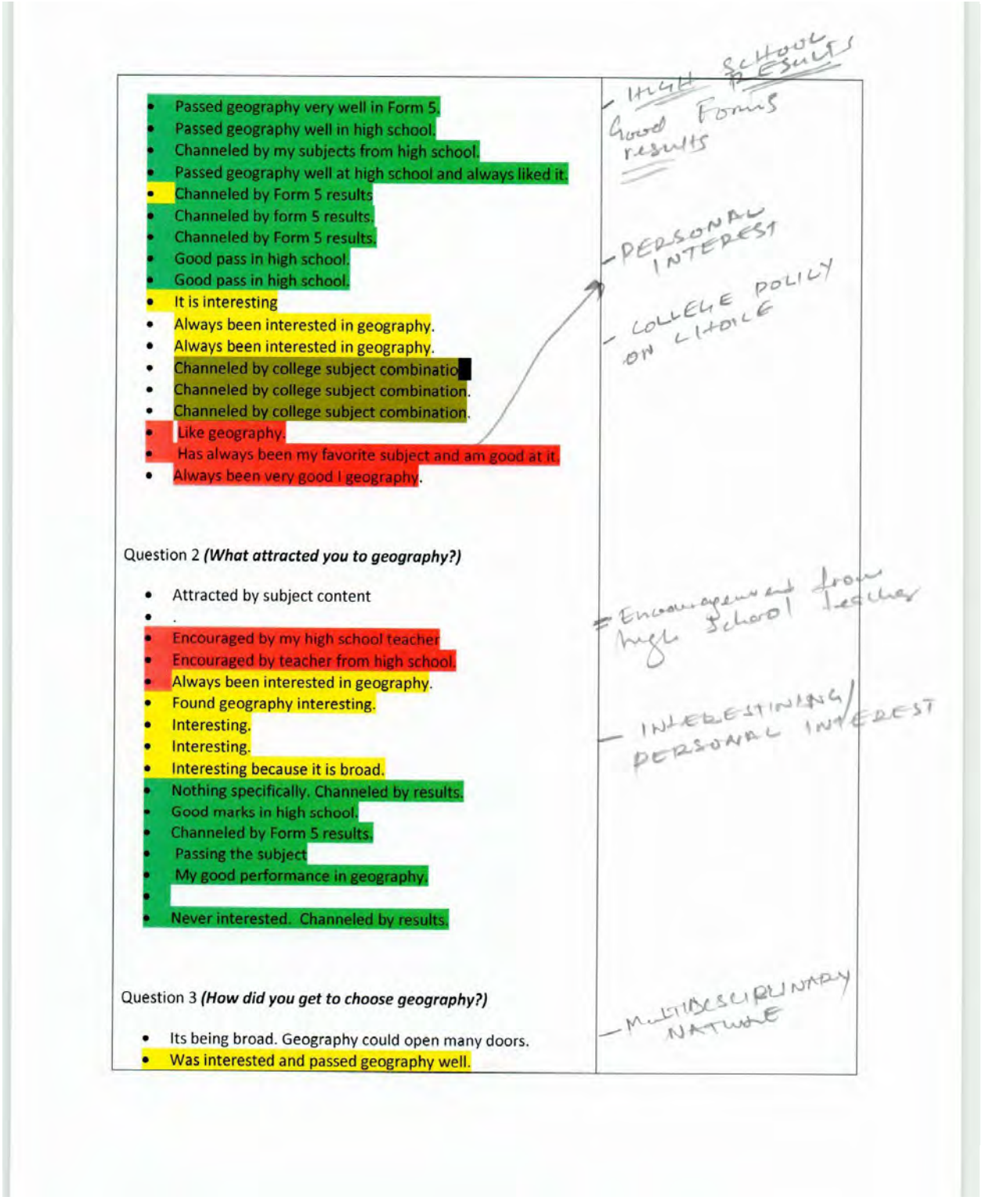
-less calculation
- VARIATION OF TEACHING METHODS

FIELDWORK
v
practical work

- Yes.
- No.
- Yes
- Yes
- Yes.
- Yes.

Question 6 ***(Do you face any challenges regarding the time you get to use the library?)***

- Internet not available most of the time.
- Internet not available most of the time.
- Internet not available most of the time.
- Internet not available most of the time.
- No. Internet not available most of the time.
- Internet not available most of the time.
- Internet not available most of the time.
- Internet not available most of the time.
- Internet not available most of the time.
- Internet not available most of the time.
- Internet not available most of the time.
- Internet never accessible.
- Internet never accessible.
- Internet never accessible.
- Internet not available most of the time.
- Yes. Library opening times inconsistent.
- Yes. Books in the library are ancient.
- Yes. Library closes without notice.
- Yes. Library opens at times when we are in class and don't need it.
- Yes. There are insufficient books.
- Yes. The re no books in library. No relevant books in the library.
- Library closed at weekends.
- Library closed when needed.
- Library not up to date and closed on weekends.
- Library always closed on weekends.
- Yes. Library hours are not consistent.
- Yes. Library has no books.
- Yes. Library has no books.
- Yes. Library has no books.
- Yes. The books found in library are not useful anyway.



