



**UNIVERSITY OF  
KWAZULU-NATAL**

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**INYUVESI  
YAKWAZULU-NATALI**

**Information needs and information seeking behaviour of  
grade 10 and 11 learners at Gerson Ntjie secondary school, at  
gaMagooa village, Limpopo province**

BY

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## Declaration

I, Asania Reneilwe Maphoto declare that:

(i) The research reported in this dissertation, except where otherwise indicated, is my original work.

(ii) This dissertation/thesis has not been submitted for any degree or examination at any other university.

(iii) This dissertation/thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.

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Signature:  ..... Date: 19 January 2017

## Dedication

This study is dedicated to my son Paballo Jaydon Maphoto and nephew Ofentse Siyabonga Maphoto for having to cope with my absence. I also dedicate it to my family for their prayers, encouragement, understanding and patience.

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*“Praise be to God who has not rejected my prayer or withheld his love from me” Psalm 66:19-20*

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## **List of abbreviations and acronyms**

DoE	Department of Education
EIR	Electronic information resource
ICT	Information and Communication Technology
ISP	Information Seeking Process
OPAC	Online Public Access Catalogue
PDF	Portable document format
SABINET	South African Bibliographic Information Network
SNS	Social networking sites
SPSS	Statistical Package for Social Sciences
TV	Television
UKZN	University of KwaZulu-Natal
USA	United States of America
Web	Website
Wi-Fi	Wireless Fidelity
WWW	World Wide Web
SA	South Africa

## Abstract

Information need is an awareness of an information gap. The nature of information need differ from one person to another. Information seeking behaviour is when an individual uses information systems to search for information in order to satisfy the information gap. Information is important in every aspect of a human's life. The main aim of the study is to investigate the information need and information seeking behaviour of grade 10 and 11 learners at Gerson Ntjie secondary school. The study was conducted with grade 10 and grade 11 learners at Gerson Ntjie secondary school in Limpopo province.

The study was guided by Wilson's 1999 model of information behaviour, complemented by Kuhlthau's 2004 Information Search Process. The models focus on information need, information seeking, information use and feelings associated in information seeking. The study used a quantitative method with a survey design. Questionnaire was used as instrument to collect data from 181 grade 10 and 11 learners, which produced a response rate of 70%. The results showed that grade 10 and 11 learners needed information to improve their reading skills. Internet was the most preferred source of information. Although there is no school library, most learners indicated that they used a library to search for information. Learners also showed that they used books as the starting point when searching for information.

Grade 10 and 11 learners indicated that they felt confused, sad, frustrated, irritated and were tempted to give up when they did not find the information they need. They further indicated that they felt happy, inspired, relieved and amazed after finding the information they need. Social networks were used daily to chat with friends and to collaborate with classmates on school works. The study recommends the following: school library, school library policy, increasing funding in public schools, computers with Internet connectivity and information resources in African languages.

**Key words:** Information need, information behaviour, information seeking behaviour, grade 10 and 11 learners, social networks, information sources, school library



# **Chapter 1: Introduction to the study**

## **1.1 Background of the study**

The study investigates the information needs and information seeking behaviour of Gerson Ntjie secondary school, in gaMagooa village, Limpopo province. According to Case (2002:5) information needs “is described as recognition that personal knowledge is inadequate to satisfy a goal that needs to be achieved.” On the other hand, information seeking behaviour involves the seeking of information that will add to meaning and understanding essential to satisfy a need (Kuhlthau, 1993:341). Case (2012:6) states that “in the first three decades of the twentieth century, studies of information channels and systems, chiefly libraries and mass media accumulated slowly.” Information need and information seeking behaviour have been a study of interest for a long time. According to Wilson (2000:50) “the origins of human information seeking behaviour are found in work on the users of the library and in readership studies in general.” Research in information behaviour took place as far back as the 1948 Royal Society Scientific Information Conference where there was a presentation of papers on information behaviour of technologists and scientists (Wilson, 1999:250). However, the studies focused only on the utilization of the library and not on the information needs which makes people want to use library as a source of information (Wilson, 2000:50). It was after the 1970s that attention moved to a person as a “finder, creator, interpreter, and user of information”, which is when the term “information seeking” and “sense making” started to be mostly used by the scholars (Case, 2012:6).

Information need as a concept was explored after 1965 and one of the major studies was conducted in 1972-73 in Baltimore, U.S.A. about the information needs of ordinary citizens (Warner et al., 1973). Wilson (1999:252) argues that an information need is a secondary need that arises when trying to satisfy the primary need and that there are different barriers that are likely to be encountered when looking for information to satisfy

the need. Case (2002: 69) defines information need as “a function of extrinsic uncertainty produced by a perceived discrepancy between the individual’s current level of certainty about important environmental objects and criterion state that he seeks to achieve.”

The area of information-seeking behaviour is defined as that which is concerned with deciding a user’s information needs, searching behaviour and subsequent use of information (Ikoja-Odongo and Mostert, 2006:146). Bitso and Fourie (2011:175) also add that information-seeking behaviour is aligned with the generation, communication, seeking and sharing of information relevant to information needs. Ruthven and Kelly (2011:15) define information seeking behaviour as a means of human interaction with information, specifically the ways in which they seek and utilize information. Information-seeking is considered as “the purposive acquisition of information from selected information carriers; these include information sources and channels of communicating information (Bitso and Fourie, 2011:176).

Wilson (1999:251) suggests that information-seeking behaviour is a result “of a need perceived by an information user, who, in order to satisfy that need, makes demands upon formal or informal sources or services which result in success or failure to find relevant information.” Kuhlthau (1993) explained in (Fisher, Erdelez and McKechnie, 2005: 232) explains that the process of information-seeking from the user’s perspective is based on task, time, interest and availability. According to Nicholas (2000:102) people normally use information that is easily accessible and closest to hand more than what is necessary or relevant, while Bitso and Fourie (2011:174-175) argue that with the understanding of information-seeking behaviour, there can be development and provision of information services that can satisfy the user’s information needs.

When searching for information, the feelings of uncertainty give rise to feelings of doubt, confusion and frustration and, as the search continues, with successful results the feelings change, and upon the collection of relevant materials, there is confidence with feelings of relief, satisfaction and a sense of direction (Wilson, 1999:255). Information-seeking behaviour is about the relationship between humans and information. Nel (n.d:25) states that progress of information seeking is the result of the attributes of the

information seeker, informational environment and the communication channels over which information flows.

## **1.2 Statement of the problem**

Gerson Ntjie Secondary School experiences the problem of not having a school library. A school library gives learners an opportunity to be better information seekers and also to be information literate to the point where they are able to identify their information needs on their own without anyone pointing it out for them. The Department of Arts and Culture (2014:48) emphasizes that:

*“School libraries develop the reading literacy crucial for academic achievement and participation in a democracy. Teachers might teach children how to read but everyday access to attractive books in their home languages leads children to enjoy reading. The more they enjoy reading, the more they will read – and the better they will read.”*

The 2007-2011 Department of Education Strategic Plan states that schools, especially those in rural and township areas, will be provided with libraries and science laboratories so that learners from Grade R to Grade 12 can use them to improve their reading , numeracy and writing skills (Department of Education, 2008). Gerson Ntjie secondary school is one of the schools that are waiting for this Department of Education Strategic Plan to be put into action in their school. Learners from schools that have school libraries have been seen to perform better academically than those without library (Equal Education, 2010:6). The Gerson Ntjie secondary school produces examination results that are not satisfactory enough in most grades. Learners take more years than they are supposed to complete secondary school.

Although there are few computers in the school, learners do not have access to them because they are only used by teachers. This is a problem because since computers are not used by learners, there is information need and access gap. There is a lack of access to information resources but that need cannot be fulfilled due to in accessibility of

computers. Learners need to have their own Internet connected computers so that they can be able to search for new and existing information, to find information that complements what they find in the library and also what they are taught about. Currently, learners use teachers, the community library in another village, academic library in a nearby university and Internet from their mobile cell phones as their sources of information. This is a problem because not all learners have cell phones that have Internet connectivity or taxi money to go to the community or academic library and other learners find it difficult to approach their teachers when they need information. Nicholas (2000:101) states that when “there are no information sources or systems available or immediately at hand, then it is highly unlikely that people will be able to meet their information needs or engage in information-seeking behaviour.” It is essential that learners acquire information seeking skills and be able to identify, search and gather their needed information on their own.

### **1.3 Aim, objectives and research questions of the study**

The main aim of the study is to investigate the information needs and information seeking behaviour of grade 10 and 11 learners at Gerson Ntjie secondary school.

To achieve the above mentioned aim, the following objectives were developed:

- To investigate the type of information that the grade 10 and 11 learners of Gerson Ntjie secondary school need.
- To investigate the information seeking behaviour of grade 10 and 11 learners at Gerson Ntjie secondary school.

To achieve the objectives, the following research questions were developed:

- What information do the grade 10 and 11 learners of Gerson Ntjie secondary school need?

- Which sources of information are mostly used by the grade 10 and 11 learners of Gerson Ntjie secondary school?
- How do the grade 10 and 11 learners of Gerson Ntjie secondary school seek information?
- What are the challenges the grade 10 and 11 learners of Gerson Ntjie secondary school face when seeking information?
- How has social networks changed the information needs of the grade 10 and 11 learners of Gerson Ntjie secondary school?

## **1.4 Delimitations and limitations**

Simon (2011) defines limitations as the weaknesses in the study that are beyond the control of the researcher and delimitations “are those characteristics that limit the scope and define the boundaries of your study” but can be controlled by the researcher. The study only focuses on Gerson Ntjie secondary school. The researcher chose this school because it is the only secondary school in gaMagooa village, except for the Ntjie Mothapo which is its primary school. The researcher saw a need for a study on this school because of the lack of information resources in the school. The study also focused only on grade 10 and 11 learners because in these grades the learners should be preparing themselves for the matriculation exit qualification. Although the grade 12 learners are also relevant to this study, the researcher excluded them because would be preparing for their exams.

## **1.5 Significance of the study**

According to Paler-Calmorin and Calmorin (2007:36) states that the significance of the study should show the importance of the study in (a) solving the problem and need, (b) bridging a knowledge gap, (c) improving social, economic and health conditions, (d) enriching research instruments, methods and strategies, and (e) supporting government thrusts.” From this study, learners will be able to see what kind of information are they lacking or needing in order to help their school performance, and also how to access that

information and use it. The learners will also be exposed to relevant information resources that may meet their needs.

The Equal Education movement (of teachers, community and learners for equal and quality education in South Africa) insists on one school, one library, and one librarian. The school library plays an important role in the education system because they work to complement the school curricula (Equal Education, 2010: 6). This study can be used by the school to approach the government or non government organizations (NGO's) and act as a motivation for why there is a need for a school library or maybe even a community library. Potential sponsors may see why it is important for the school to have their own library and therefore, they may not hesitate to make an investment in ensuring that there is a library in the school. With a school library, learners will be able to identify their information needs and also be able to search for information on their own. The learners may be able to use their free time to visit the library and look for information that will complement what they do in class, to enhance their understanding. The library and information sciences (LIS) could use this study to ensure that the community libraries work together with the nearby schools to ensure that they include books that are related to the schools curricula in the library collections.

## **1.6 Principal theories underpinning the study**

This section outlines the theoretical frameworks used in the study which are discussed in detail in section 2.2 of Chapter two. The models that were used in this study are: Wilson's (1999) model of Information Behaviour and Kuhlthau's (2004) Information Search Process. The study used three models because no model on its own was able to answer all the research questions. Fourie (as cited in Ikoja-Odongo and Mostert, 2006: 154) states that there are strengths and weaknesses in each model, therefore, the "models complement each other, as opposed to contracting or replacing each other." These theories have been used in many studies to investigate and understand information needs, information seeking, information sources, and information exchange and utilization. The mapping of the research questions and variables of the models for this study are also shown in section 2.2.4 of Chapter two.

## **1.7 Preliminary literature review**

This section briefly introduces the literature reviewed; a detailed literature reviewed is provided in n Chapter two. The literature that was reviewed in this study is sourced from academic databases, books, Internet, theses and dissertations. The literature reviewed reflects hierarchy from the international situation, to African countries and South Africa. The literature focused on information needs, information sources, information seeking behaviour, information seeking barriers and social networking sites.

In Turkey, Tosun and Baris (2011:533) carried out a study on the place and importance of computer and Internet in secondary school students lives. The findings indicated that majority of the students used the Internet to research their homework and homework preparation. Other students used the Internet for playing games and having fun, for loading programmes or files and for acquaintances and chatting. Some students used the Internet for electronic schools procedures, E-mail reading and sending messages while other students used the Internet to watch films. A minority of the students indicated that they used the Internet to read news and learn the usage of new programmes.

In the United States of America, Head and Eisenberg (2010:7) found that some of the courses that students used for course related research were course readings, which were used by a majority of the students. Other students used scholarly research databases as their source of information while others used instructors and teachers as their source of information for coursework. Library shelves and librarians were also consulted by a number of learners when they needed course related information.

In the United States of America, Bilal and Kirby (2002:661) undertook a study on the differences and similarity of adults and children using the Web. Grade 7-9 learners and graduate students were used as participants of the study. The study found that both children and graduate students had inadequate knowledge of using Yahoo! as their search engine. Both the participants did not quit when they encountered difficulties when searching for information. However, compared to graduate students, children were not

able to recover from 'breakdowns' of keyword searching. Graduate students were also able to finish searching for information quicker than children.

In Kenya, Mingaine (2013:234) investigated the challenges that hinder the implementation of ICT in public secondary school. The factors that were stated to hinder the implementation of ICT's in school included but not limited to: high cost of ICT equipments, limited staff that are literate in using ICT's, lack of ICT qualified teachers and the level of commitment of school leadership in implementing ICT's. The study concluded that many schools in Kenya are unable to use ICT's because of their high cost of acquisition and implementation (Mingaine, 2013: 236).

In South Africa, Stead, Els and Fouad (2004:211) carried out a study on the carrier barriers that are believed to be among South African learners. The study used grade 11 and grade 12 high school learners. The study discovered that learners did not perceive discrimination gender or personal characteristics as factors that could prevent them from the careers of their need or choice. Learners stated that race and colour does not decide the success of the person, but only qualifications, skills and capabilities will determine the success of an individual.

The reviewed literature showed a few gaps. For example, there are limited studies conducted on information needs and seeking behaviour among secondary school learners. Within those studies, there are only a few studies that focus on the information needs and information seeking behaviour of secondary school learners. Most of the studies on information needs and information seeking behaviour have been conducted with university students and the private or government sectors. Moreover, although some of the literature reviewed cover secondary school learners, most of those schools are situated in urban areas or township areas and only few focus on schools in rural areas.

## **1.8 Methodology**



The study used quantitative method approach, which is a combination of qualitative and quantitative approaches. A positivism paradigm was applied. A survey design was used with a questionnaire as an instrument to collect data. A questionnaire was seen as the best instrument for the study because it saved learners' time when participating in the study. A questionnaire is also appropriate because Kuhlthau's (1993) model of the Information Search Process was tested on high school learners using a questionnaire. Through systematic random sampling, a sample size of 196 learners was drawn using the Krejcie and Morgan table of sample size determination. Moule and Goodman (2009:268) explain that the systematic random sampling "approach in sampling can only be employed when a list is available that orders all the members of the population." Quantitative data will be analyzed with SPSS software. A full description of the research methodology will be given in Chapter 3.

## **1.9 Definition of terms**

### **1.9.1 Information**

Kaniki (2001: 191) defines information as "ideas, facts, imaginative works of the mind and data of value, potentially useful in decision making, question answering and problem solving. It leads to a state of knowing." Meyer (2005: 98) states that "information on its own is worthless and cannot solve problems. It has only power when it is effectively used and applied." This study investigates learners' information needs and how learners look at the information that is available to them and how to access and use it.

### **1.9.2 Information need**

Mostert and Ikoja-Odongo (2006:147) define information need as a necessity needed to push people into the process of information seeking. It arises from awareness that something missing, which requires information that will add meaning and knowledge (Kuhlthau, 1993). Information needs differ from one person to another, depend on the existing situation and change over time (Mostert and Ikoja-Odongo, 2006:147).

### **1.9.3 Information seeking**

Information seeking involves the way people search for information they need, which includes how and where solutions to solve information problems are found (Bitso and Fourie, 2011: 176). A person cannot undergo the process of information seeking without being aware of his information gap.

### **1.9.4 Information seeking behaviour**

Majyambere and Hoskins (2015:66) sees information behaviour as an umbrella for information needs, information seeking behaviour, information retrieval and the information use. According to Wilson (1999:249) “information behaviour is meant those activities a person may engage in when identifying his or her own needs for information, searching for such information in any way, and using or transferring that information.” Information seeking behaviour is defined as “the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems such as a newspaper or a library or with computer-based systems such as the World Wide Web” (Wilson, 2000: 49).

### **1.9.5 Information sources**

Ingwersen and Järvelin (2005:387) define information sources as the variety of physical or digital media that provide information. An information user derives information from an information source to satisfy a perceived need. An information source provides the user with the needed information, whereas a channel guides the user to find the source of the required information (Bystrom & Jarvelin, 1995:139).

### **1.9.6 Social networking sites (SNS)**

Moyo & Abdullah (2013: 142) states that “a social networking site is a website where individuals can set up an online profile and describe their interests. These online profiles

can be viewed or accessed by everyone or only those who are given permission. Social networks are used by people of different ages, socializing with different groups of people, for different reasons. Social networking sites are the social communication tools that the 21<sup>st</sup> century generation finds effective and convenient (Sekhaolelo, 2015:9). This study uses this definition of social networks and how learners use them.

### **1.9.7 Secondary school**

Secondary school is a senior high school for learner between the ages of 14 and 18 years. Secondary school comes after primary school and before higher (post school) institutions of learning. It provides learners with the secondary education needed for them to be able to get to higher educations.

### **1.9.8 Grade 10 and 11 learners**

Grade 10 and 11 learners are regarded as seniors at school. They are learners who are preparing themselves for grade 12 (matric) and potential students at higher educations.

## **1.10 Institutional Background**

Gerson Ntjie secondary school is situated at Capricorn district of Limpopo province in a village called gaMagooa at Mothapo area. It is a village in Limpopo province in the outskirts of Polokwane. Gerson Ntjie secondary school is about 30km from the city of Polokwane and about 5km from the University of Limpopo. The school falls under the traditional leadership of Bakgaga ba GaMothapo tribal authority, under chief Mothapo. It is the only secondary school in the village and falls under the Kgakotlou circuit. The school was opened in 1991 and is 25 years old. The Mothapo royal family named the school after the man who was the first teacher in the village as a sign of honoring him (Malatji, 2011).

The school is an extension of Masobe secondary school. The Masobe secondary school had a high number of learners and in 1989 the school leadership and Mothapo royal house decided to have an extension where they moved 11 teachers and all the grade 8 learners (Malatji, 2011). When the extension of Masobe secondary school started, the Mothapo royal house began negotiating with the Department of Education to have a separate school in Mothapo-Ramogale areas (Malatji, 2011). When the school started in 1991, they had one block which consisted of two grade 8 classes and one grade 9 class and the first grade 12 was in 1994 (Malatji: 2011). Currently the school has 937 learners.

The school has produced the following pass rate for grade 12 learners in the past years:

Year	Percentage
2009	53.4%
2010	58.1%
2011	60%
2012	62.7%
2013	68.1%
2014	52.9%
2015	38.1%

Table 1.1: Gerson Ntjie secondary school Matric pass rate between 2009 and 2015 (Kganyago, 2016)

The standard of living in GaMagooa is still very low but with signs of development. The people of this area have electricity in their households but struggle with water that flows intermittently. Most of the households have kraals in their yard for livestock and some families still fetch woods to make fire for household chores, in order to save electricity. The area has no information resources like an Internet café or community library; therefore, learners travel to other areas that are developed in order to access these services.

## **1.11 Study outline**

Chapter 1 covers the introduction and background of the study. It consists of a statement of the problem, objectives, research questions, delimitations and limitations of the study, and significance, summary of theories and preliminary literature review, methodology, institutional background and the outline of the study.

Chapter 2 puts forward the theoretical framework and the literature review. Wilson's 1999 model of Information Behaviour is discussed and complemented by Kuhlthau's 2004 Information Search Process model.

Chapter 3 presents the research design and methodology. It discusses the approach taken, the target population, sampling and data collection techniques, as well as the validity and reliability of the instruments.

Chapter 4 interprets and analyzes the findings collected from the questionnaires answered by the Gerson Ntjie grade 10 and 11 learners.

Chapter 5 discusses the results of the study in the context of the research questions and also the literature review.

Chapter 6 provides the conclusion and recommendation of the study

## **1.12 Summary of the chapter**

The chapter addressed the research problem, objectives, research questions and background of the study. The significance and limitations of the study were outlined. In addition, theoretical framework underpinning the study, literature reviewed and methodology were discussed. Key terms were also defined to ensure clarity. The following chapter focuses on the theoretical frameworks and also reviews the literature of the information needs and information seeking behaviour of high school learners.



## **Chapter 2: Theoretical framework and Literature review**

### **2.1 Introduction**

This chapter focuses on the theoretical frameworks of the study and the literature review. The theoretical frameworks used in this study are Wilson's 1999 Information Behaviour model and Kuhlthau's 2004 Information Search Process (ISP) model. The literature review provides studies related to the information needs and information seeking behaviour of learners, from international countries, some from African and also studies from South Africa.

### **2.2 Theoretical framework**

According to Kerlinger as cited by Sevilla et.al (1992:55) a theoretical framework is the "set of interrelated constructs (concepts), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables." The theoretical framework provides unity in the study and also a connection to the previous studies. A theoretical framework guides the researchers on how to design a study, how to collect and analyze data (Understanding Research, 2004: 143). From the theoretical framework, the researcher was able to see what has been done in previous similar studies and it will serve as a guide on how to conduct the entire research study.

This study used Wilson's 1999 model of Information Behaviour complemented by Kuhlthau's 2004 Information Search Process. The three theories were used to complement each other because Wilson's models focuses more on the information need and information seeking, whereas Kuhlthau's model is mostly about the information search and the changes of feelings in the process of searching information. Kuhlthau's model was mostly tested in high schools and is a recent model, which makes it more relevant to this study. The combination of these models will enable deep understanding of information seeking from different approaches.

## **2.2.1 Wilson's 1999 Information Behaviour model**

Wilson's model was formulated in 1981, and refined in 1994, 1996, and 1997 up to the recent 1999 model (Majyambere, 2012:13). The reason for choosing Wilson's 1999 model of Information Behaviour is that it is able to clearly explain the information need and information seeking behaviour of the learners as the information users in this study. Wilson's model has also been used by several scholars like Mostert and Ocholla (2005) in their study on the information needs and information seeking behaviour of South African parliamentarians. Monyela (2013) also conducted a study in the University of Fort Hare, South Africa and used Wilson's 1993 model. Majyambere and Hoskins (2015) also undertook a study using Wilson 1999 model to investigate the information seeking behaviour of Humanities/ Arts students in public universities in KwaZulu-Natal. Case (2012:135) is of the opinion that Wilson's (1999) model is the most used model of information seeking behaviour in the Library and Information Science field.

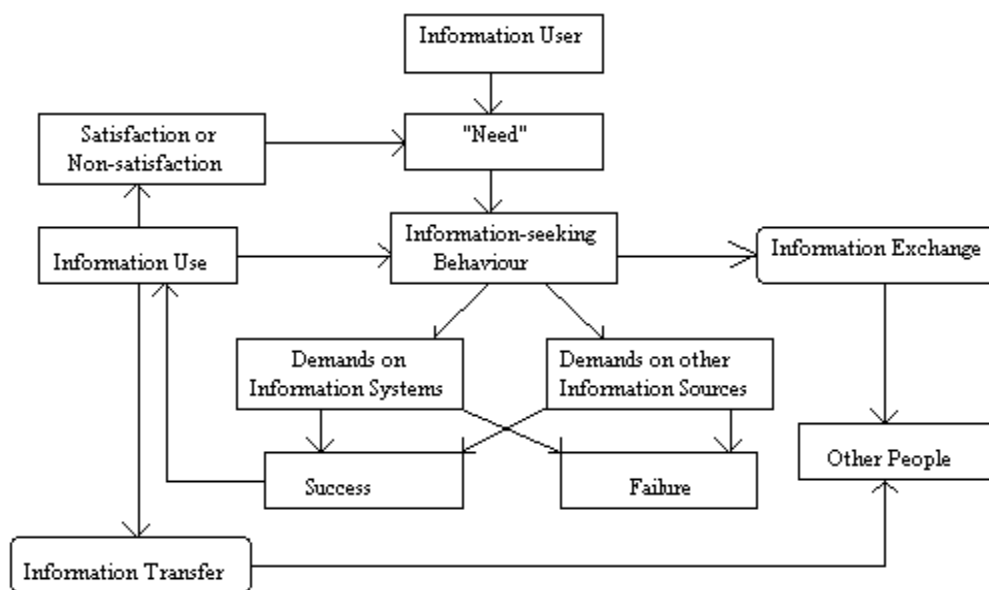
Wilson's 1999 model is based upon two main points: firstly, information is a secondary need that arises out of a basic or primary need; and secondly, the information seeker tends to meet different barriers during the process of discovering the needed information (Wilson, 1999: 252). The Information Behaviour model demonstrates that the information user develops a need for information, which leads to information-seeking behaviour (Wilson, 1999:251). The user will use various information sources or services to satisfy his need but in the end he may either experience failure or success in terms of finding the exact and relevant information he needed (Wilson, 1999:251). If the search is unsuccessful or it becomes a failure, then the information user has to repeat the steps of the model again. The model shows that the information user exchanges information with different people and if the search is successful and he finds the information useful, he will then share with others (Wilson, 1999:251). When the information is relevant and useful, he will give it to others to use it or even use it himself.

The model is appropriate for this research because the research focuses on the information needs and information-seeking behaviour of learners. Therefore, the model assists in producing the relevant answers for this study. Using this model, the researcher



was able to understand the information needs and information-seeking behaviour of the learners. The researcher could also determine the information sources that learners' use and whether the information they find satisfy or fail their information need. Therefore, recommendations can then be made on how to help these learners.

In this case, learners (information users) are the ones who have a need for information. If they are able to identify their information gap, they will go through information-seeking behaviour and look for information in different information sources (Wilson, 1999:251). During the stage of their information need, they will be engaging with other people and exchanging information. If the outcomes satisfy their information need, they will use that information and also share it with other people (Wilson, 1999:251). However, if at the end their information search becomes a failure, they will have to go back and start the process over again.



**Figure 2.1: Wilson's 1999 Information Behaviour model**

Source: Wilson (1999: 251)

### **2.2.3 Kuhlthau's 2004 Information Search Process (ISP) model**

Kuhlthau's Information Search Process was used in research mainly conducted with high school learners. This is because children and teenagers are still developing their knowledge base and how they view the world (Kuhlthau, 1997: 709). The model was developed using high school learners who were succeeding academically and was tested and expanded with different high schools (Holliday and Qin, 2004:359). Kuhlthau, Heinström and Todd (2008) state that "the Information Search Process model describes feelings, thoughts and actions in an information seeking task with a discreet beginning and end, where considerable of knowledge takes place."

In the beginning, the temporal conceptualization of Kuhlthau's Information Search Process model on information need, seeking and use was different from the existing model that view information need as a static state of mind (Cole, Beheshti and Abuhimed, 2008:2249). They further explain that "the second innovation of the ISP model is that it describes the role of the student's feelings, thoughts, and actions in (a) constructing the school assignment and (b) directing the student's information-seeking behaviour to effectuate this construction" (Cole, Beheshti and Abuhimed, 2008:2249).

When using this model in an educational environment, learners will stop to collect and compile information to satisfy their teachers. However, they will go through the thinking process which needs considerable exploration of ideas, and thought formulation in order to have their own knowledge and understanding of the topic and be able to present it. During the exploration and collection of information, learners should have enough time for reflection and formulation to ensure that they undergo all the importance stages of learning (Kuhlthau, Heinström and Todd, 2008).

Kuhlthau's Information Search Process is a connection of feelings, thoughts and actions. Fisher, Erdelez and McKechnie (2005: 230) state that the model shows the similarity of the "users experience in the process of information seeking for a complex task that has a discrete beginning and ending, and requires construction and learning to be accomplished." The Information Search Process consists of six stages:

1. Initiation – a person is aware that he has an information gap
2. Selection - the general topic is identified and chosen
3. Exploration - exploring and searching information available on the general topic
4. Formulation - focusing on a specific area
5. Collection – gathering relevant and accurate information on the topic
6. Presentation – completion of information search, using results where needed

In this study, the model shows that learners go through stages of feeling, thoughts and action during their information-seeking. Holliday and Li (as cited by Kuhlthau, Heinstrom and Todd, 2008) note that “Students tend to conceptualize information as something easily available and feel frustrated when the process is not as seamless as they expect.” The Information Search Process is essential in guiding and contributing to the knowledge development of the students (Kuhlthau, Heinstrom and Todd, 2008). Kuhlthau (2004)’s Information Search Process model is shown in Figure 2.2 below.

Stages	Task	Topic	Prefocus	Focus	Information	Search
Starting	Initiation	Selection	Exploration	Formulation	Collection	Closure Writing
Feelings	uncertainty	optimism	confusion,	clarity		sense of relief
satisfac-			frustration,		direction/	tion
or			doubt			confidence
dissatis-						
faction						
Thoughts		ambiguity-	----->			specificity
					----->	
					Increase interest	
Actions		seeking relevant information	----->			seeking pertinent information

**Figure 2.2: Kuhlthau's Information Search Process**

Source: Fisher, Erdelez and McKechnie (2005: 231)

## 2.2.4 The mapping of the research questions and variables of the models used in the study

Research question	Construct	Model
What information do the grade 10 and 11 learners of Gerson Ntjie secondary school need?	Information need	Wilson's 1999
Which sources of information are mostly used by the grade 10 and 11 learners of Gerson Ntjie secondary school?	Information sources	Wilson's 1999
How do the grade 10 and 11 learners of Gerson Ntjie secondary school seek information?	Information seeking behaviour	Wilson's 1999 and Kuhlthau's 2004
What are some challenges the grade 10 and 11 learners of Gerson Ntjie face when seeking information?	Information seeking barriers	Wilson's 1999 and Kuhlthau's 2004
How has social networks changed the information needs of the grade 10 and 11 learners of Gerson Ntjie secondary school?	Informal information sources	Wilson's 1999

**Table 2.1: Table of variables**

Source: Wilson, 1999 and Kuhlthau, 2004

## **2.3 Literature review**

The literature review carefully examine and provide a summary on the findings of existing research, being guided by the interests of the researcher and identifying the gaps found in the previous studies (Bosswell and Cannon, 2014:148). Similarly, Jesson, Matheson and Lacey (2011:10) maintains that the literature review as an academic task “where the researcher shows an awareness and also interprets what is already known and eventually point out contradictions and gaps in existing literature.” It is the discussion of the sources, linking one idea with the other. The literature review gives great attention to the available knowledge on the topic (Dawidowicz, 2010: 2). It does not merely summarize the conducted information available on the field of study but it also evaluates and gives clarity to the existing literature. A review looks at the previous studies and explains what has been said and done on the topic of study.

Pather (2004:71) points out that the purpose of the review is “to indicate where the present study fits into the broader debates, thereby justifying the significance of the study.” A review of the literature therefore is conducted to show the strengths and limitations in the field of study. Blaxter, Hughes and Tight (2006: 3) add that “the purpose of literature review is to locate the research project, to form its context or background, and to provide insights into previous work.” With the given definitions and the role of literature, this section reviews literature on the information needs that the grade 10 and 11 learners at Gerson Ntjie secondary schools might possess. The literature also focuses on how the (grade 10 and 11) learners (of Gerson Ntjie secondary school) seek information. The sources used in this study are from online databases SABINET, Ebscohost, Jstor, Science Direct, Emerald Insight, ProQuest and Google Scholar. Other sources are from print materials like books, journals, theses and dissertations.

The topics covered in this section are information need: the type of information that secondary school learners mostly need; information sources: to address the information sources that secondary school learners prefer to use; information seeking behaviour: how the secondary school learners search and gather information; information barriers: the information challenges that are found when learners search or retrieve information; and social networking sites and how social networking sites can be used in academic institutions as an educational tool.

As explained in section 1.7 of Chapter one, the reviewed literature indicates some gaps that are found in studies conducted on similar topic to this study. The researcher noted that there are limited studies that have been conducted in secondary schools and most of them are not about information needs and information seeking behaviour. Tertu (2013:296) agrees that “the information needs of children and young people are poorly covered in the literature of library and information science.” The majority of the available literature on the information need and information seeking behaviour are from studies with university students and private or government institution. Another weak spot found in the reviewed literature is that in the total number of studies carried out in secondary schools, a majority of them have been conducted in urban areas or township areas and there is only a few that focus on schools in rural areas.

Since most of the literature has a university population (both lecturers and students) as their participants, the focus is on sources that are used by the university community and those sources are different to the sources that are used by school learners. This means that the literature has limited information on the sources that are used by secondary school learners. There is also little literature on how learners seek information. The information sources and information seeking behaviour of university students is very different to that of secondary school learners. There are greater chances that the information sources and information seeking skills that are used by university students will not be able to satisfy the information needs of secondary school learners. Information seeking is determined by the type of information need and the context of the situation. Lastly, the available literature mostly indicates how learners misuse social networking

sites by always chatting with their friends instead of research into encouraging and educating learners on how to use social networks as an educational tool.

Therefore, this study addresses the information that is needed by the secondary school learners. From the study, learners will learn new ways of seeking information and also be exposed to the relevant sources that can assist them to find the needed information. Schools and learners will be alerted to the fact that social networking can be used to benefit the learners' school performances when being used to complement their traditional face to face learning.

### **2.3.1 Information need**

Case,(2007 :333) is of the opinion that an “information need arises when an individual senses a problematic situation or information gap, in which his or her internal knowledge and beliefs and model of the environment fail to suggest a path towards the satisfaction of his or her goals.” People do not know their information need or that they have an information gap because they are not aware of the available information that could assist them (Nicholas, 2000: 22). Being able to identify the needed information can help learners to do their school work and complete it in the required time. Elsenberg, Lowe and Spitzer (2004: 4) explain that an information literate person must be able to identify an information need, find, evaluate and also be able to utilize the information needed.

Learners need information to fulfill different types of need. In the United States of America, Yi (2007:668) conducted a study on international student perceptions of information needs and use and found that the majority of the students (45.9%) needed information for their academic work, and 36.1% of them needed it to improve their library skills. However, these students needed information to improve library skills because they have a library in their institution which is not the case for the learners of Gerson Ntjie secondary school. One needs skills for something which they will be able to apply those skills to. Ajiboye and Tella (2007) undertook a study in Botswana to determine the undergraduate students' information seeking behaviour and similarly, they found that the greater and more important information needed by students (64.1%) was academic information. Other



students needed information for personal development (12.5%), health information (11.25%), employment information (9.3%) and global information (2.85%).

Niemand (2010:3) undertook a study on the information seeking habits of information and knowledge management students at the University of Johannesburg. The study attempted to “explore the information seeking habits of Information and Knowledge Management students at University of Johannesburg. The study used a questionnaire to collect data from 200 students. The results showed that according to the importance and the need for information, 48.6 % of the students needed information for research, 20% needed it to know more about their specific area of interest and only 19% needed information for personal interest. Students mostly need information for academic purposes. However, the findings indicated that as much as most students needed information for research, information is also essential for students in other areas of their lives like personal development.

Boadi and Letsolo (2004:194) carried out a study on information needs and information seeking behaviour of distance learners at the Institute of Extra-Mural Studies in Lesotho. The study tried to establish the information needed by distance learners to be able to conduct their learning activities efficiently. The respondents were asked about the information they preferred to find in the library. The findings indicated that most of the respondents (74%) stated that they preferred information that was relevant to their programme of study, 64.8% liked information that can be accessed easily; 40.7% of the respondents indicated that they liked information that comes from the Internet, while 9.2% of the respondents wanted to have information that was free and a minimum of 7.4% of the respondents preferred information from the Online Public Access Catalogue. The results showed that learners liked to find information that is flexible, “relevant, timely, easily accessible and current” (Boadi and Letsolo, 2004:194).

Nwangu (2010:52) conducted a study on information and learning needs of youth in a rural community in Nigeria. The study aimed to address the disadvantages that girls faced due to traditional practices. The study focused on youth between the ages of 7 and 30

years old. A questionnaire and focus group were used to collect data. The findings showed that all the respondents below 12 years of age, stated that they needed information to learn about pregnancy. Boys and girls indicated different types of information needs; 32.33% of the girls indicated that they needed information for issues about HIV/AIDS; 19.19% needed information for careers; 18.19% needed information for children's rights; 18.19% needed information to get school related information; 12.98% stated that they needed information for health reasons and lastly, 4.27% needed information for education purposes. However, boys indicated different types of information needs from the girls group. The results show that 59.9% of the boys needed information for school subjects, 32.19% needed information about computers and the remaining 29.1% of the boys indicated that they needed information about sports.

In Limpopo province, Matlala (2015:64; 75) carried out a study on the use of the Internet by grade 11 learners from selected schools in the Sekhukhune district, Makhuduthamaga local municipality. The purpose of the study was to investigate what grade 11 learners mostly use the Internet for. The study used 264 grade 11 learners from 7 high schools. The findings indicated that of the 264 learners, 78% of the learners used the Internet for learning purposes, 46.5% used it to communicate with friends and family, and 41% indicated that they used the Internet to update knowledge. The remaining 18% of the learners stated that they used the Internet for entertainment purposes while only 11% learners indicated that they used Internet to get the news. The findings showed that learners use Internet for different reasons, which is because learners are trying to satisfy different types of need, hence they look for different information.

### **2.3.2 Information sources**

An Information source is a medium for the storage of information and knowledge (Nikalanta and Scamell, 1990: 25). People utilize the information sources to retrieve the desired or relevant information to satisfy their needs. Without the availability of information sources, people will fail to fulfill their information needs and will not be able to take part in information seeking behaviour (Nicholas, 2000:101). Information sources can be differentiated from formal or informal sources, human and documentary sources or

external and internal sources (Gralewska –Vickery, 1976:267). Wilson (1999:251) agrees that an information user will use formal or informal information sources to satisfy his information need. Case (2002: 12) admits that there is an essential difference between formal and informal sources of information in the literature of information seeking. Case (2002: 12) further specifies that formal sources refer to encyclopedias, dictionaries, books and textbooks, whereas, informal sources include colleagues, friends and family.

Tury, Robinson and Bawden (2015:314) carried out a study of information seeking behaviour of distance learners in London. The research questions that underpinned the study were: “What are the information needs of distance learners at the University of London?; What kind of information sources and information channels are used by distance learners and why are they used?; What barriers do distance learners encounter when accessing and using Online Library resources?; To what extent does the Online Library meet distance learners' information needs? What practical solutions can be employed to help learners overcome the barriers they face when seeking, accessing and using information sources?” The study found that students mostly used ‘course textbooks’ (80%) and ‘free sources of Internet’ (79%) as their sources of information (Tury, Robinson and Bawden, 2015:316). Learners in rural areas tend not to use information because they do not have enough information resources like free Internet where they can be able to search information to complement the one they find in their course textbooks.

Taylor (1991: 219) also states that most learners only use teachers as their source of information because they see teachers as the population group that is active, experienced and critical users of information. This is supported by a study conducted by Kakai, Ikoja-Odongo and Kigongo- Bukunya (2004) in Uganda about undergraduate students and their information seeking behaviour. The purpose of the study was to find ways that would improve undergraduate students' information seeking skills. The study was guided by the following objectives: “To establish the undergraduate students' information needs, to determine the undergraduate students' information seeking behaviour; To establish the problems that undergraduate students encounter in information seeking; and To suggest strategies of improving undergraduate students' information seeking behaviour” (Kakai, Ikoja-Odongo and Kigongo- Bukunya, 2004:2). The findings showed that students mostly

preferred using lecture notes and handouts more than any other information source (Kakai, Ikoja-Odongo and Kigongo- Bukonya, 2004:6). Learners need to learn to be independent in searching for information. This will sharpen and prepare them for the tertiary education level where they have to find information on their own.

In South Africa, Adams (2010) carried out a study on the uncertainty in information seeking behaviour in the virtual playground of Generation Y students at Stellenbosch University. The purpose of the study was to discover the information seeking behaviour of Generation Y students when they carry out their academic assignments. The study used questionnaires, interviews and journal writing as the instruments for the study. Adams (2010:75) study noted that students firstly used Google when given any academic assignment. Sources like Google are mostly utilized when students have computers with connected free Internet. This study shows that when there is enough information sources available, students have a choice to choose the one that suits them best. Students use different sources like Internet, course textbooks or lecture notes to find information. The preferred source may be chosen because of its availability, ease of use or its relevancy and accuracy to the needed information.

Kuhlthau (1994: 62) on “the assessment and the school media library media center” stated that it was important to think of assessing students’ library research based on how they used the library collection sources. Kuhlthau (1994:62) stated that students used to start their information search by using general sources then more specific sources that matched their research process. During the exploration stage, students used different sources related to their topic of need and on the collection stage they used information sources that had specific information to their research process. One student explained that “the ones (sources) in the middle are the most useful because in the beginning you’re not definitely sure what you are doing. Then as you get direction toward the middle, you know what you are looking for. In the end you are just looking for extra things so you are sure you have everything, but a lot of it is repeat.” Kuhlthau (1994:62) emphasized that students used different sources at different stages of the Information Search Process.

Monyela (2013:116) carried out a study on the information seeking behaviour of postgraduate students at Rhodes University and Fort Hare University. The purpose of the study was to eradicate information illiteracy of the postgraduate students, with the aim of investigating their information seeking behaviour and how they search and retrieve information for study purposes. The study intended to establish the students' most preferred source of information. The findings indicated that students used a variety of sources with a majority (45.5%) using the Internet as their most preferred source of information. Printed books (28%) were the second most chosen source of information, while 17.5% used scientific databases. A minority of 9.0% stated that they used academic and scholarly search engines. The findings showed that a majority of the students preferred to use the Internet over other information sources that are available.

In addition, Hoehne (2012:60) conducted a study at Jules High school in Johannesburg on the impact of informal social networks on integration. Jules High school enrolls South African and migrant students. The study was conducted with 93 students between 11 and 20 years old using group-administered questionnaires which were equally distributed according to gender and migrant status. The study also used a focus group of 10 participants between 14 and 20 years old. The findings revealed that the common information sources that were used by learners to find news about South Africa are television (36%), Internet (23.7%) and newspaper (21.3%). The students were further asked about the number of sources they have or use to gather news about South Africa. The results showed that majority of the students (38.5%) indicated that they used three and more sources, followed by 35.2% of the students who said they only used one source of information while 26.4% said they used two sources of information.

Onen (2015:111) conducted a study on the information literacy integration strategies into the curriculum of senior secondary schools in Botswana. The study was motivated by concern that students from the University of Botswana did not have sufficient information literacy skills and competencies. The study used 150 teachers from 12 schools of which 4 were public schools and 8 were private schools. The teachers were asked about the content that is included in the school information literacy curriculum. The results showed

that 112 said they taught the use of print and electronic sources; 72 of the teachers confirmed teaching citation of sources of information and writing references or bibliography in assignments; 86 of the teachers stated that they taught the use of encyclopedias, glossaries, magazines, indexes, newspapers, dictionaries, almanacs and the differences between fiction, non-fiction and parts of the book. The results further showed that half of the teachers (50%) included the use of the library catalogue to look for library materials using title, subject, and name of the author in the information literacy curriculum, but the remaining 50% did not do this. Teaching learners about the use of different information sources is recommended for all schools so that learners are exposed to and can learn about different information sources and how to use them at an early age. This study is important to the current study because learners in the current study have limited information sources and it would be beneficial to them if they learn how to use different information sources while they are still in their secondary school.