- Passed geography very well in Form 5.
- Passed geography well in high school.
- Channeled by my subjects from high school.
- Passed geography well at high school and always liked it.
- Channeled by Form 5 results
- Channeled by form 5 results.
- Channeled by Form 5 results.
- Good pass in high school.
- Good pass in high school.
- It is interesting
- Always been interested in geography.
- Always been interested in geography.
- Channeled by college subject combinatio
- Channeled by college subject combination.
- Channeled by college subject combination.
- Like geography.
- Has always been my favorite subject and am good at it.
- Always been very good I geography.

Question 2 ***(What attracted you to geography?)***

- Attracted by subject content
- .
- Encouraged by my high school teacher
- Encouraged by teacher from high school.
- Always been interested in geography.
- Found geography interesting.
- Interesting.
- Interesting.
- Interesting because it is broad.
- Nothing specifically. Channeled by results.
- Good marks in high school.
- Channeled by Form 5 results.
- Passing the subject
- My good performance in geography.
-
- Never interested. Channeled by results.

Question 3 ***(How did you get to choose geography?)***

- Its being broad. Geography could open many doors.
- Was interested and passed geography well.

- Yes. Brother.
- Yes. Brother.
- Yes. Parents.
- Yes.
- Yes.
- No.
- No.
- No.
- No.
- No.
- No.
- No.

Not influenced by relatives

Question 6 ***(If not your relatives, then who influenced you to do geography?)***

High school teachers.

- Headteacher.
- High school teacher.
- High school teacher.
- High school teacher.
- High school teacher.
- High school geography teacher
- Friends.
- Was channeled by the selection system of the college
- Was interested.
- Was interested

Personal interest

Question 7 ***(Can you tell me how?)***

- Saw that I had potential.
- Judging from performance teacher encouraged her to take geography.
- Encouraged me because he saw I had potential.
- My high school geography teacher was very good and that encouraged me.
- Teacher encouraged her to take geography brvause she was good at it.
- Realized that I liked it.
- Encouraged me to focus on geography which was a science and therefore more marketable.
- Teacher understood how she loved the subject.
- Mother encouraged me because she saw geography as more marketable.

Teacher was good in geography.

marketability

- Passed well in high school.

SECTION 5

Question 1. ***(How do you feel about being the minority gender in class?)***

- Disappointed because the boys do better.
- Shows females lack confidence to do geography.
- Bad.
- Undermined.
- Very bad because it gives false impression that ladies are not good in geography.
- Don't understand why it happens.
- Comfortable.
- Challenged. Because boys get all the attention.
- Very bad and wanting to give up.
- Bad.
- Bad. Because boys feel they are better.
- Bad. Because there is no equity in the classroom.
- Frustrating because male counterparts get more attention.
- Boring because male counterparts think they are smarter because they get more attention.
- Frustrating because male counterparts think they are smarter.
- Frustrating because male counterparts think they are superior.

Question 2 ***(What do you think could be done to enhance more girls to do geography?)***

- Teachers improve teaching methods because girls understand geography differently from boys.
- Teachers must find ways to make the scientific and mathematical parts of geography more enjoyable to girls.
- Reduce practical work because girls are lazy to do practical work.
- Make geography teaching/learning more interesting.
- New and advanced learning aids would make geography more interesting for girls.
- Girls should be taught in a way that will be attractive to them.

Appendix 9 – Table of themes and categories emerging from the data

Question	Themes	Categories
What are the experiences of girls learning Geography as an area of specialisation?	Interesting	Fieldtrips Teaching methods Nature of subject Relaxed classroom atmosphere
	Challenges faced by students	Dislike of Drawings and Calculations Shortage of learning materials Unavailability of resources – internet, library Treatment of students by lecturers
What factors inform girls' choice of Geography as a subject specialisation?	Personal Interest	multidisciplinary nature of Geography Activities involved in Geography
	Curricula influences	Channelled by high school results College's policy on subject choice
	Influence from personal relationships	Influenced by parents, family

		Influenced by peers Influenced by high school teachers
How can girls' participation in Geography be enhanced?	Pedagogical issues	Use of learner centred teaching methods More fieldwork Use of modern technology in teaching
	Curricula Issues	Change of subject combinations in schools Schools liaise with institutions of higher learning when creating subject combinations in schools Partnership between schools and colleges.
	Marketing	Outreach campaigns

Appendix 10 – Turnitin report