### **2.3.3 Information seeking**

According to Case (2002:5), information seeking is when a person notices a need to acquire information in response to awareness of one's information gap. Information seeking starts when a person realizes that his current state of knowledge is not enough for what is needed to solve a problem. The process ends when that person no longer sees the need for new information. Information seeking is when an individual takes the initiative towards fulfilling his needs. Humans undergo the process of information seeking in order to be able to change their state of knowledge (Nel n.d: 25). According to Fisher et al. (2005: xix) information behaviour is "how people need, seek, manage, give and use information in different contexts" and Ruthven and Kelly (2011:16) similarly opine that information seeking refers to the need, seeking and use of information (Ruthven & Kelly, 2011: 16). It includes "examining the ways in which people find information they require, such as how and where people look for solutions to information problems" (Burke, 2007: 697). In this study, there is a need to find out whether the learners of Gerson Ntjie secondary school find the relevant information for their academic work and also determine the type of information sources that they use. Information seeking is concerned with the utilization of information sources.

In India, Singh, Kumar and Khanchandani (2015:35) carried out a study on the information needs and information seeking behaviour of foreign students at the University of Delhi. The study used a structured self-administered questionnaire on 120 students. The findings indicated that most students (96.5%) used the Internet as the main source of information while the library was used by 58% of the students; and lecturers or tutors were consulted by 51.1% of the students (Singh, Kumar and Khanchandani, 2015:34). The results showed that students preferred to search for information through the Internet rather than books. The study was underpinned by the following objectives:

“To find the awareness and use of library resources by the foreign students; To identify the types and range of information resources used; To investigate the availability of information resources that affects the information seeking patterns and communication process of foreign students; To determine whether or not different kinds of information need leads to different information seeking behaviour and communication channels; To analyze the possible reasons for not using information sources; and to understand the problems confronted by the foreign students while seeking information” (Singh, Kumar and Khanchandani, 2015:39).

Similarly, Majyambere and Hoskins (2015: 75) studied the information seeking behaviour of Humanities/Arts international postgraduate students in the University of KwaZulu-Natal and revealed that students seek information with the guidance of their supervisors on research projects and also the librarians when searching for academic information. This study shows that even when there are various sources available, students they still need the library to seek information. This shows the importance of having a library in any learning institution. A library should be seen as the heart of the school and therefore, it is a disadvantage to the learning progress of learners when they do not have it within the school. In other cases, learners prefer to search for information via people that they are familiar with.

Baro, Onyenania and Osaheni (2010:114) undertook a study on the information seeking behaviour of undergraduate students in the humanities in three universities in Nigeria. The questions that guided the study were: “What are the reasons undergraduate students

in the humanities search for information?; What are the sources of information used by undergraduate students to obtain information in humanities?; and What are the different information searching strategies employed by the students in the humanities?" The results showed that the majority of the students (65.2%) browsed the library collections to get information; 55.6% used lecturers and colleagues when they sought academic information; whereas 54.8 % said they searched for information using references given at the back of the book. Most students browsed library collections to get information not only because the library has a vast of information collection but because there was a library in their institution, they are familiar with utilizing it, and that would not be the case for students who do not have their own school.

Marais, Van der Westhuizen and Tillema (2013:68) undertook their study on grade 8 learners in a secondary school in Johannesburg in terms of their teachers' knowledge of learner's help-seeking in Mathematics problem solving. The grade 8 class comprised 20 learners and their mathematics teacher. The study looked at the following features of learners: their plans to search for help, the kinds of help they seek and their reasons for not always seeking help (Marais, Van der Westhuizen and Tillema, 2013:65). The study discovered that learners are more comfortable with asking for information from their friends. It is easy for them to ask someone whom they are more familiar with (friends) for clarity and help about their school work more rather than asking their subject teacher (Marais, Van der Westhuizen and Tillema, 2013:68). The results show that out of 20 learners, 14 learners will seek help but the remaining 6 learners will not because of fear.

Rawatlal and Petersen (2012:354) carried out a study at a South African public school in KwaZulu Natal and used focus group with grade 10 learners and 7 interviews with teachers and school managers. The study concerned factors impeding school connectedness. The aim of the study was to understand factors that impede school connectedness and to make recommendations for improving school connectedness. The results indicated that learners preferred to seek assistance from informal sources rather than formal sources. Peers were chosen as the main source of help. When learners encountered personal or emotional problems, they preferred to talk to their peers instead



of their teacher or parents. The results also highlighted learners were able to open up to their peers when they had problems, however, the unfortunate part is that they are opening up to people who have no skills to solve other people's problems.

In University of South Africa, Waithaka (2013: 91) conducted a study on the Internet use among university students in Kenya and asked students about their purpose of using the Internet. The objectives of the study were (Waithaka, 2013:9) : "to ascertain the level of students" awareness of the internet services offered by the UON; to assess students" skills in accessing the internet services; to determine the factors affecting students" effective use of the internet services; to examine the use of different types of internet applications (for example e-mail, social networking tools, the WWW and search engines); to establish the kind of information students look for on the internet; to establish the problems students experience in their efforts to use the internet services." The results indicated that (Waithaka, 2013:91) 50.8% of the students used the Internet for communication, 48.5% of the students used the Internet for research, 38.6% raised that they used the Internet for teaching, 16.7% used the Internet for recreation, and 15.9% used the Internet for learning while 10.6% of the students used the Internet for reading Web pages.

### **2.3.4 Information seeking barriers**

Information barriers are obstacles that hinder an information seeker from acquiring the relevant needed information. Wilson pointed that during the process of information seeking, the information seeker is likely to meet barriers (Wilson, 1999:252). Some of these barriers include interpersonal, personal and environmental barriers (Majyambere, 2012:12).

In the United States of America, Holliday and Qin (2004:36) conducted a study in Utah and found that undergraduate students believed that seeking information was easy but then felt frustrated when they had to deal with the difficulties of information seeking. The

students further stated that the Internet makes it easier for the lazy people because “it’s just sit and click”. They believed the digital age will put an end to the era of books because computers are convenient and quick. People want things that are simple and that can be accessed without any difficulties or delays. The availability of information on the Internet makes student believe that there are no complexities in searching for information and therefore, information can be found and retrieved without any effort (Adams, 2010: 75). The Web has changed students’ perceptions of the research process, which makes them want to be independent in searching for information but when they fail to find the required information, they become frustrated (Holliday and Qin, 2004:364).

Odenyo (2012: 15) conducted a study in Kenya on the challenges encountered by nontraditional students’ satisfaction of their information needs, and found that students felt frustrated when they had to find books and journals in the library due to their insufficient skills for searching information. The insufficient skills hindered the students when searching and retrieving the information they needed. The students also had a problem with lack of library staff on weekends and during the week after 4pm. They stated that they had inadequate support when library staff availability was reduced. Students further stated that the library hours were not convenient to them because most of them are working during the day and attended classes in the afternoon and by that time the library is already closed. Students expressed that the library was favoring full time students especially as regards loan periods because part time students were unable to get to the library during normal hours of opening.

Similarly, Adams (2010:52) carried out another study at Stellenbosch University library on the information seeking behaviour of Generation Y students. The study used the following research questions: “What are the information seeking behaviours of Generation Y students as they undertake their academic assignments? Do Generation Y students conform to the information seeking processes of the Information Search Process (ISP) model? Does their reliance on information technology affect the stages of the Information Search Process model, created by Kuhlthau? What is the role of the library in fulfilling the

information needs of Generation Y students? What is a Generation Y students' perception of or experiences of the Library's information retrieval systems?"

The findings revealed that students felt frustrated when they were unable to find the information they needed. Some of the students even expressed that they even thought of giving up or losing confidence in searching. The findings of Adams (2010)'s study supports Kuhlthau's (2004) model that students feel frustrated when they do not find the information they need. Students feel frustrated when seeking information because they lack the information searching skills or because they expect to find information easily. For university students to struggle in finding information is proof that information seeking should start to be taught in secondary schools so that learners become familiar with and be skilled in searching information at a younger age.

The inability to do school work and complete it on time is another problem that learners face in schools. Pillay (2004:6) undertook a study of the experiences of learners from informal settlements in Johannesburg. The findings indicated that learners experienced different feelings such as sadness, fear, anxiety, angry, shame and disappointment to name a few amongst others. Learners felt shame and embarrassment when they struggled with their homework, especially when they were being teased by their classmates and teachers. One of the learners when interviewed said that "I feel shame because I did not complete my homework, but I know that I am not lazy. They think that I am stupid and lazy but I am not." Learners felt sad when teachers were rude to them and treated them differently according to race. Other learners had to change schools because of their teachers' attitude towards them. Teachers and classmates play a role in building or destroying the self-esteem of every individual in class; therefore mocking one another sometimes makes information seeking difficult for other learners and they can end up with an unsatisfied need.

Again in Johannesburg, Mokhele (n.d: 39) conducted a study in identifying grade twelve learners' problem solving strategies in gravitational acceleration problems and revealed that grade 12 learners had no clear understanding of Mathematics concepts and they just

try to answer the questions without understanding the concepts. Learners answer questions with no clear understanding of what they are writing about, the goal to write and submit the work to the teacher. This proves that there are still learners who are writing just to please their teachers and not for their own understanding.

### **2.3.5 Social networking sites (SNS)**

Social networking sites are perceived as an informal source of information. Learners engage in social networking to chat with friends, families and classmates. Social networking sites are online social interaction tools where users communicate with people in their networks through a public or private profile (Muhingi et al., 2015: 171). Barnes (2006:11) defines social networking sites as online services that give permission to users to:

1. Put together public and semi-public profile with a certain system.
2. Put a list of users who share a connection
3. “Views and transverse their list of connections and those made by others within the system. The nature and the naming of connections differ from each sites.”

Hodge (2006: 2) states that social networks are liked by many people and they continue to attract many users. Brucks, Mehnet, Prommer and Rader (2008:2) are of the opinion that just like our everyday lives, we do exactly what we do in real life on the Internet, mainly because it is quick, effective and inexpensive. The 21<sup>st</sup> century teenagers are “digital natives”, they are a generation that is often on the Internet, texting, instant messaging and using Facebook (Hodge, 2006: 6). In this study, social networks sites include but are not limited to, Facebook, Whatsapp, Messenger, Youtube and Twitter. The study also uses the terms “social networking sites” and “social networks” interchangeably.

Pempek, Yermolayeva and Calvert (2009: 231) performed a study in the United States of America on college students’ social networking experiences on Facebook and found that youth mostly used Facebook for chats with their friends and to follow the activities of friends. Students find social networking sites convenient because they can be accessed

from anywhere as long they have their cell phones or their portable electronic devices with them. The disadvantage is that data is required for accessing social networks via cellphones and it is not every students that can afford to buy data. Although social networking sites are not designed for educational purposes, they can be used to enhance teaching and learning; and also be used as educational networks between schools (Sekhaolelo, 2015:10). These will inspire learners to read and learn more especially because social networking sites are their most popular tools for accessing information and they can access it at their own convenience.

Muhingi et al (2015:176) also conducted a study in Kenya on social networks and students' performance using lessons learnt from an Open Learning Centre. The study comprised of 100 secondary school students from grades 8 to grade 11. The findings showed that students spent too much time enjoying social networking when they should have been striving for academic excellence, which reduces the pass rates of secondary school. Students (67%) spent more than 2 hours of their time on social networks such as Facebook, Tag, Ovi Store, Hi5, 2go and Twitter. The majority of the learners stated that they used Facebook as a platform of socialization to join with friends. Most parents, teachers, company managers and the government complain about learners spending most of their time on social networks chatting with their friends (Sekhaolelo, 2015:9). In most schools, there are a number of learners who are distracted from their school work and end up performing less than expected because of the misuse of the social networks.

Molopa (2014:116) undertook a study on the potential benefits and risk of social networks amongst learners in Limpopo province. The study was a comparison of two schools in the area, Sekitla High School which is situated in a rural village and Capricorn High School which is in urban area. The aim of the study was to discover and examine the benefits learners get from using social networks and the dangers associated with it. The study found that learners from both schools used social networks to collaborate with one another on homework and group projects. However, other learners viewed social networks as a distraction and 56% of the learners claimed that their performance had dropped since the introduction of social media. Some learners (20%) stated that social

media assist them with their school work because they utilize it as a platform to help each other with things they did not understand in class. The remaining 24% stated that they did not experience improve performance in their school work because of social networks.

Moyo and Abdullah (2013:140) support that social media make learners advance and maintain the reading habit more than the television and print media. Indeed, social networking sites can satisfy the information needs of the students but it depend on which type of need. Although other studies show that students are able to use social networks to complement their studies there are also students whose learning performance is badly affected by the introduction of social networks.

Monyela (2013:122) carried out a study on the information seeking behaviour of postgraduate students at Rhodes University and Fort Hare University. The study wanted to find out how frequently the students used Internet to search for information. The results indicated that most students 52.5% used the Internet to search for information on a daily basis; 37% of the students searched for information through the Internet weekly; 9.0% of the students searched the Internet monthly while 1.5% searched for information on the Internet quarterly. The findings indicated that a majority of the students daily used the Internet daily to seek information. The findings also indicated that students did not utilize the available online academic databases; instead they used the general Internet more. This means that the Universities were spending a lot of money to subscribe to academic and scholarly search engines that were not heavily used by students.

In Ghana, Sarfo and Ansong-Gyimah (2011: 220) conducted a study on Ghanaian senior high school learners' access to and experiences in the use of information and communication technology. The population of the study was learners between the age ranges of 14 to 21 years in four senior high schools. The results showed that the highest number of learners (38.7%) used the Internet to acquire skills, 23.2% used the Internet for learning purposes, 22.5% used the Internet for entertainment at home, 21.8% utilized the Internet for social communications and the remaining 11.6% used the Internet for entertainment. The use of the Internet depends on the type of information need a user

has. Some learners indicated that they spent most of their time on the Internet while others did not see the necessity of spending most of their time on the Internet.

However, there are other individuals who use social networking sites to torment one another. Scholtz, van Turha and Johnston (2015:98) in Cape Town carried out a study on Internet visibility and cyber bullying. The study used grade 10, 11 and 12 learners in nine secondary schools in Cape Town. A majority of the learners were between the ages of 15 to 21 years old. The findings show that 42% of the learners had been bullied online in the previous 12 months. Some of the learners 29% stated that they have been bullied through social networking sites, followed by 22% of those being bullied by SMS. Being cyber victims left learners feeling traumatized and bothered by that incident for days. Female respondents took longer to get over cyber bullying than male respondents. When participants were asked if they had cyber bullied anyone in the past 12 months, 60 % admitted to being perpetrators. Learners of both genders agreed to having been nasty to someone online everyday or once or twice a week. As a result, learners were afraid to engage in social networking sites because they were afraid that bullies may use it as a platform to hurt their feelings.

## **2.4 Summary of the chapter**

This chapter presented the theoretical framework which underpinned the current study, namely: Wilson's 1999 model of Information Behaviour and Kuhlthau's 2004 Information Search Process (ISP). The chapter further reviewed the scholarly literature related to information needs, information sources, information seeking, information challenges and the use of social networking sites. The next chapter provides the methodology of the study.

## **Chapter 3: Research methodology**

### **3.1 Introduction**

According to Welman, Kruger and Mitchell (2005:2) “research methodology considers and explains the logic behind the research methods and techniques”. Research methodology is a scientific system of clear and exact procedures and rules to be followed when conducting a research (Nkomo, 2009). Research methodology explains in detail how the research will be carried out and which techniques will be used. Research methodology provides the layout of the methods that will be used in the study. Therefore, this chapter discusses the research methods followed when carrying out this study. It explains the research paradigm, approaches, research design, population for the study, sample and sampling techniques, the data collection methods and also how data was analyzed. Cresswell (2009: 203) states that the main research methods are qualitative, quantitative and mixed methods approaches.

### **3.2 Research Paradigm**

A paradigm is concerned with people’s conception of the world, including all their assumptions about the conception of the world (Teddie and Tashakkori, 2009: 4). Du-Plooy-Cilliers, Davis and Bezuidenhout (2014: 19) explains that a 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.” There are positivists, interpretivist and post-positivist paradigms in research (Markula and Silk, 2011:31). This study used positivist paradigm because the researcher wanted to avoid bias when collecting data by ensuring that the role of the researcher is not given too much attention. Positivist paradigm is concerned with real observations, measurable phenomenon and objectives (Philips and Burbules, 2000). Positivist paradigm believes that there is only one truth and the reality is fixed.



### **3. 3 Research Approach**

The research approach is concerned with how the researcher carries out the study. Social research has three approaches which are the qualitative approach, quantitative approach and mixed methods approach (Johnson and Christensen, 2016). According to Creswell (2014:5) the research approach “is the plan or proposal to conduct research, involves the intersection of philosophy, research designs, and specific methods.” The research approach guides the researcher on how to carry out the study.

#### **3.3.1 Qualitative methods**

Qualitative research looks at opinions and how a person or people know the world and their explanation from their experiences (Maree, 2010:50). Du Plooy-Cilliers, Davis and Bezuidenhout (2014: 174) explain that “qualitative researchers are interested in the depth of human experience, including all the personal and subjective peculiarities that are characteristic of individual experiences and meanings associated with particular phenomena.” Qualitative methods are methods that are concerned with the gathering, analysis, interpretation, and presentation of narrative information (Teddie and Tashakkori, 2009: 6). Some of the strength of qualitative research as stated by Tracy (2013) are that it “is rich and holistic; also it offers more than a snapshot – proves understanding of a sustained process.” Researchers have a chance of collecting original data from the population. In this study, through the use of the qualitative approach, the researcher was able to give participants a chance to express their opinions. However, qualitative research has some weaknesses: it can be time consuming and it can also be quite expensive.

#### **3.3.2 Quantitative methods**

Quantitative research methods use existing theory to construct a hypotheses, which based on what is experienced or seen during the course of the investigation will be proved right or wrong (Goertz and Mahoney, 2012:11).Keohane and Verba (as cited by Thomas, 2003: 2) are of opinion that

“Quantitative research uses numbers and statistical methods. It tends to be based on numerical measurements of specific aspects of phenomena; it abstracts from

particular instances to seek general description or to test causal hypotheses; it seeks measurements and analyses that are easily replicable by other researchers.”

This study was carried out with quantitative method, using a survey design. Quantitative methods involve the gathering, analysis, interpretation, and presentation of numerical data (Teddie and Tashakkori, 2009:6). Quantitative research uses statistical data and the collected data is presented with numbers, tables and percentages (Babbie, 2010:35). Bamberg (2000: 146) believes that the strength of the quantitative research method is that it allows generalization of the findings of information to the population it was obtained from. However, the quantitative method has weaknesses: producing inaccurate and inadequate information can be a problem, and also it may be difficult to gather other information such as about sensitive issues (Bamberg, 2000: 146).

### **3.3.3 Mixed methods**

Mixed method is a “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches in a single study” (Teddie & Tashakkori, 2009: 7). It is the use of more than one methodology in a single study. Clark and Creswell (2008:165) state that mixed method is the combination of qualitative methods with quantitative methods of collecting and analyzing data in one study.

The benefit of mixed method is that combining two methods with various strengths and weaknesses will help reduce mistakes and reduce the possibility of missing anything important (Johnson and Christensen, 2016). According to Schulze and Kamper (n.d: 133) mixed method “allows the researcher to study large samples and obtain results that may be generalised to a population, while also examining in depth particular cases.”

## **3.4 Research design**

Research design is defined by Welman, Kruger and Mitchell (2005: 52) as “the plan according to which the researcher obtains research participants and collects information from them.” It is the plan to help the researcher in gathering, examining and finding meaning to the observed facts (Bless and Higson-Smith, 1995: 63). There are a few different types of research design survey design, non-experimental research designs, correlation design, criterion-groups design, cross-sectional design and also longitudinal design (Clark and Creswell, 2008: 93-95). This study was conducted using survey research design.

### **3.4.1 Survey research design**

Survey research design is the research strategy where data is gathered from certain parts of or the whole population, to determine the relative occurrence, sharing and connectedness of naturally occurring variables (Powell, 1991:47). It is the gathering of facts on different types of situations, with each situation being examined only in terms of the special feature under consideration (Bless and Higson-Smith, 1995: 43). According to Du Plooy-Cilliers, Davis and Bezuidenhout (2014: 150-152) there are different types of surveys such as mail survey, telephone survey, personal interview, group administration and questionnaires. The type of survey that the current study used was the questionnaire. According to Powell (1991:53) the benefit of survey research “is that if properly done, it allows one to generalize from a smaller group from which the subgroup has been selected.” Survey can use more than one approach. It is also most suitable for researchers who want to gather primary data from large elements of a study that cannot be described straight from observation (Babbie, 1992: 262). Using survey in a research process ensures that the correct information, efficiency and accuracy are maintained, and it also saves time and money (Dube, 2005: 106). Survey research is popular in South Africa (Babbie and Mouton, 2001:231). Social Sciences and other fields mostly use surveys as data-gathering technique (Neuman, 2009:144).

### 3.5 Population

According to Durrheim and Painter (2012: 133) “the population is the larger pool from which our sampling elements are drawn, and to which the researcher want to generalize our findings.” Population is the total number of the specific elements of the study (Babbie, 1992:198). Babbie (1992:107) adds that “the population of the study is that group (usually of people) about whom we want to be able to draw conclusions.” The latter definition is more appropriate for this study because the grade 10 and 11 learners enrolled at Gerson Ntjie secondary school in 2016 are the group of people whom the researcher wants to draw conclusions about. The population for this study comprised of 382 learners from both grade 10 and 11 classes.

N=382

Grade	Class no
Grade 10	230
Grade 11	152
Total	382

**Table 3.1: Number of learners per grade**

Source: Kganyago, 2016

### 3.6 Sampling

Sampling is the process of choosing the participants for the study (Babbie, 1992: 192). Similarly, Maree (2010: 79) refers to sampling as the process applied to choose a part of the population that will be used in the study. The purpose of sampling is that a set of elements from a population is chosen in such a way that their description will accurately represent the whole population from which it was selected (Babbie, 1992: 200).

### 3.6.1 Sample selection

According to Babbie (1992:194) there is probability sampling and non probability sampling. Durrheim and Painter (2012:139) state that “non probability sampling refers to any kind of sampling where the selection of elements is not determined by the statistical principle of randomness.” However, through the use of non probability sampling, there are chances that the population may not be represented accurately. Non probability sampling is used when it is impossible to gain access to the whole population (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014: 137). In contrast, probability sampling is about everyone in the population having the same chance of being selected as a participant of the study (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014:136). With probability sampling, everyone has an equal chance of being selected. Powell (1991: 64) opines that probability sampling improve the chances of choosing a set of elements that will correctly represent the whole population. According to Bailey (1994:89) probability sampling includes random sampling, systematic random sampling, stratified random sampling and cluster sampling, while Babbie (2014:196) opines that non-probability sampling includes purposive sampling, snowball sampling and quota sampling. The current study used systematic random sampling.

Systematic random sampling was used to select the participants for the study. Parahoo (2014:266) explains that systematic samplings “are drawn by choosing on a list at intervals prescribed by the researcher in advance.” Numbers from 1 to 382 were written and put in two boxes each. From the first box every student took out one number without looking into the box. In the second box, the researcher randomly picked out a number and when it matched with the number of the learner, the learner was then selected for participation. The researcher randomly took out numbers until the participants reached the sample size. This means that every learner had an equal chance of being selected to participate in the study.

### **3.6.2 Sample size**

A sample is the selected number of individuals chosen from the population to participate in the study (McMillan and Schumacher, 1993: 693). The sample size for this study is 181 learners. According to Krejcie and Morgan (1970) table of sample size determination, with a population size of 382, the sample size is 181. Guiloff (2013:231) state that “a large sample is required to demonstrate the difference and be confident that it is truly significant.” Grinnell (1994:253) had the same opinion that the bigger the sample, the better. The sample size was sufficient for this study and enabled the researcher to establish the information seeking of learners from a large sample and be able to generalize. Any increase in the sample size, increases the accuracy of the findings (Nachmias and Nachmias, 1996:194).

### **3.6.3 Sample frame**

A sampling frame is defined by Mateo and Foreman (2014: 198) as “the actual list of sampling units from which the sample, or some stage of the sample, is selected.” The participants included in the sampling frame must show almost the same qualities of the target population (Moule and Goodman, 2009: 266). In this study, numbers were written in two boxes; the first box the learners picked out a number without looking into the box, the second box was used by the researcher to pick out a number, without looking as well. The number from the researcher that matched with the learner’s number gave the learner a chance to be a participant in the study.

The following calculations were applied to select the participants for the study:

Grade 10:  $230/382 \times 181 = 109$

Grade 11:  $152/382 \times 181 = 72$

### **3.7 Data collection instruments**

Data instruments are the techniques and methods that are used to gather data. Data instruments are used to collect quality data that enable the researcher to provide credible answers to the research questions. Using the relevant instrument to collect data enhances reliability, validity and accuracy of the data. Bless and Higson-Smith (1995: 99) explain that “data consists of measurements collected as a result of scientific observations.” According to Bless, Higson-Smith, and Kagee (2008: 111), data collection is the precise, systematic gathering of information relevant to the research sub-problems, using methods such as conducting surveys. The techniques that are commonly used to collect data in a survey are interviews, focus group and questionnaire. The technique that was used in this study was the questionnaire because with questionnaires, the researcher was able to reach a larger population at a low cost (Pickard, 2007:183).

A questionnaire is a good technique to collect data, but it has a number of advantages and disadvantages.

#### **3.7.1 Advantages** (Maree, 2010:57)

- Majority of the participants can complete the questionnaire quickly.
- It is easy for participants to complete.
- Participants from long distances can be reached.
- It produces the best response rate.
- When participants are confused with some questions, the researcher will be closer to assist.

#### **3.7.2 Disadvantages** (Marutha, 2011:89)

- “It takes a lot of time for a researcher to compile questions and distribute questionnaires as well as collecting them.
- They are useless for those who are illiterate.

- They are also costly in terms of materials to be used, such as computer or typewriter, printer, pages for printing and files to carry those questionnaires to the participants”

Although a questionnaire has its disadvantages, it was chosen for this study because its disadvantages are outweighed by its advantages. The disadvantages of this technique will not have any impact on the study, and different responses from different test administrators made the researcher ensure that the questionnaire content is of good standard. Kuhlthau used a questionnaire several times on replicated longitudinal studies of information seeking behaviour including the 1993 model that was used in the study of how the grade 8 and 10 high school learners seek, gather and use information. This made the use of questionnaire for this study more relevant because the study focuses on the information need and information seeking behaviour of high school learners. The researcher gave learners the questionnaires to complete and collected them on that same day.

### **3.8 Reliability and validity of the instrument**

Reliability is when an instrument used at different times or on different participants of the same population, produces the same findings (Maree, 2010: 25). Similarly, Babbie (1992: 129) maintains that “reliability is a matter of whether a particular technique, applied repeatedly to the same object, would yield the same results each time. Reliability is about the consistency of the method or techniques used in the study. However, it is useless for a study to be reliable but not valid. Validity refers to how much a measurement tool provides data that is similar to the usually agreed meaning of a certain concept (Babbie, 1992: 135). Bless and Higson-Smith (1995: 135) states that “an instrument with very high reliability is useless if it has poor validity. Similarly, an instrument with very low reliability should not be used merely because it has very high validity.”

To enhance reliability and validity of the questionnaire, the researcher conducted a pilot study on grade 10 and 11 learners in another high school: of Klaas Mothapo Secondary School. The school was chosen because it has the same characteristics as the school



used for the study. The pre-testing benefited the study because from the answers and interpretation of the pilot study, the researcher was able to rectify the mistakes in wording and questions construction. The 20 learners who volunteered were randomly picked in class to participate in the pilot study.

The data collected from the learners during the pilot study helped to measure the time needed to complete the questionnaire. The researcher estimated that learners may be able to finish answering the questionnaire within 15 minutes, and therefore, the pilot study assisted the researcher to see whether the learners would be able to answer all questions in the required time. The answers from the Klaas Mothapo secondary school learners also assisted the researcher in knowing whether the learners are able to understand the questions. The researcher was able to see whether the wording and terminology used in the questionnaire could be understood by learners of those grades. A large number of questionnaires with all questions answered were a good indication that learners understood the questions. If learners had left many questions unanswered, the researcher would have known that those questions must be reconstructed because they may be difficult for learners to understand.

The questionnaire was also sent to other experts in the field. The questionnaire was sent to some lecturers in the Departments of Information Studies at University of Limpopo and University of KwaZulu-Natal to check the validity of the content. The Departments of Information Studies in both universities gave their professional opinion on the questionnaires and the mistakes that they highlighted were corrected before the researcher could continue with the study. Welman, Kruger and Mitchell (2005: 148) explain that a pilot study is used to check possible errors in the measurement procedures. Through the pilot study, the researcher was able to ensure that the chosen data collection instrument was free from errors and suitable for the study.

### **3.9 Data analysis**

According to Sapsford and Jupp (2006: 153) data analysis is “the stage at which the researcher ‘tunes into’ the meaning and messages in his or her data and builds up an appreciation of the nuances and structure and the possibilities of analysis.” The

researcher interpreted the collected data to generate meaning, taking note of the omissions and errors that have been made during the course of the study. The qualitative data was analyzed using thematic analysis whereby the researcher reviewed the collected data, made notes and sorted out data accordingly. The researcher narrated the data from the participants to show the results. The Statistical Package for the Social Science (SPSS) software was used for the quantitative data analyses and results were presented through graphs and charts. As noted by Pickard (2007: 278) SPSS can enable the researcher to easily get meaningful information from data.

### **3.10 Ethical consideration**

Ethics are the normative ways of behaviour; issues of standards, integrity and values in human life. Welman, Kruger and Mitchell (2005: 181) explain that “the principles underlying ‘research ethics’ are universal and concern issues such as honesty and respect for the rights of the individuals.” When conducting research it is important to adhere to the rules and acceptable standards that govern how the study should be carried out, and also how to treat the participants. Mertens (2012:19) emphasizes that all academic studies should adhere to the ethical guidelines and principles made by the Universities involved. As part of the requirements for studies that are being conducted in schools, the researcher obtained an approval letter from the Department of Education Kgakotlou circuit office (attached as Appendix 1) prior to collecting data.

The University of KwaZulu-Natal has policies that ensure that every researcher conducts a responsible study and participants are not harmed in any way by the study. The researcher presented the content and the methodologies of this study to the University Ethics Committee upon the completion of the research proposal. The study was approved and the researcher was given a clearance letter from the University of KwaZulu-Natal Ethics Committee and also from the school of Social Science. The clearance letter serve as proof that the University acknowledges the study that the researcher is undertaking. The clearance letter attached (Appendix 2) was shown to the principal of Gerson Ntjie secondary school before data could be collected at the school.

The informed consent letter was sent to the school to ask for permission to conduct the study at their school, with their learners. The letter attached (Appendix 3) outlined what the research was about, including the significance of the study and also what the researcher would be doing in their school (Pickard, 2007: 73). Research on children requires the researcher to strictly adhere to the ethical considerations. According to the Children's Act 38 (2005:24) "a child, whether male or female, becomes a major upon reaching the age of 18 years." Therefore, for the researcher to abide by this act, parents were sent parental consent letter (Appendix 4); in order for them to give approval for their children to participate. As stated by the 'Age Admission Policy for Public Schools' (as cited by Department of Education, 2008:13) learners who are considered eligible for secondary schools are those between the ages of 14 and 18 years. It was important to get consent from the parents because legally, children who are in high school are regarded as minors. The researcher gave learners consent letters to give to their parents to ask for permission to allow their children to participate in the study. The researcher went to the school again the next day and collected the signed consent letter and participation was allowed for those learners who were granted permission by their parents.

Learners were given child assent letters before they could participate in the study. The child assent letter (Appendix 5) clearly stated that learners are not forced to participate in the study as participation was voluntary. The researcher explained that privacy and confidentiality of the participants would be maintained and that they should not write their names on the questionnaires to ensure that their responses cannot be identified. Loue (2007:147) emphasizes that "a respect for persons would dictate that participants be afforded sufficient privacy and confidentiality to safeguard their interests and ensure that they are not simply viewed as a means."

### **3.11 Summary of the chapter**

This chapter explained the research methodology used in the study. It described the paradigm used, research approaches, research design, population, sample and sampling techniques, tools and instruments used in the study, validity and reliability of the

instrument, how data was analyzed and the ethical considerations for this study. The study used the survey questionnaire to collect data with a quantitative method approach. The following chapter presents the findings of the study.

## **Chapter 4: Data Analysis and Presentation of Findings**

### **4.1 Introduction**

This chapter presents the results of the study drawn from the questionnaires given to grade 10 and 11 learners of Gerson Ntjie secondary school in order to understand their information need and information seeking behaviour. The objectives of the study were to investigate the type of information that the grade 10 and 11 learners of Gerson Ntjie secondary school need and also to investigate their information seeking behaviour. The researcher used the Statistical Package for the Social Sciences (SPSS) to analyze quantitative data.

### **4.2 Response rate**

According to Stangor (2011:261) a response rate is the percentage of participants who have answered and returned the questionnaires to the researcher and Babbie and Mouton (2001:261) opine that a response rate that produces 70% is considered “very good”. Of the 181 copies of questionnaires distributed and administered at Gerson Ntjie secondary school, 159 were returned providing a response rate of 88%. The results of the questionnaires are presented below. N shows the total number of the participants that have answered a particular question. The findings of the study are organized in the following themes: Gender of the participants, age, level of study, years spent in the grade, information needs, preferred sources of information, library use, reason for library use, materials mostly used at the library, information seeking, experiences of challenges when searching for information, challenges encountered when seeking information, feelings when information is not found, feelings after finding information, use of social networks, social network most frequently used, frequency on social network sites, the uses of social networks and home language.

### 4.3 Profiles of the participants

Every questionnaire opened with questions about the background information of the respondents. The questions included gender, age, school grade, the numbers of years spent in that grade and home language.

#### 4.3.1 Gender

The researcher wanted to establish the respondents gender. The researcher believed that information needs and seeking does not differ between genders and also wanted to ensure that learners from both genders were given same opportunities to participate in the study. According to Halder, Ray and Chakrabarty (2010:426) in their study conducted at Universities in India, stated that there is a noticeable difference in genders in regard to information seeking behaviour and also found that female respondents are better at information seeking than male respondents. However, Large, Beheshti and Rahman (2002: 441) in their study with an elementary school revealed that boys are more active in using the Web than girls.

N=159

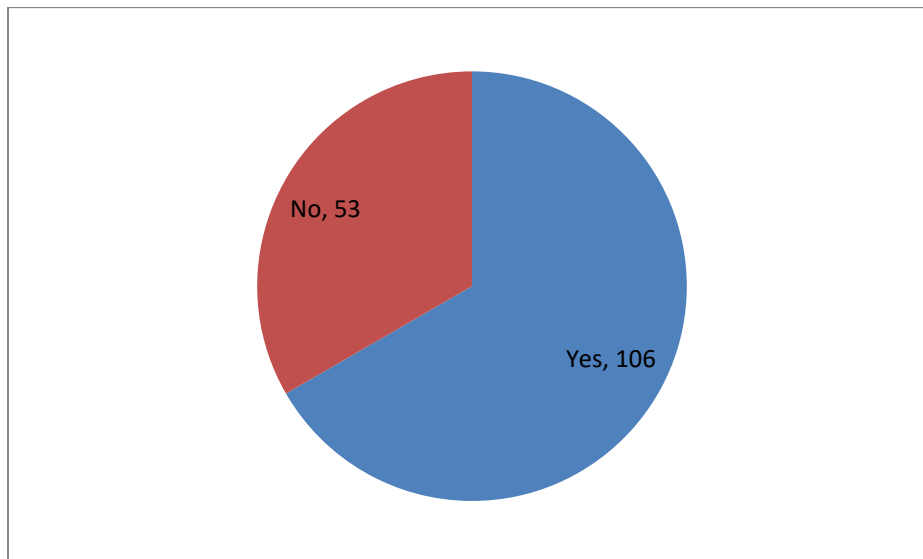
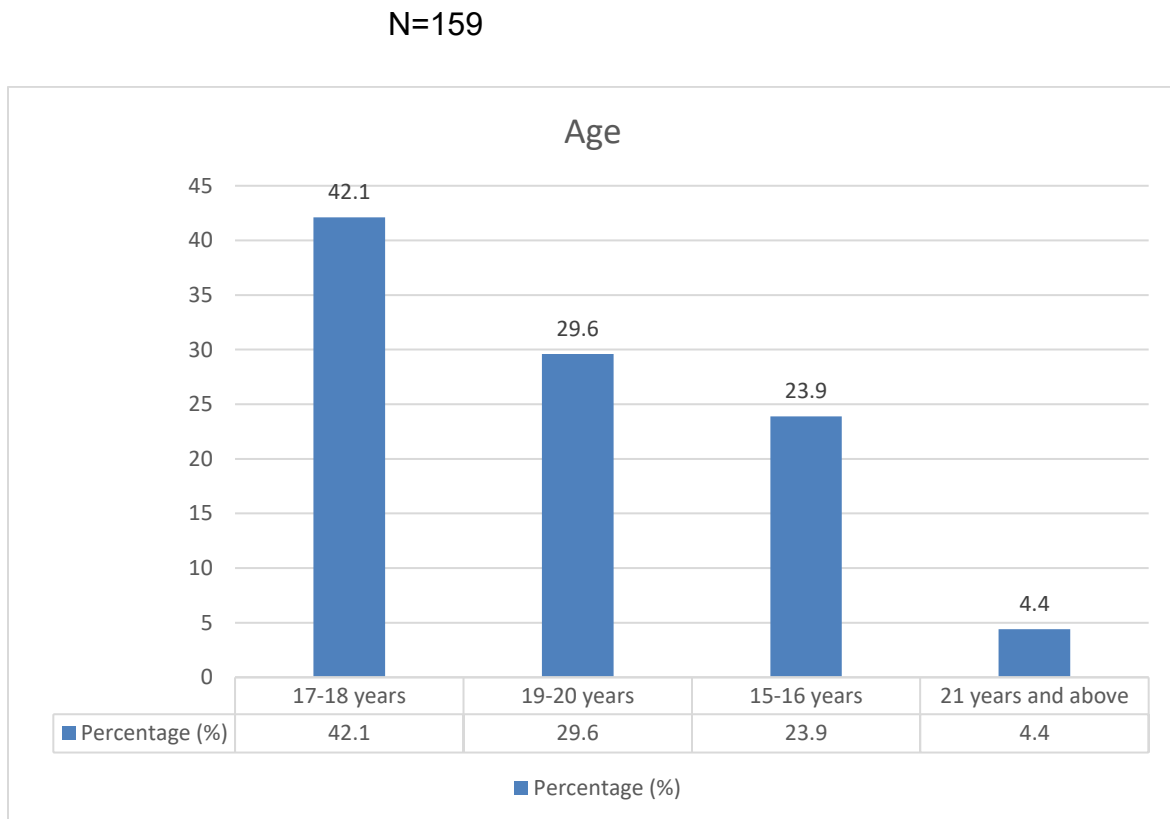


Figure 4.1: Gender

From the current study, the results showed that of 159 respondents, 87 (54.7%) were males and 72 (45.3%) were females. The results indicate that there were more male respondents than female and this could be because there were more males learners in class than females learners. Figure 4.1 above indicates the gender of the respondents.

### 4.3.2 Age

Respondents were asked to indicate their age group. The ages were categorized according to age groups so that respondents would not feel uncomfortable revealing their ages. The researcher wanted to know if age is a contributing factor in information need and seeking.



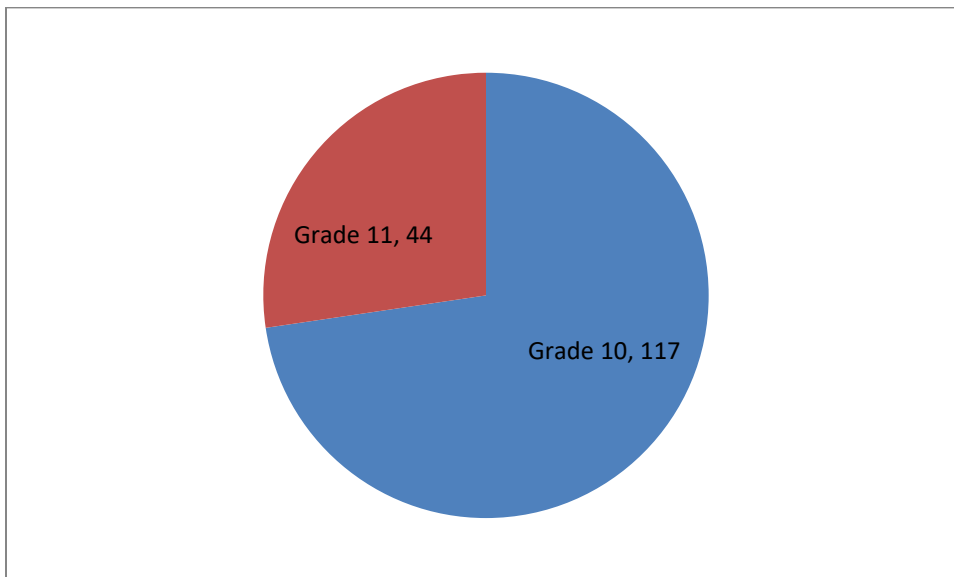
**Figure 4.2: Age**

Figure 4.2 above shows that the majority of the respondents (42.1%) were in the age group of 17-18 years. Twenty nine point six percent (29.6%) of the respondents were between the ages of 19-20 years. Twenty three point nine percent (23.9%) were respondents between the ages of 15-16 years, while those aged 21 years and above were the smallest at 4.4%. For the school to have respondents aged 19-20 years and also 21 years and above in grade 10 and 11, shows that the mature respondents are eager to learn and be educated. A majority of the respondents were between the age group of 17-18 years.

### 4.3.3 Level of study

The respondents were asked to specify their level of grade. This was because the study was focused on two grades, namely 10 and 11.

N=159



**Figure 4.3: Level of study**

The results in figure 4.3 above indicate that 117 (73.6%) respondents were doing their grade 10 and 42 (26.4%) respondents were in grade 11. The results show that many

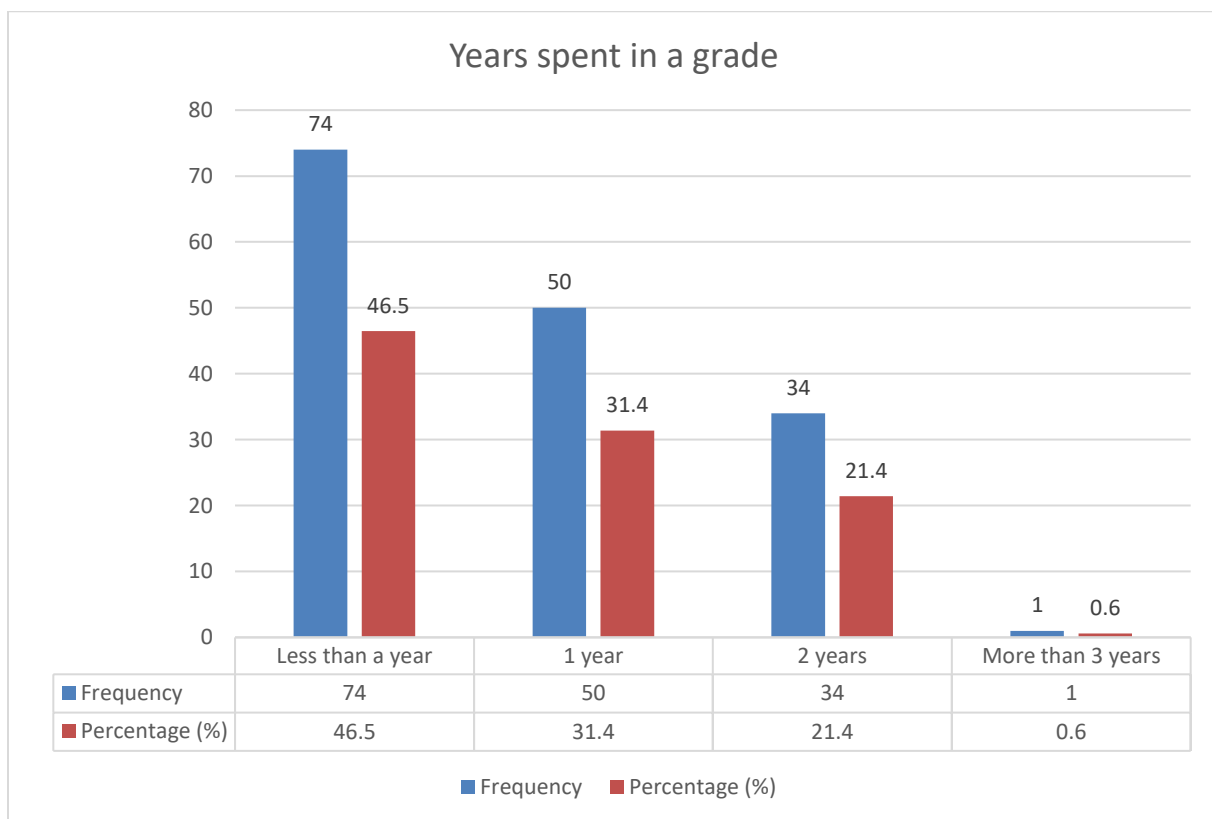


respondents are from grade 10 because there are more classes for grade 10 than grade 11 learners.

### 4.3.4 Years spent in a grade

Respondents were asked about the number of years they have spent in their current grade. This was done to confirm whether learners can easily progress to the next grade.

N=159



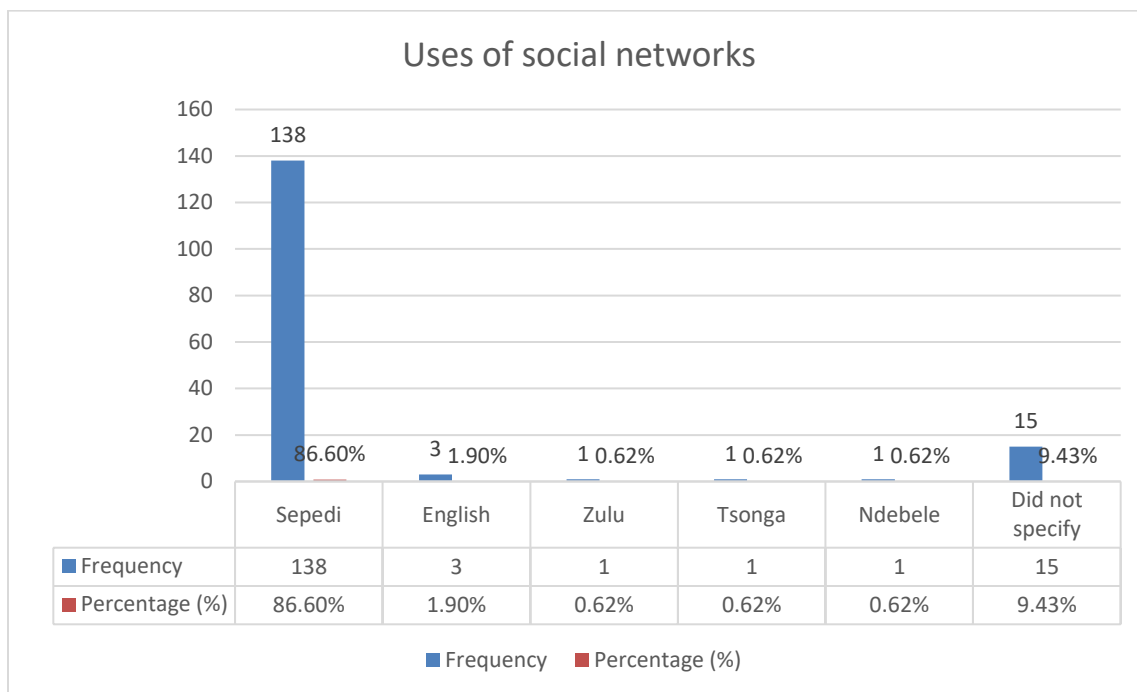
**Figure 4.4: Years spent in a grade**

The results indicate that the largest response was of 74 (46.5%) of the respondents who spent less than a year in that grade. This was followed by 50 (31.4%) of the respondents who had spent a year. Thirty four (21.4%) of the respondents spent 2 years in their current grade and also 1 (0.6%) of respondents who are repeating their current grade for more than 3 years. From the results, it is evident enough that respondents are having

challenges to progress to the next grade, and information seeking and identifying the information they need could be some of the challenges that hinder their progress. There are many more grade 10 learners than grade 11 learners because some are repeating grade 10.

### 4.3.5 Home language

The researcher wanted to establish the home language of the respondents because the researcher opines that information seeking becomes easier when information is available in the language that an information seeker understands. Language can limit the ability of an information seeker to find information.



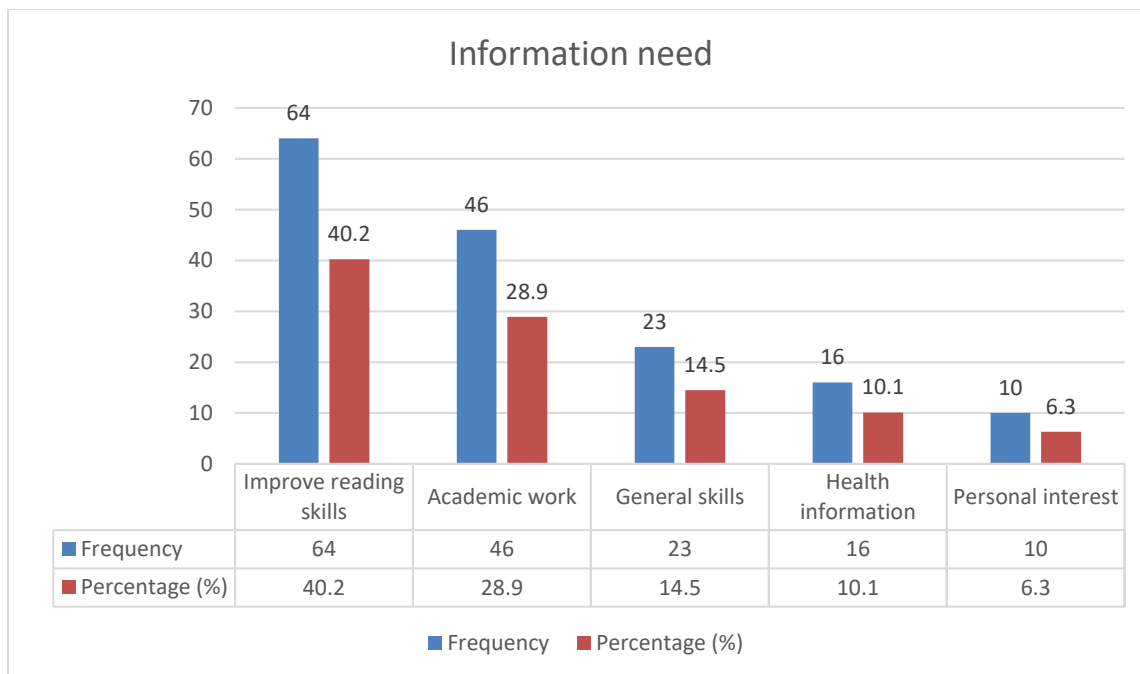
**Figure 4.5 Home language**

The results in figure 4.5 above show that 138 (86.8%) Of the respondents were speaking Sepedi as their home language, 3 (1.9%) speak English, 1(0.62%) Zulu, 1 (0.62%) Tsonga, 1 (0.62%) Ndebele and 15 (9.43%) of the respondents did not specify their home language. The majority of the respondents were speaking Sepedi as their home language because the school is situated in village of Sepedi speakers.

## 4.4 Information need

Information need is necessary to drive an individual into searching for the missing information. In most cases, the information need differs according to the context of the situation. Generally, learners need information that will help them to improve their performance in school and also information that will keep them updated with their everyday lives so that they can be able to make informed decision. Information need differs according to the context of the situation. Information need also changes over time. The respondents were asked what they need information for. The results as indicated in figure 4.6 below illustrates that 64 (40.2%) of the respondents needed information to improve their reading skills. This was followed by 46 (28.9%) respondents who needed information for academic work. Some 23 (14.5%) of the respondents needed general skills and 16 (10.1%) respondents needed health information. Only 10 (6.3%) respondents needed information for personal interest.

N=159



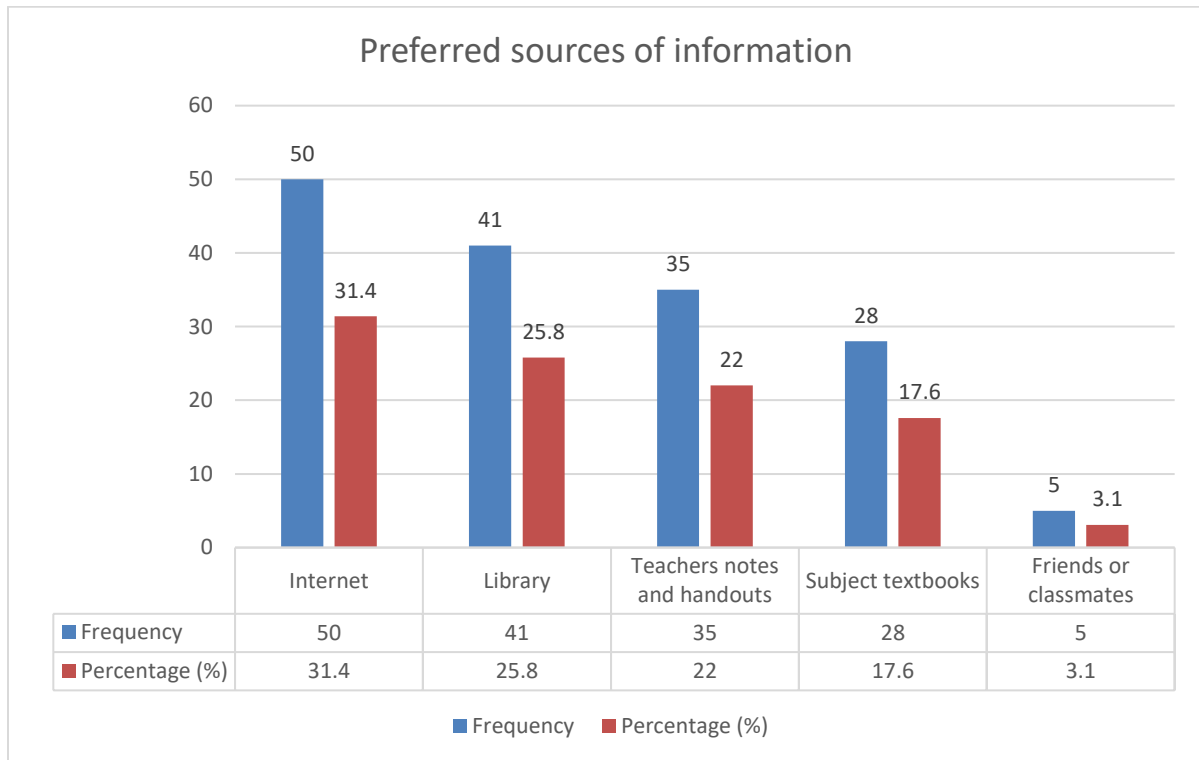
#### **Figure 4.6: Information need**

Most respondents needed information to improve their reading skills and academic work, and with the establishment of a school library, the respondents' information gap could be satisfied. Information that imparts library skills is needed. Information should be available to everyone, for example the community library should notify all nearby communities who are using their library about library training.

#### **4.5 Preferred sources of information**

Respondents were asked about their preferred sources of information. This was to ascertain whether the sources that respondents preferred to use are those that are available in their school or community. A relevant information source can help an information seeker to find the relevant information. With no information sources available, an information seeker will not be able to satisfy their information need. The respondents had to choose from the given information sources, namely: subject textbooks, teachers' notes and handouts, library, Internet and their friends or classmates. It is demonstrated in Figure 4.7 below that majority of the respondents (31.4%) preferred to use the Internet as their source of information. It is followed by 25.8% of respondents that used the library (academic or community library in nearby communities) as their source of information. Respondents that preferred to use teachers' notes and handouts made up 22.0% whereas those that preferred to use subject textbooks comprised 17.6%. Only a small number 3.1% of the respondents preferred to use their friends or classmates as their sources of information.

N=159



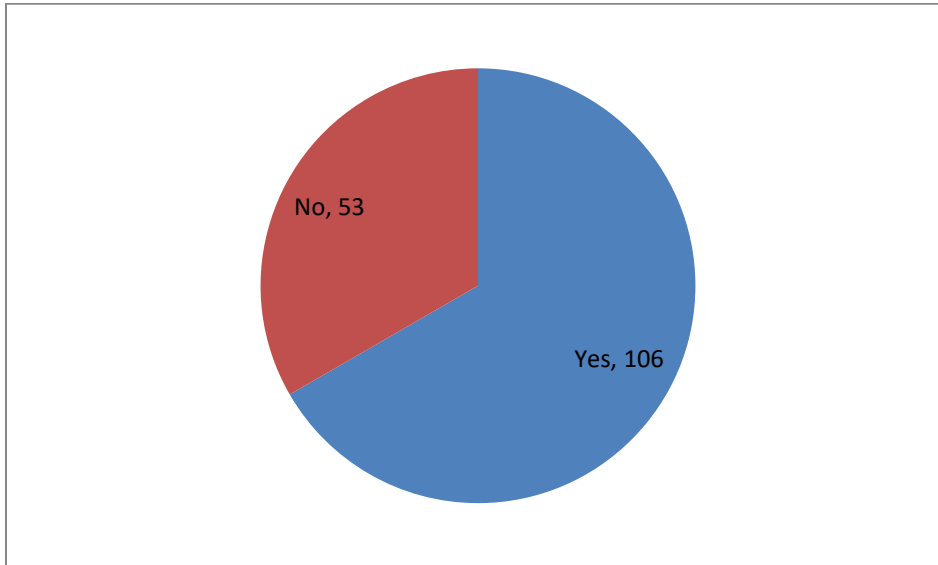
**Figure 4.7: Preferred sources of information**

The results of the study show that a majority of the respondents prefer to use the Internet as a source of information because the 21<sup>st</sup> century generation likes technology and also because the Internet can be accessed on their mobile phones.

#### **4.6 Library use**

Although there is no school library at Gerson Ntjie Mothapo secondary school, respondents were asked if they have ever used a library before, bearing in mind that there is a community library 5km away from the school and the university library 8km away from the school. This was to ascertain whether respondents were familiar with the use of libraries and the library environment.

N=159



**Figure 4.8: Library use**

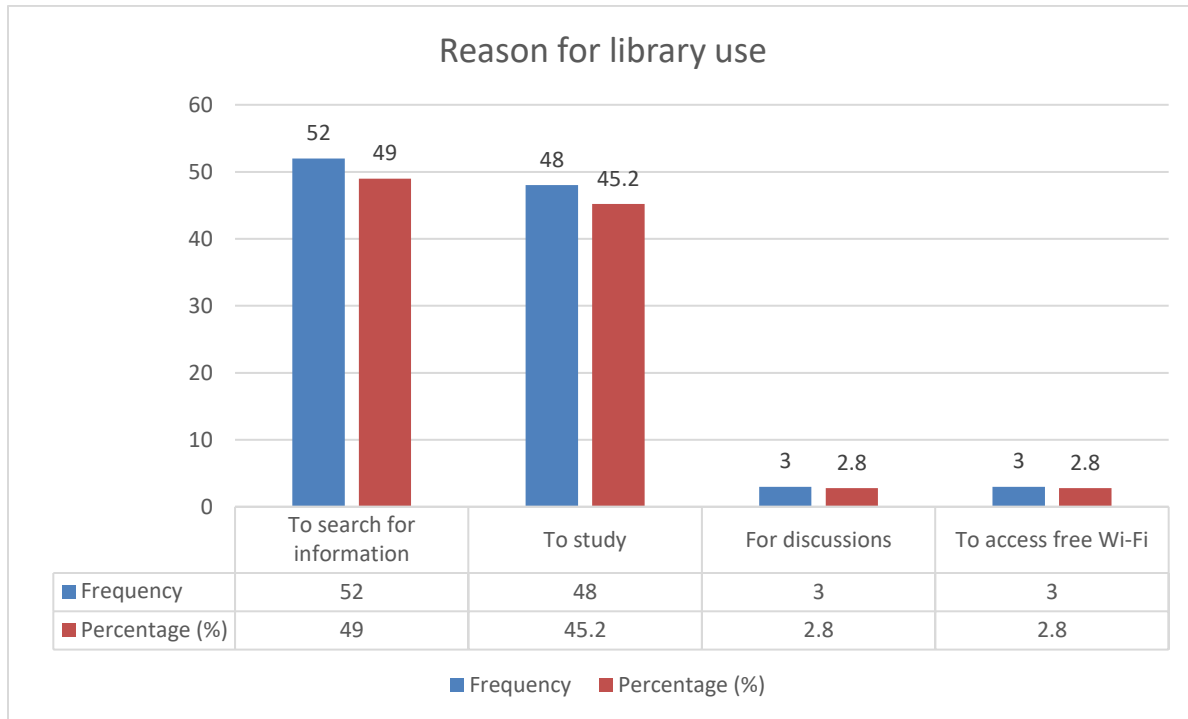
In Figure 4.8 above, the results show that the majority of the learners 106 (66.7%) responded that they had visited the library before. Only 53 (33.3) of the respondents said they have never been to the library before. As a high number of respondents 106 (66.7%) had used a library before could benefit and improve their information seeking skills because the library is a good source of information.

#### **4.6.1 Reason for library use**

The library is being used for various reasons. The respondents were asked what they used the library for. The researcher asked this question because there are many activities an individual may engage in at the library and wanted to find the reasons for the respondents to use the library. A library is a good information source depending on how the information seeker uses it. Respondents were provided with the following options to

choose from: to study, for discussions, to search for information, to access free Wi-Fi and others.

N=106



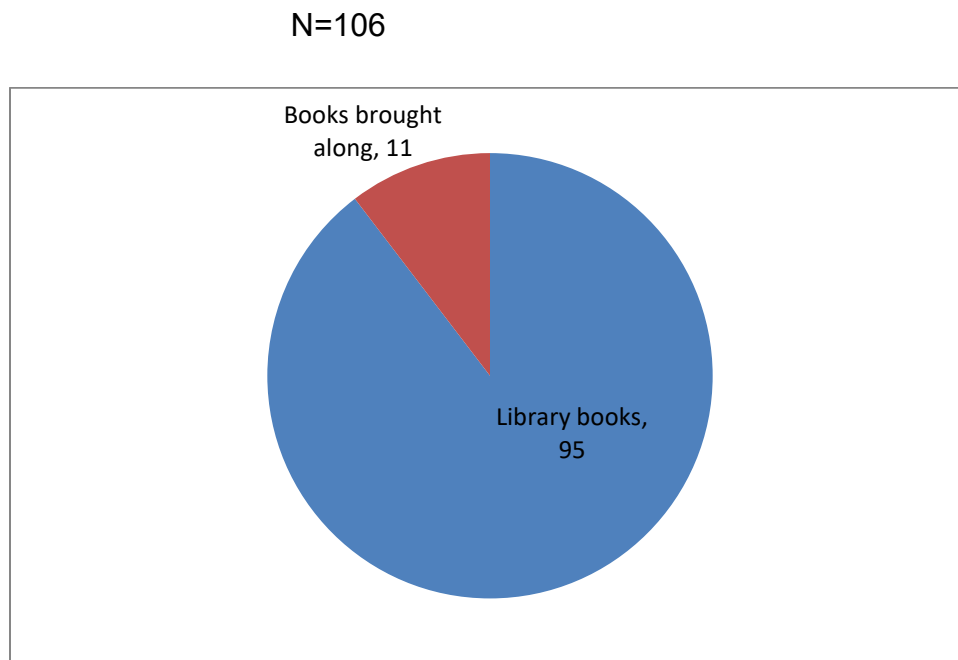
**Figure 4.9: Reason for library use**

Figure 4.9 above indicated that out of 106 respondents, 52 (49%) went to search for information, 48 (45.2%) used the library to study, 3 (2.8%) used the library for discussions and another 3 (2.8%) used the library to access free Wi-Fi. No other reasons were mentioned by the respondents for using the library. A library is a quiet place full of information resources which makes it an ideal place for studying which is the reason why a majority of the respondents used the library for studying.

#### **4.6.2 Materials mostly used at the library**

Learners who had used the library before were asked about the materials that they used when they went to the library. This was asked to ascertain whether learners used the

library collections and if they were also able to locate and retrieve them. There is no point in always going to the library but not touching the library collection.



**Figure 4.10: Materials mostly used at the library**

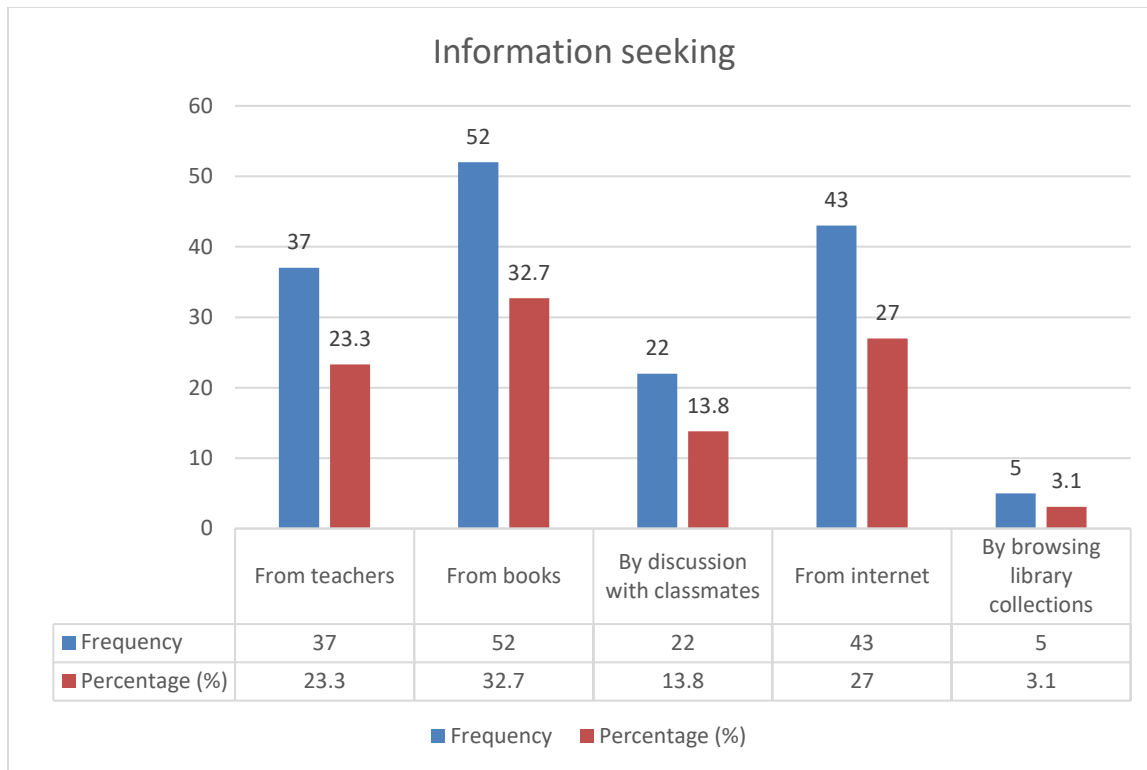
Figure 4.10 above illustrates the materials mostly used by the respondents. The results indicate that of 106 respondents, 95 (89.6%) used the library materials when they visited the library and only 11 (10.4%) respondents used the books they had taken along. This shows that a majority of the respondents are familiarizing themselves in searching and using information from the library. However, one cannot conclude that respondents were able to locate and retrieve library collections materials on their own since the researcher did not give them a list of library collections to indicate the one they have used. This is because respondents may be using library collections that are put on reserves or in the reference section which users do not make any effort to search for them. Since learners are familiarizing themselves in using the library, having their own school library would be advantageous to them because they would be able to visit the library frequently when they have test and assignments, which will make them learn to search different library collections.



## 4.7 Information seeking

Information seeking is the process where an individual engage in the process of searching the information that is in need. An individual only engage in information seeking after identifying an information gap. Respondents were asked how they search for information, the question was asked to check the accessibility and availability of information sources to the respondent and the study found that of the 159 respondents, 52 (32.7%) of the respondents used books as the starting point when searching for information. A further 43 (27.0%) respondents searched for information on the Internet. 37 (23.3%) of the respondents asked teachers for information. 22 (13.8%) of the respondents chose to start with a discussion with classmates when they search for information and only 5 (3.1%) of the respondents browse the library collections when they start to search for information. The results are demonstrated in Figure 4.11 below.

N=159



**Figure 4.11: information seeking**

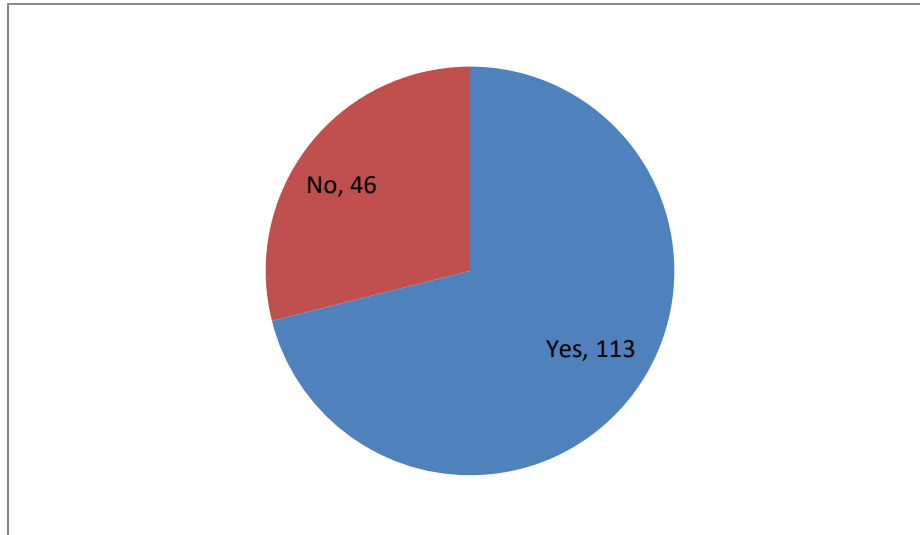
The findings revealed that respondents do not mostly use the library as the source of information, the reasons are because the community library does not have the collections related to their school curriculum and also because the community library is very far. Majority of the learners initially indicated that their preferred source of information was the Internet and here the results indicate that most learners mostly search information from books. The reason for learners to seek information with another source that is not their preferred source of seeking information is because books are available and immediately to hand but as for Internet they must have mobile data to be able to use it.

#### **4.7.1 Experiencing challenges when seeking information**

Information seeking may seem like an easy process but it is not. A person may encounter several challenges before finding the relevant information. An information seeker can fail to satisfy the information need because of the challenges involved during the information

seeking process. Respondents were asked if they encounter any barriers when seeking information.

N=159



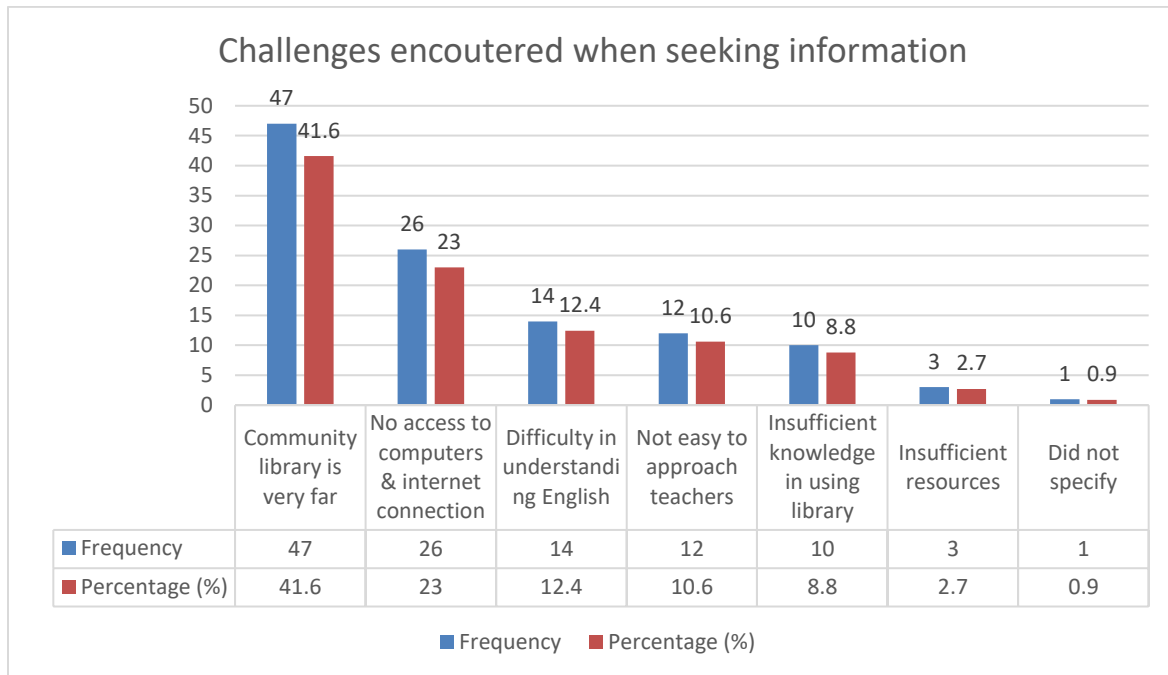
**Figure 4.12: Experiencing challenges when searching information**

The results indicate that 113 (71.1%) respondents revealed that they encountered barriers in finding information. Only 46 (28.9%) respondents said they did not find any challenges. The highest number of respondents (113) experience challenges when seeking information because both the school and the village have limited information resources. Figure 4.12 above indicates participants who experienced challenges when searching for information.

#### **4.7.2 Challenges encountered when seeking information**

Respondents were asked about the type of challenges they encounter during the process of information seeking. Challenges experienced during information seeking can hinder the information seeker to acquire the needed information. The types of barriers provided as options to choose from are: no access to computers and internet connection, community library is far, insufficient knowledge in using library, not easy to approach teachers, insufficient resources and difficulty in understanding English.

N=113



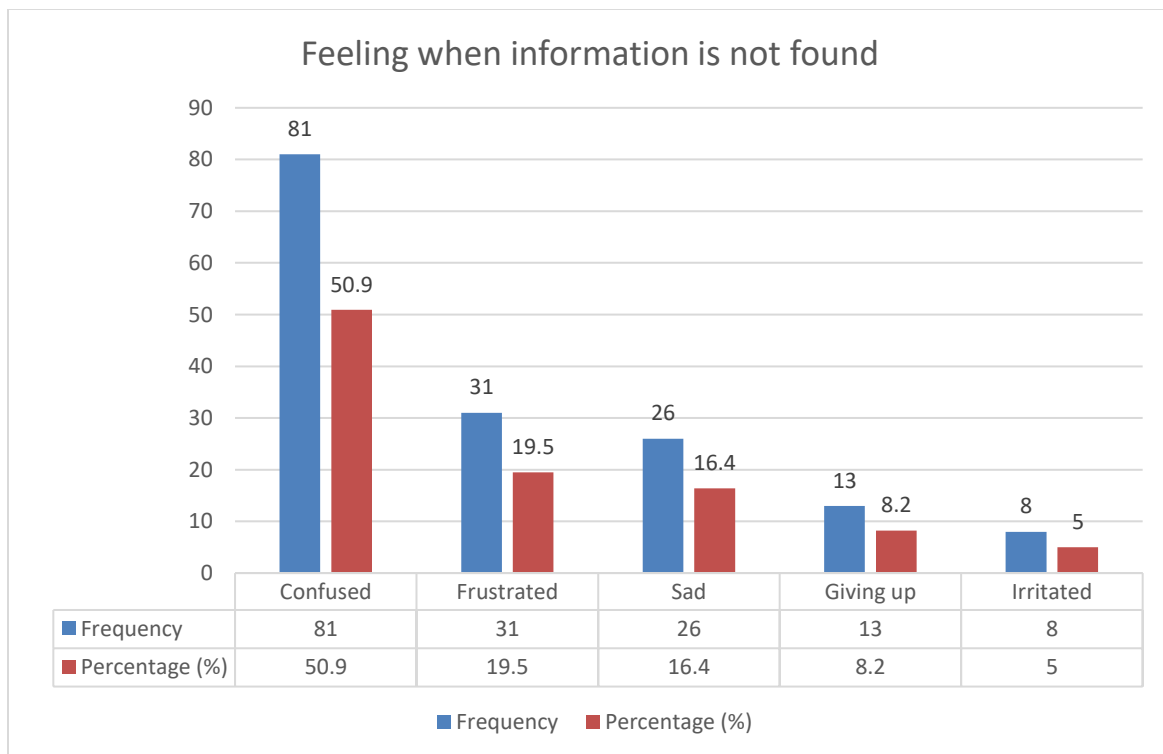
**Figure 4.13 Challenges encountered when seeking information**

The results demonstrated in figure 4.13 above indicate that 47 (41.6%) respondents complain about the community library being far. The second highest challenges found when seeking information was no access to computers and internet 26 (23%). 14 (12.4%) respondents said their challenges were the difficulty in understanding English and 12 (10.6%) respondents indicated that it was not easy to approach teachers when they seek information while 10 (8.8%) respondents said their challenge in seeking information was insufficient knowledge in using library. 1 (0.9%) respondent did not specify the type of challenge encountered when seeking information. Majority of the respondents complain about community library being far because the respondents do not have school library which they can use to access information because the community library is about 5km from the school and learners have to take a taxi when going there.

### 4.7.3 Feelings when information is not found

Not being able to find the information needed can arouse a number of feelings. Kuhlthau's 2004 Information Search Process model demonstrate that an information seeker changes feelings when searching for information. Learners were asked about the feelings they have when they do not succeed in finding the information they need. This was done to confirm with Kuhlthau's 2004 Information Search Process that information seeking is associated with feelings. The following options were provided to choose from: frustrated, confused, sad, giving up and irritated.

N=159



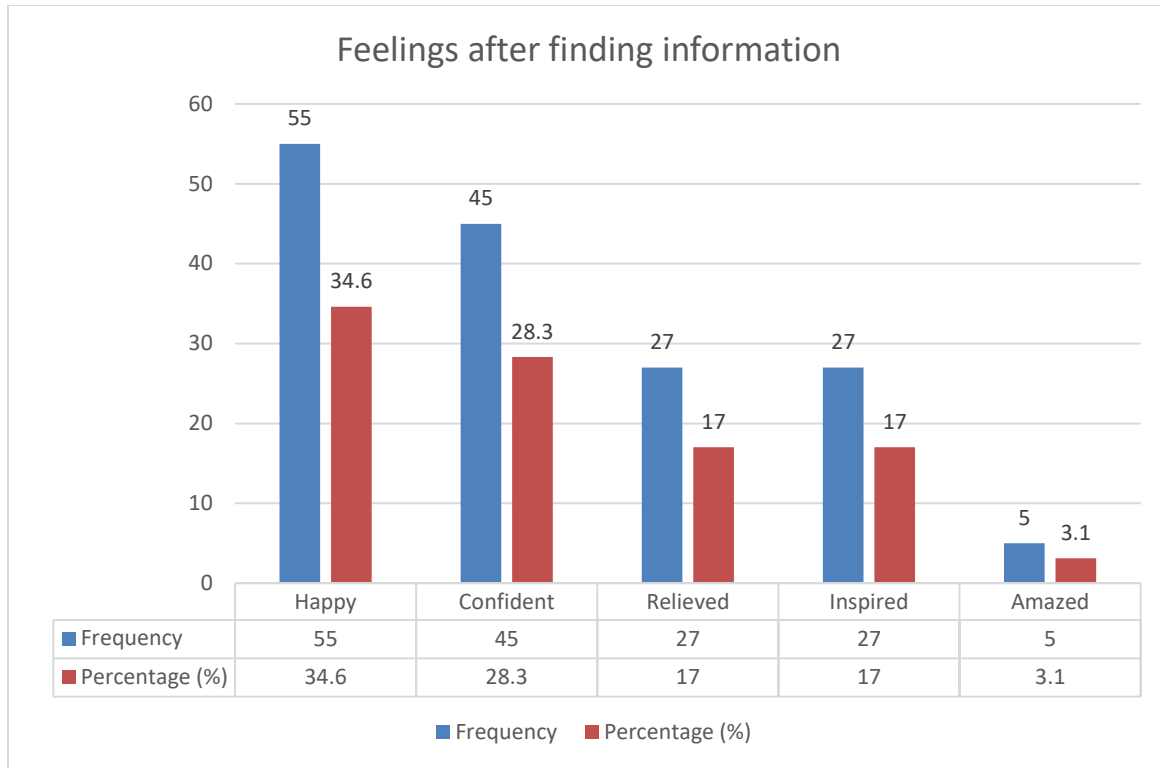
#### **Figure 4.14: Feeling when information is not found**

The findings indicate that a slight majority 81 (50.9%) responded that they felt confused, and it was followed by learners who felt frustrated 31 (19.5%), then those who felt sad 26(16.4%) when they struggled to find information. Thirteen (8.2%) of the respondents felt like giving up when they do not find information they need whereas 8 (5%) felt irritated. A majority of the respondents expressed feelings of confusion when they struggle to find the information they need.

#### **4.7.4 Feelings after finding information**

Respondents were asked about the feelings they have when their information search is successful. This was to compare the changes in feelings when seeking information and after finding the relevant information. The respondents were provided with the following choices: Inspired, happy, relieved, amazed and confident.

N=159



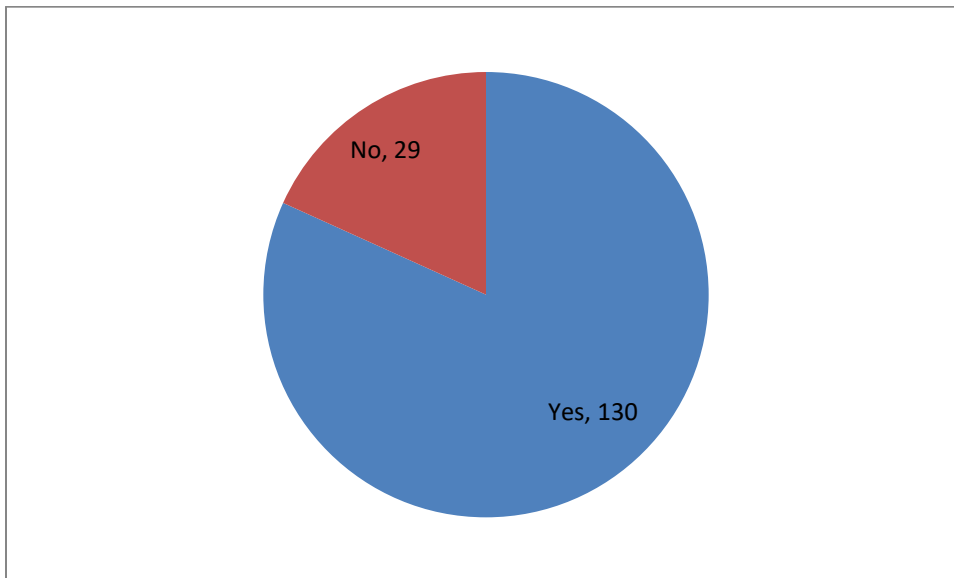
**Figure 4.15: Feelings after finding information**

Figure 4.15 above shows the feelings of satisfaction from the respondents after finding the information they need. The findings show that the highest number of 55 (34.6%) of the respondents felt happy. Feeling confident was the second highest response 45 (28.3%). 27 (17.0%) of the respondents felt inspired when their search produced relevant information and another 27 (17.0%) of the respondents felt relieved when their search is successful. Only a minimum number of 5 respondents (3.1%) felt amazed when they searched and found the required information.

## 4.8 Use of Social networks

Today's youth find it difficult to live without using social networking sites. Since the introduction of social networking sites (SNS) like Twitter, Facebook and Mxit, a large number of people use and combine these sites with their everyday life (Molopa, 2015:13). Social networks are social communication tools that are used by people of different ages for different reasons. One of the reasons they are highly favored is because some of them are cheap to use and a user is able to talk to a number of people in different places, all at the same time. Social networks can be a good or a bad communication tool depending on how the user utilizes them. Learners were asked if they engage in the use of social networking sites. The researcher asked this question because although the respondents live in a village with a lack of formal information resources the respondents could use social networking sites to complement their traditional learning.

N=159



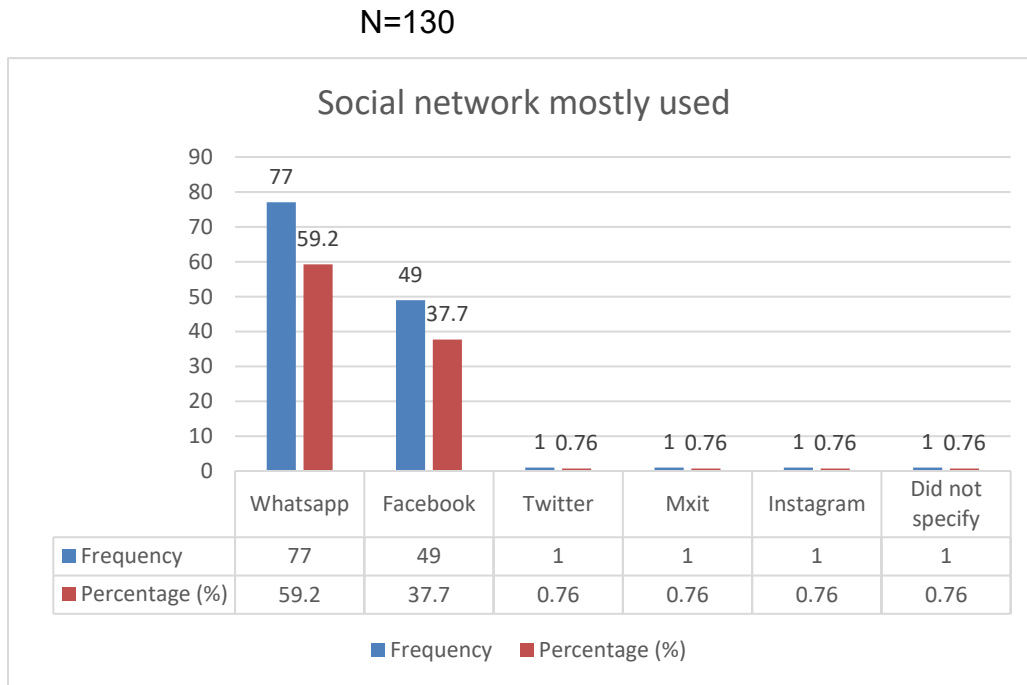
**Figure 4.16: Use of social network**

The results are shown in Figure 4.16 above. The largest number of 130 (81.8%) of the respondents used social networks. It is only 29 (18.2%) respondents who did not use social networking sites. With the popularity of the use of social networking, it is not surprised that the majority of the respondents were using it.



### 4.8.1 Social network mostly used

When asked about the type of social network that is mostly used, out of the total of 130 respondents, it was found that 77 (59.2%) of the respondents used Whatsapp. The second largest group of 49 (37.7%) of respondents used Facebook while 1 (0.76%) of the respondents used Twitter and another 1 (0.76%) of the respondents used Mxit. There was 1 (0.76%) of the respondents who specified that they used Instagram for social networking whereas another 0.76% of the respondents did not specify the type of social networking they use. The choice of social network could be affected by the cost and speed of that social networking site.

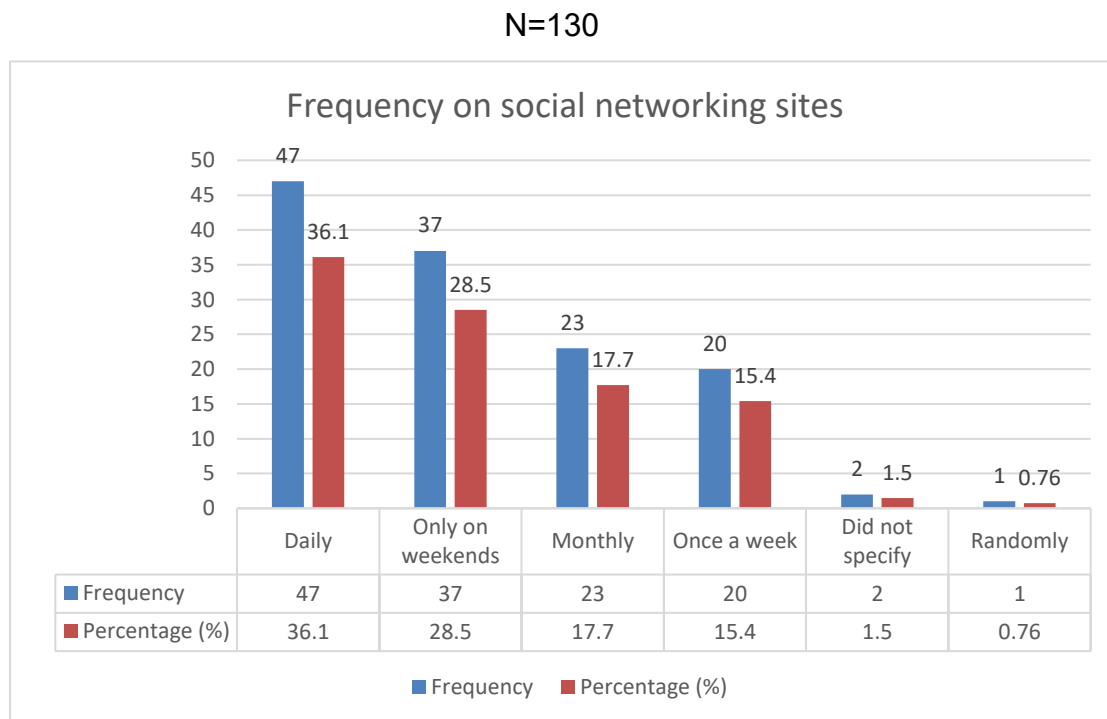


**Figure 4.17: Social network mostly used**

Figure 4.17 above is a pictorial illustration of the mostly used social network by respondents. It shows that a majority of the respondents preferred to use Whatsapp because it is speed and cheap and because it does not consume too much data.

#### 4.8.2 Frequency on social networking sites

Learners were asked a how often they used social networking sites. The responses shown in Figure 4.18 below reveal that from the total of 130 respondents, 47 (36.1%) used social networking daily. This was followed by 37 (28.5%) who used social networks only on weekends and 23 (17.7%) of the respondents used social networks monthly. Twenty (15.4%) used social networks once a week while 2 (1.5%) of the respondents used other time slot which they did not specify and only 1 (0.76%) of the respondents used social networking sites randomly. Social networking sites can be used for educative purposes but having a high number of respondents (36.1%) who use it daily can affect the respondents' school performance negatively.

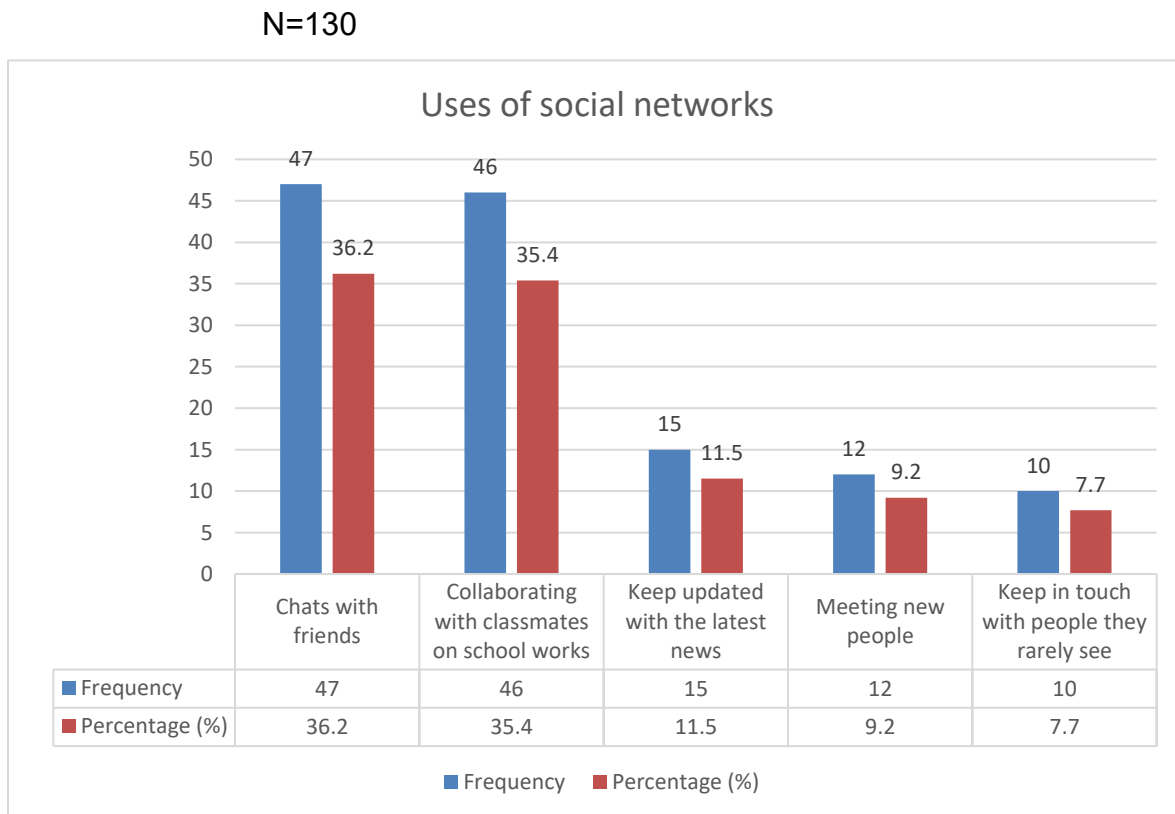


**Figure 4.18: Frequency on social networking sites**

The results indicate that learners prefer to use the Internet as their main information source and therefore, it is not surprising when the majority of the learners are engaged in social networking.

### 4.8.3 Uses of social networks

The respondents were asked about their reasons for using social networking sites. Since the respondents are situated in an area lacking information resources, the researcher asked this question to check if respondents used the social networks to their advantage by using it to complement the school curriculum. Social networking sites can be used for various reasons but the respondents were asked to choose one main reason.



**Figure 4.19: Uses of social networks**

Figure 4.19 above shows the results about the use of social networking by learners. Of 130 respondents, 47 (36.2%) of the respondents used social networks to chat with their friends, followed by 46 (35.4%) who used them to collaborate with classmates on school works. Fifteen (11.5%) of the respondents used social networks to keep updated with the latest news. The lowest number of respondents 12 (9.2%) used social networking sites to meet new people and 10 (7.7%) of the respondents used them to keep in touch with people they rarely see. With 46 (35.4%) of the respondents using social networking sites as a tool to collaborate on school works and 106 (66.7%) of the respondents indicated that they used the library; proves that if the respondents had relevant information resources in their school premises or village, they would use them effectively on school works.

#### **4.9 Summary of the chapter**

This chapter presented the results collected through the questionnaires. Graphs and charts were used to present the information need and information seeking behaviour of grade 10 and 11 learners of Gerson Ntjie secondary school. Quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS). The results assisted in understanding the type of information learners need and how they go about seeking them. The discussion of these findings is presented in the next chapter.

## **Chapter 5: Discussion of the results**

### **5.1 Introduction**

This chapter discusses and interprets data that were presented in the previous chapter to show how the findings contribute to the existing body of knowledge and theories used for the study. Nicodemus and Swabey (2011:5) state that “after a reflection on the purpose and use of research on interpreting, the diversity of concepts, models, and interdisciplinary approaches is used as a point of departure for a discussion of the identity of the field as a scientific discipline.” The main objective of this chapter is to bring the findings into the fold of the existing literature regarding information needs and information seeking behaviour of grade 10 and 11 learners at Gerson Ntjie secondary school. The chapter discusses the findings in relation to the following research objectives and research questions:

#### **Objectives of the study were:**

- To find out the type of information that the grade 10 and 11 learners of Gerson Ntjie secondary school need.
- To investigate the information seeking behaviour of grade 10 and 11 learners at Gerson Ntjie secondary school.

#### **The study was underpinned by the following research questions:**

- What information do the grade 10 and 11 learners of Gerson Ntjie secondary school need?
- Which sources of information are mostly used by the grade 10 and 11 learners of Gerson Ntjie secondary school?
- How do the grade 10 and 11 learners of Gerson Ntjie secondary school seek information?
- What are the challenges the grade 10 and 11 learners of Gerson Ntjie secondary school face when seeking information?

- How has social networks changed the information needs of the grade 10 and 11 learners of Gerson Ntjie secondary school?

## **5.2 Profile of the participants**

This section discussed the profile of the respondents which includes gender, age, level of study, years spent in the grade and home language.

### **5.2.1 Gender**

The respondents were asked to specify their gender. The researcher asked this question because of a believe that gender can affect information seeking behaviour. In the current study 87 (54.7%) of the respondents were males and 72 (45.3%) were females. The results showed that there were more male respondents than female respondents. The findings showed that information seeking is not depended on gender. Similarly, Callahan (2005:313) conducted the study in Texas on tracking and high school English learners. More than half of the respondents were male, and within those male respondents, 42% of them were in grade 10, 37% were doing grade 11 while 21% were in grade 12. From the results of the current study, it is evident that gender was not a factor that could hinder or make a difference in seeking information.

In Nigeria, Olugbenga (2008) carried out a study of secondary school students' perceptions of incidences of Internet crimes among school age children with 20 secondary schools and also found that majority of the students (50.5%) were males and 49.5% were female students. There seem to be more male students than females in classes. However, although classes have more male students than female students, but their information need and the way they seek information is not also the same. Similarly, Adesoye and Amusa (2012:102) in their study of investigating the information needs of sandwich and part-time students with two universities in Nigeria, they had more male respondents than female respondents. In the studied school, learners of both genders

had the same information gap which shows that for as long as learners are in the same grade; their information need is the same.

### **5.2.2 Age**

Boadi and Letsolo (2004:190) opine that a person is an information seeker despite age. In this section, the respondents were asked to state their age range. The findings of the current study showed that most respondents (42.1%) were between the age group of 17-18, followed by respondents (29.6%) between the age group of 19-20 years while 23.9% were respondents between the age group of 15-16 years and minority of the respondents (4.4%) were aged 21 years and above. This results show that age affect information seeking. The study also indicated that there were learners aged 20 years and above, which means that their information need and information seeking is different to the learners who are at the right ages to be in secondary school.

Similarly, in Namibia, Tertu (2013:58) on the study of Web-based information behaviour of high school learners using grade 12 learners, found that majority of the respondents (44.4%) were 18 years old, followed by respondents who were 17 years of age (25.4). 15.6% of the students were 19 years old, 8.8% were 16 years old while 3.5% were 20 years old. The lowest number of respondents was 20 years old (2.5%). The results of the studied school showed that the most common age range was between 17-19 years and only a few learners were between the age ranges of 20-21 years. From the findings of the current study, it proves that to have mature learners (20 years and above) in secondary school, shows that learners are experiencing challenges that hinder them to complete their secondary school; therefore having access to different information (from educational information to personal information) could be one of the solutions to solve their problems.

### **5.2.3 Level of study**

Respondents were asked to specify their level of study since the study was only focused on grade 10 and 11 learners. The results of the current study indicated that 117 (73.6%) respondents were doing their grade 10 and 42 (26.4%) respondents were in their grade

11. At the time of collecting data, learners were busy preparing for end of the year school function and most of them were not in their classes, which is the reason why the number of learners per grade is not proportional. Daraha (2013:246) also conducted a study in Thailand with grade 10, 11 and 12 learners on the effect of Internet use on high school students. Similarly, in Washington, Fidel et al. (1999:27) carried out the study on Web searching behaviour of high school students with grade 11 and 12 learners while in Australia, McGregor and Williamson (2015:501) conducted a study with grade 11 learners on the appropriate use of information at the secondary school level. These studies show that grade 10, 11 and 12 learners are the group population that is most researched in secondary school, the reason could be because they are the matured students who are going to complete in due course and go to higher education institutions.

#### **5.2.4 Years spent in a grade**

The researcher wanted to establish the number of years learners spent in a grade. The findings of the current study indicated that many respondents 74 (46.5%) spent less than a year in a grade while 50 (31.4%) of the learners spent a year. Thirty four (21.4%) of the respondents indicated that they spent 2 years in their grade and only 1 (0.6%) of the respondents were in their grade for more than 3 years. The findings showed that there are respondents who spent 2 to 3 years in their current grade. Therefore, the researcher would like to point out that if Gerson Ntjie Mothapo learners had adequate available information sources that could help them with their school work; it will only be few learners who would be repeating their grade, maybe due to personal reasons.

#### **5.2.5 Home language**

The researcher wanted to know the home language of the learners. The findings of the current study showed that majority of the learners 138 (86.8%) spoke Sepedi as their home language; 3 (1.9%) spoke English, 1 (0.62%) spoke Zulu, 1 (0.62%) spoke Tsonga, 1 (0.62%) spoke Ndebele and 15 (9.43%) did not specify their home language. It was noted by the researcher that since English is not their mother tongue, there are greater



chances that learners could experience difficulty in reading, writing or understanding information packaged in the English language. Language could be a barrier to information seeking because there is no point in having information that is in a foreign language that an information user does not understand. Learners could retrieve inaccurate information because they do not understand the language clearly. Seeking information in a language an information seeker does not understand is quite a challenge, therefore, information should be available in the language of the users.

In KwaZulu-Natal, Majyambere (2012: 46) had similar findings on the study of the information needs and information seeking behaviour of international students at the University of KwaZulu-Natal. The findings showed that majority of the international students that stated that they had English language problems, they indicated that they had challenge with writing in English language, followed by those who had problems with speaking in English while other students expressed that they had problem in understanding English. The results of the studied University are similar to the findings of the current study; learners could fail their test or assignments not because they do not know answers but because they interpreted the question wrong or because they did not understand the question at all. Learners could also fail because they have inadequate knowledge of English grammar and also spelled words wrong since they do not understand the English language

Again in KwaZulu-Natal, Majyambere and Hoskins's (2015:69) study also showed that international students had problems with the proficiency in English language in terms of the accent and different tones meant students had difficulty in hearing or understanding when they are in consultation with academics or during their studies. International students had problem with English language because it is a foreign language to them, just like the learners in the current study who had problems with the English language because it is not their mother tongue.

### **5.3. Information need**

According to Chawinga and Zozie (2016:2) information is needed for various purposes like education, medical reasons, entertainment and others. Respondents were asked about what they need information for and it emerged from the findings of the study that 64 (40.2%) of the respondents needed information to improve their reading skills and 46 (28.9%) of the respondents needed information for academic work. It was noticed that 23 (14.5%) needed information for general skills, 16 (10.1%) of the respondents needed health information while a minority of the respondents 10 (6.3%) needed information for personal interest. Since learners needed information to improve their reading skills, these shows that learners need information that will equip them to be better readers. For learners to need information to improve their reading skills could be a call for help because some learners may be failing to progress to the next grade because of not being able to read and understand the content of their books clearly.

Similarly, in Malawi, Chawinga and Zozie (2016:7) did a study with open and distance learners on the information needs and barriers to information sources and they found that the majority of the students (209) needed information on subjects relating to their studies. 168 students needed information on scholarship or sponsorship for further education whilst 84 students needed information on their career development and also 53 students needed information on job opportunities. About 32 of the students stated that they needed general information like weather and entertainment information. The study indicated students needed information related to studies to enable them to do their academic work and be able to submit well written works. It also emerged in the current study that that most students are interested in information that help them in their school performance.

In Delhi, Singh, Kumar and Khanchandani (2015:34) undertook a study of information needs and information seeking behaviour with foreign students, the findings of which are supported by results of the current study in that the main reasons students needed information were for educational purposes. 76 students needed information related to programmes of study, 60 students needed information related to their University/Faculty, 59 students needed information related to assignments and 53 students needed information for writing research articles. Information related to finding a job was needed by 43 students, information for continuing with education after the course was needed by

42 students and 36 students needed immigration information. For university students to need information for educational purposes, shows that learners of the current study are serious about their school work to need information to improve their reading skills and academic work while they are still in secondary school.

In Nigeria, Adesoye and Amusa (2012: 107) investigated the information needs of sandwich and part-time students and found that majority of the students frequently needed information on their course of studies, followed by students who needed information on health, politics, economy, trade and commerce. Other students frequently needed information on their career development and scholarship while others needed information on self development and problem solving. Minority of the students frequently needed information on professions and professional activities and information on current issues. The findings of the studied Universities indicated that majority of the students needed information related to their course of studies and it is only few students who needed information on professional activities since most of part-time students are working. As much as learners of the current study are living in a rural area, it would be advantageous for them to also have access to economical, career development, scholarship and health information. These kinds of information would help them to improve their school progress, personal lives and also developing their community.

#### **5.4 Preferred sources of information**

Tertu (2013: 9) states that information seeking behaviour involves the use of three resources, namely: humans, information and systems. Respondents were asked to identify their preferred source of information and it emerged from the results of the current study that 50 (31.4%) preferred to use Internet as their source of information as opposed to asking another human being. Slightly fewer respondents 41 (25.8%) used the library, 35 (22.0%) used teachers' notes and handouts while 28 (17.6%) preferred subject textbooks and only 5 (3.1%) preferred to use friends and class as the sources of information. This shows that humans were not the main source of information. Learners preferred to use the Internet as their source of information although they do not have access to it in their school. The findings show that learners use other information sources

only because they are available but not because they are what they prefer to use to search for information.

The findings are confirmed by Kerrins, Madden and Fulton (2014) in Ireland in their study of information seeking and students studying for professional careers, particularly law and engineering students. Their findings indicated that engineering students in Ireland preferred the Internet as their information source and channel. Their preference was based on the view of 'the Internet as a speedy, current information source which fed initial information quickly.' Students in the studied University indicated that the Internet was their first source when they searched for information because it gave them an idea of what to do. Students also preferred to use library print resources like books, journals and technical handbooks. The students indicated that they used the library resources to check the validity of the information they had found from the Internet. Law students also mentioned that they used reading lists, textbooks and course packs. Although these findings are of university students but they prove that the Internet is the preferred source of information just like in the current study of secondary school. The learners of the current study could also have preferred to use the Internet as their source of information because the Internet provided them with the current information.

In Namibia, Hamutumwa (2014:122) conducted a study of the electronic resources use by distance learners at the University of Namibia. The population of the study was distance learners, centre coordinators, lecturers and library staff. The study asked students to identify their preferred source of information and the results showed that the majority of the students (73%) preferred to use lecture notes and about 61% preferred to consult the Internet. Other students (43%) preferred to use reference textbooks, 34% used library resources while 28% talked to their colleagues when they need information. About (6%) of the students did not specify their preferred source of information. Unlike the findings of the current study, students preferred to use lecturer notes as their source of information over subject textbooks but non-human sources were preferred overall. Lecturer notes are preferred by many because the information is simplified to the level of understanding of the students and also straight to the point. Internet is preferred by most students, including the learners in the current study although they do not have access to

it. It is best for learners to have access to their preferred source of information because it means it is the type of source that they believe will enable them to find the information they need and also maybe because they know how to use it best compared to other sources of information.

In Malawi, Chawinga and Zozie (2016:7) carried out a study with open and distance learners on their information needs and barriers to information sources. Students were asked about the information sources that they regarded as important to accomplish their academic work and found that majority of the students (92,6%) regarded lecture notes and hand-outs as important information sources. This was followed by 80.5% students that indicated that Internet is important whilst 77.4% of the students used library books as their source of information; 46.7% of the students gave a positive response that they used lecturers while 40.9% used their colleagues. Electronic books were used by 31.9% students, the newspaper was used by 26.1% of the students and only 6.2% of the students used radio/TV as their source of information. The studied schools revealed that the majority of students regarded lecturers' notes and hand-out and Internet as the important sources of information. These findings contradict with the findings of the current study because they indicated that lecture notes and hand-outs are the preferred sources of information and not the Internet. However, these findings also indicate that although the Internet is not the first referred source of information but it is one of the most preferred sources of information just like in the current study.

## **5.5 Library use**

A library is a place full of information sources in various formats. The researcher believes that the use of a library by the respondents is essential, especially when they start learning to use it at an early age. The respondents will be going to tertiary institution in two to three years to come and therefore, they should be familiarizing themselves with using the library. Not being able to have a library at secondary school level could negatively affect the information seeking skills of the respondents in future. The study aimed to find out if the respondents use the library and for what reasons. Learners develop the reading culture when they are frequently engaged in reading books, especially when they are able

to read information materials for pleasure and not only for school works or careers Plockey and Amuda (2013:207). In the current study, learners were asked if they have ever used a library and the results indicated that majority of the respondents 106 (66.7%) used the library and only 53 (33.3%) respondents had never used the library. Library is an important source of information, which is the reason why it is good to see learners who do not have a school library making a means of going to the nearby libraries.

Toteng, Hoskins and Bell's (2010:70) study of information literacy of undergraduate law students conducted at the University of Botswana supports the above mentioned results by stating that the majority of the students (98.4%) in their study indicated that they have used the library and only a minority of them (4%) did not use the library. The results of the studied University showed that law students were using the library given that law is so 'book dependent'. These results in the studied university indicate that the learners in the current study are doing well by using the library since the library is an information source that can be used for career development. Since learners do not have their own school library or community library, they take a taxi to go to the nearby community or academic libraries. Some learners are from families that cannot afford taxi fares so learners have to walk about 8km to the academic library or 5km to the community library.

Singh, Kumar and Khanchandani's (2015:36) study of information needs and information seeking behaviour of foreign students in Delhi is also supported by the results of the current study. A majority of the students (81.1%) in their study mentioned that the library is the main source that they use to satisfy their information needs. It was only 18.1% of the students that indicated that they did not use the library. The findings indicated that the majority of the students' still valued the library as a good source of information and therefore, learners should also be fortunate like other students and have their own school library. Just like in the current study, library is valued as information source and this could be because a library has collection of information that are no longer available in other information sources or those that are rare to find.

Similarly, in Mpumalanga province, Swanepoel (2003:127) investigated the ease of use in a small technikon library with pre-graduate students and found that majority of the students indicated that they used the library frequently. 71.1% of the students used the

library every day, 21.2% of the students used the library once or twice a week and the minimum of 7.5% of the students used library monthly and seldom. The findings of the studied technikon contradict with the findings of the current study because these findings showed that students did not mostly utilize the library. This is because the technikon had a library compared to the secondary school in the study, which is the reason why the findings are different. However, it shows that there are some students who have access to the library but are not using it, while learners in the current study had to walk long distances just so that they can use the library. Students who are fortunate to have different information sources they are not using them, while there are other learners who do not have those information sources but try by all means to have access to them.

In Pietermaritzburg, Nkosi, Leach and Hoskins (2011:64) on their study of knowledge and use of library resources by academic staff at University of KwaZulu-Natal found that many academic staff (94%) indicated that they used the library and it was only 6% of the staff that indicated that they did not use the library. Libraries are regarded as the hub of every institution that is why it is surprising to find academic staff that did not use library at all. Academic staff should be the one setting an example of using the main sources of information such as library so that when secondary school learners enter universities, they can find lecturers who encourage them to utilize the library.

In Nairobi, Mwatela (2013:34) study on factors influencing utilization of library services and resources at University of Nairobi conducted with students using Mombasa library contradict the above mentioned results by stating that most students in Nairobi (51.02%) used the library more than once a week. Next were 25.51% of the students who used the library more than 6 times per semester, 13.27% used the library used the library 1 to 3 times per semester while 10.20% of the students used the library 3 to 6 times per semester. Although majority of the students used the library more than once a week but almost half of the students are still reluctant to use the library.

### **5.5.1 Reason for library use**

Hadebe and Hoskins (2010:49) emphasized that it is essential for students to know the available resources in the library and how to use them. The researcher wanted to establish what respondents used the library for and found that most respondents 52 (49.9%) used the library to search for information; closely followed by 48 (45.2%) who used the library to study, and 3 (2.8%) respondents used the library for discussions while another 3 (2.8%) used the library to access free Wi-Fi. The results indicated that library is mainly used to search for information, however, it was not discovered how the learners in the current study used the library to search for information since there are many ways to use the library to search for information.

In the United States of America, Ojennus and Watts (2015:7) undertook a study on user preferences and library space at the library of Whitworth University using all Whitworth University students. The current study supports the above mentioned findings by indicating that the common tasks that students did at the library included studying on their own, group study, using library computers or connecting the laptops with the library Wi-Fi, getting materials on the reserve and using electronic resources. These findings are similar to the findings of the current study. Although learners in the current study do not have access to the Internet connectivity but it is only few of them who used the library to access the Internet. The reason could be that in the academic library that the learners use, they are not able to use computers because they require passwords and credentials of the university population. The learners may also be hesitated to use the Wi-Fi at the community library because most of the time it is slow.

In KwaZulu-Natal, Nkosi, Leach and Hoskins (2011:63) in the study of knowledge and use of library resources by academic staff found that majority of academic staff (63) at the University of KwaZulu-Natal used the library for their research while 61 academic staff used the library to prepare for the lecture. The current study used secondary school but the researcher believed it was important to also check how academic staff used the library since these are the people who would be leading the learners in few years to come.

### **5.5.2 Materials mostly used at the library**



According to Kiondo and Msuya (2006:82) “the availability of a library does not mean that such a student has the skills and ability to use the facility to solve information problems”, and Moyane, Dube and Hoskins (2015:28) also opine that most students in academic libraries still have limited knowledge and skills necessary to enable them to locate materials. Learners in the current study were asked about materials they mostly used at the library and it was indicated that 95 (89.6%) respondents used the library materials and the remaining 11 (10.4%) respondents used the books they brought along. However, the results are not really helpful because the researcher did not provide learners with the type of library collections to choose from so that they specify the type of library materials they used.

In Lesotho, Khaola and Mabilikoane (2015:48) undertook a study on the perception of library service quality, satisfaction and frequency of use of library resources by students at the National University of Lesotho. The current study support the findings of the study which indicated most students (31.5%) stated that they used the library resources, 16.1% of the students stated that they never used the library website while only 6.6% indicated that they used the library to surf the website. The findings of the studied University indicated that students did use the library resources, including the library website. Since learners of the current study are using the community and academic libraries in the nearby villages, they are not aware when the library provides training to the users. This means that learners may not have adequate skills to use the library and its website.

In Nairobi, Mwatela (2013:35) on the study of factors influencing utilization of library services and resources at University of Nairobi, asked students using Mombasa library about the resources they used at the library and discovered that most students used print materials. This group was followed by students who used Wi-Fi at the library, very few indicated that they used electronic journals and minority of the students used Online Public Access Catalogue (OPAC) and electronic books. The findings of the studied University revealed that students are familiar with utilizing the services and resources in the library especially because by the virtue of being students at higher education institution, they are bound to use the library. Therefore, it would be good that the learners in the current study be taught about how to utilize the different services and resources in

the library while they are still in secondary school so that when they get to higher educational institutions, they would not have difficulty in using the library resources.

## **5.6 Information seeking**

According to Wilson (2000: 49) during the process of information seeking, “the individual may interact with manual information systems (such as a newspaper or a library), or with computer- based systems (such as the World Wide Web).” The researcher wanted to find out how respondents searched for information and it was found that 52 (32.7%) used books to search for information, a slightly frequency 43 (27.0%) searched information by Internet while 37 (23.3%) asked teachers for information. Searching for information through discussion with classmates was used by 22 (13.8%) of the respondents and only 5 (3.1%) of the respondents searched for information through browsing the library shelves. It is noticed that most learners preferred to seek information through Internet but used books as their source of information. Learners chose books as their source of information because they do not have computer with internet connectivity in their school and they only accessed Internet through their mobile phones since most of them could not afford Internet Cafés.

In United States of America, Lorenzen (2001:157) conducted a study on the use of World Wide Web for research by high school students and asked students about the sources they used to get information for their school assignments. Grade 10 and 12 learners who participated in the study mentioned that they used only the library and World Wide Web as their information sources. A majority of the students indicated that they used both the library and the World Wide Web as their sources of information while a few students indicated that they used only the Web as their source of information for their school assignments. This study shows that there were no students who relied solely on the library as the source of information. The results are similar to those of the current study because they indicated that despite the popularity of the Web, students still used print materials from the library and still value the library as an information source.

In Fort Hare University, Somi and de Jager (2005: 262) carried out a study in the role of academic libraries in the enhancement of information literacy, giving out questionnaires to students entering the library. The study found that the sources students consulted when given assignments were browsing the open shelves at the library (36%), followed by 28% of the students that indicated that they regarded the Internet as their source of information while 13% of the students regarded dictionaries, encyclopedias, biographies and World Bank reports as their first source of information when given assignments. However, 12% of the students consulted the librarians on their assignments, 8% of the students indicated that they used the Online Public Access Catalogue (OPAC) to check available books in the library and only 3% used the library subscribed online databases. The results showed that the students used library materials when they need information but only few of them used the subscribed library materials which the library spent a lot of money on. That is the reason why the researcher of the current study believes that although learners of Gerson Ntjie secondary school are using libraries in other villages, but they should be given library training. From the training, learners would be taught at an early age on how to access different materials available in the library, including the subscribed library materials.

Unlike other studies, in Lesotho, Boadi and Letsolo (2004:195) investigated the Information needs and information seeking behaviour of distance learners and found that Internet was the least used information source by distance learners. The findings contradict with other studies in the sense that colleagues were the most popular information source by 44 students. Personal collections were used by 40 students' and lecturers or experts were consulted by 38 students as their information source. 35 students used course material as their information source while 29 students consulted their family members as their information source. Only 12 students regarded Internet as an information source. Unlike learners of the current study, these findings showed that students did not make an effort in using the Internet since they were distance learners and only had access to the Internet at their university, while learners in the current study had to use their cellphones to access the Internet or to go to the library just so that they can access Wi-Fi.

In Botswana, Onen (2016:116) undertook a study on the information literacy integration strategies into the curriculum of senior secondary schools and asked teachers about the type of sources that they use to teach information literacy in schools and found that most teachers (62%) used prescribed textbooks, followed by 57% of those who used their own personal resources 41% of the teachers regularly used the Internet from the school or library to find information and 28% of teachers who magazines, journals and newspapers as sources to teach information literacy. Subscribed and free online databases was regularly used by 28% of the teachers, E-mail, chats, Website and Blogs were used by 23% of the teachers while electronic digital resources were regularly used by 21% of the teachers. The results indicated that teachers try to use different sources of information when they teach information literacy in schools thus exposing learners to a range of information sources. Information sources differ in accuracy, relevance and the current of the information they provide. These findings are relevant to the current study because the type of information sources that the teachers use affect the type of information they give to learners.

Ocholla (1999: 139) at the University of Zululand conducted a study on the insights into information-seeking and communicating behaviour of academics and asked academics to identify 10 sources that they frequently used. The findings showed that majority of academics (189) used journals to search for information, followed by 144 academics who searched for information from dissertations or thesis while 128 academics used textbooks as their source of information. 100 academics gave a positive response about using Internet, whilst handbooks are used by 74 academics, 70 academics indicated that they used mass media. Consulting professional associations as an information source was indicated by 58 academics and only 1 academic indicated consulting colleagues. The library is a good source of information, therefore, it is pleasing to find academic who have a variety of information sources, still valuing the library as their source of information. This study could act as a type of motivation for the learners of the current study that using the library does not only end at secondary school. An individual can enquire at the library at every level of his life.

## **5.7 Experiencing challenges when searching information**

The researcher wanted to know whether learners' experienced challenges when searching for information and the findings indicated that a majority 113 (71.1%) of the respondents had challenges when searching for information while 43 (28.9%) of the respondents did not experience any challenges at all. Information seeking is a complex process, so it was not a surprise when learners encountered challenges when searching for information.

### **5.7.1 Challenges encountered when seeking information**

Wilson (1999:252) states that in the process of seeking information to satisfy a need, an individual will encounter different challenges. Respondents were asked to state the challenges they encountered when searching for information. Most of the respondents mentioned that the community library is far away 47 (41.6%), other respondents 26 (23%) mentioned that they had no access to computers and Internet while some respondents 14 (12.4%) had a challenge in understanding the English language. Twelve (10.6%) of the respondents complained that it was not easy to approach teachers when they need help, 10 (8.8%) of the respondents mentioned that they faced challenges in terms of insufficient knowledge in using the library and insufficient information resources. It was only 1 (0.9%) of the respondents that did not specify the type of challenge they encountered. Most challenges hinder learners to seek information.

In Namibia, Tertu (2013:79) conducted a study on the Web-based information behaviour grade 12 high school learners and asked the respondents to identify the challenges they encountered when they used the Web to search for information. The results indicated that the highest number of students (77.4%) had challenges with not having adequate time to use the Internet at school. Students that complained about slow Internet connectivity comprised 53.9% of respondents, and were followed by complaints of inadequate resources (38.2%) and lack of skills and knowledge in searching for information on the Web (35.2%). Poor quality of facilities and lack of skills and knowledge in using ICT was identified by 31.1% and 31.1% of the students respectively and only

1.9% encountered a challenge with limited access to the lab. The findings showed that students complained about inadequate time to use the Internet while learners of the current study do not have access to the Internet at all. This is a digital divide to schools because students in schools that have access to Internet could perform better in school since they are able to search for information than students who do not have access to the Internet at all.

In Namibia, Hamutumwa (2014:124) asked the learners to identify the factors that hinder them in successfully using electronic resources. The results showed that amongst other factors, most students (44%) had a problem with speed, followed by 34% of students who complained about not having enough time and another 34% of students who struggled with information overload. 29% of students explained that they do not know how to search and 23% said information is scattered. 22% said they fail to find information because they had limited searching skills, 21% argued that the Internet is costly and another 21% stated that they had inadequate library knowledge. 14% said they had no access to the Internet while stated that they had a challenge with using electronic resources because of not being able to afford to buy themselves personal computers. For university students to experience challenges of not knowing how to search for information, having limited searching skills, limited knowledge and inadequate library knowledge proves that learners should be exposed to the library environment and be taught how to use Internet for searching information at an early age.

A study by Chawinga and Zozie (2016:10) in Malawi with open and distance learners on information needs and barriers to accessing information sources discovered that the biggest information challenge (65.8%) faced by Mzuzu University open and distance students was having limited access to the relevant information for their studies. Students had to travel long distances to the library, which does not have relevant information materials for them. The Mzuzu University is does not subscribe to some common online databases and the available databases cannot be accessed from off-campus. Students lack information literacy skills, therefore some of the information they retrieved from the Internet was sometimes inaccurate need. Since the Internet has too much information, students had challenges in trying to identify which information is relevant and which

information is inappropriate. Another challenge students encountered was that it is very rare to find a community library in a rural area, and this exacerbated their struggle to find relevant books. Also, most Internet cafés in rural areas are expensive and learners cannot afford them. Students use their mobile phones to access the Internet but their mobile phones cannot provide them with certain information from the Internet, for example, some student stated that that her cell phones could not open a portable document format (PDF) document.

The challenges experienced by these students are similar to the challenges of the learners of the current study. Having to walk long distance to the library, expensive Internet cafés and lack of information literacy skills are challenges that make it difficult for learners to find information. These are the same challenges that students in the current study are experiencing. Learners indicated that felt confused and thought of giving up when they did not find the information they need. The challenges that the learners encounter during the information seeking are the ones that make them not find the information they need.

In Nigeria, Okite-Amughoro, Makgahlela and Bopape (2015:32) undertook a study on the challenges of using electronic information resources for academic research by post-graduate students at Delta State University and found that students encountered several challenges when they used electronic information resources (EIRs). Students explained that they had challenges when they had to use electronic information resources because they lacked training on using information communication technologies (ICTs). Lack of training resulted in students experiencing frustration in using EIRs and also retrieving inaccurate information for their need. Students also complained about slow network connectivity which made it difficult for them to download files. Other challenges faced by students when using EIRs were having insufficient ICT equipment, irregular power supply and lack of space. The results indicated that post-graduate students had challenges in using electronic information resources because of limited knowledge in using ICTs. Learners of the current study only access the Internet through their cell phones since most of them could not afford Internet cafés. These learners taught themselves on how

to search for information on the Internet which could lead them to retrieving inaccurate information since they do not have adequate training in using the Internet.

### **5.7.2 Feelings associated with information seeking**

Wilson (1999:255) explains that Kuhlthau's Information Search Process indicates that the feelings of uncertainty during the information search "give rise to feelings of doubt, confusion and frustration and that, as the search process proceeds and is increasingly successful, those feelings change." Learners were asked about the feelings they had when they did not find the information they needed. The findings indicated that majority of the respondents felt confused 81 (50.9%) when the search did not produce the desired results. Thirty one (19.5%) of the respondents felt frustrated, 26 (16.4%) expressed being sad while 13 (8.2%) of the respondents felt like giving up and 8 (5%) of the respondents felt irritated.

These findings support the stages of Kuhlthau's model. The researcher also wanted to find out the feelings learners had after finding the information. The results showed that most respondents 55 (34.6%) felt happy, 45 (28.3%) felt confident, 27 (17.0%) of the respondents stated that they felt inspired while another 17.0% of the respondents felt relieved and minority of the respondents (3.1%) stated that they felt amazed. It is expected that learners had to experience different feeling before and after finding the information they need. The results indicated that some learners felt like giving up when they failed to locate the information they need. Giving up will mean that their information gap will not be satisfied because they would still be lacking the information they are in need of.

In Washington, Fidel et al. (1999: 31) carried out a study on the Web searching behaviour of high school students doing grade 11 and grade 12. The results are supported by the findings of the current study because they showed that students had different feelings when searching for information. The results indicated that students felt frustrated when the Web search did not produce the results in the time they thought was reasonable. They



felt frustrated when the Web did not produce the results quickly. One student stated that “it is frustrating when you cannot find something you are looking for.” Some students felt irritated when the link they thought would provide them with the information they needed had either moved or the browser could not open. “I hate it when they have something up there and it ain’t there,” explained a student who waited a long time due to the slow response of the Web and which produced no desired results. The findings indicated that students were aware that searching for information on the Web could sometimes take time but they were always impatient when the search response was slow. These results support the current study that learners undergo different feelings during their information seeking process and that it is normal for learners to be confused during the beginning of the information search and then become happy when the search produce the desired results.

Wilson et al. (2002: 717) conducted a study in both United States of America and United Kingdom with 198 researchers on the study of uncertainty and its correlates in information searching. They described that there are different feelings of uncertainty throughout the information seeking process. They stated that the first uncertainty is at the problem recognition stage and it is connected only with feeling of disappointment or pleased. The second uncertainty is at the problem definition stage and is more connected with feelings of confusion or clarity and doubtful or confidence. The third uncertainty is at the problem resolution stage and it highly involves feelings of pessimism or optimism and doubtful or confident. The last uncertainty is at the solution stage and highly involves feelings of confusion or clarity, doubtful or confident, dissatisfied or satisfied and lastly, disappointed or pleased. From the results of the current study, the researcher believes that certain skills need to be applied when searching for information. Learners of the current study should be taught on how to use search terms and key words when searching for information so that they do not find the process of searching for information too much difficult and give up when they encounter the uncertainties.

In New Jersey, Kuhlthau and Heinstrom and Todd (2008) undertook a study on revisiting the Information Search Process using grade 6 to grade 12 students and the results indicated that students go through different feelings when they had to search for

information. Students had challenge in choosing a topic at the initiation stage and experienced feelings of confusion and uncertainty which decreased throughout their project. Other students felt confident and optimistic at the initiation stage but there were those who felt insecure. At the middle of the project, students felt overwhelmed when they could not easily retrieve the relevant information and that caused a decrease in their optimism. There was also a small increase in the feelings of anxiety and disappointment at this stage. There were different feeling involved during the writing stage. There was an increase in feelings of relief, satisfaction and confidence. There was also a decline in feelings of confusion, uncertainty and frustration. The current study was guided by Kuhlthau's model on the feelings associated in information seeking and the learners had shown that feeling and emotions changes when seeking emotions just as it was stated by Kuhlthau. Learners indicated that information seeking could be confusing in the beginning of the search but the felt happy and confident when the search produced the desired results.

In Germany, Kalbach (2003:7) wrote an article that outlined the framework on the role of emotions in seeking information on the Web and stated that during the initiation stage, an information seeker has feelings of uncertainty and apprehension. At the selection stage an information seeker experiences feelings of curiosity, impatience and skepticism. During the exploration stage an information seeker experiences feelings of anticipation and optimism. At the formulation stage, an information seeker has feeling of uncertainty, confusion and feeling overwhelmed. At the end of the Information Search Process, an information seeker has feelings clarity, confidence, and sense of direction. The findings are similar to the findings of the current study because they show that emotions changes in any information seeking, regardless of the information source that is used when searching for information. Due to the complexity of information seeking, it is not surprising when some of the learners in the current study indicated that when they struggled to find the information they need, they sometimes thought of giving up.

## **5.8 Use of Social networks**

Students were asked if they used social networking sites and the findings indicated that most learners 130 (81.1%) mentioned that they used social networks while only 29 (18.2%) learners mentioned that they did not use social networks. The majority of the learners indicated that they used social networking sites despite not having free access to the Internet at school. Learners buy mobile data for their mobile phones to be able to access social networks. This means other learners did not use social networks because they could not afford to buy mobile data or even cell phones that have the Internet. Similarly, in Nigeria, Kolawole (2016: 114) conducted a study with academics and undergraduates in two universities to find out how technologies are used for teaching and learning and also found that most students were using social networking sites (99.7%), 81% were using Youtube, 80% were using Instant messaging and 59% were using Skype. The findings of the studied Universities revealed that social networking sites are highly used by a large number of students.

### **5.8.1 Social network mostly used**

Chen (2003:29) emphasized that the information searching process is no longer concerned with only visiting the library and browsing indexes or tables of contents. High school students can simply search the Web and just “type in the word and click”. The findings indicated that majority of the learners used Whatsapp 77 (59.2%), followed by 49 (37.7%) of the learners that used Facebook. Twitter, Mxit and Instagram were used by 1 (0.76%) of the learners respectively. One (0.76%) of the learners did not specify the social network they used. 21<sup>st</sup> century generation prefer using technology a lot because it provides speedy information. Social networks are used by many learners because they are more popular. Today’s youth prefer chatting rather than making a phone call. This is because social networks are speed, inexpensive and also because an individual could create a group chats where a number of people could communicate at the same time on one platform.

Similarly, Matlala (2015:66) undertook a study in Limpopo province on the use of Internet by grade 11 learners and found that the majority of learners (188) used Facebook and equally 188 learners used Whatsapp. 32 learners indicated that they used Twitter,

followed by 13 learners who used LinkedIn and 9 learners who used MySpace. Most students used Facebook and Whatsapp more than other social networking sites due to their popularity and ease of access. The findings of the studied school are relevant to the current study, more especially because the studied school has learners who are living in similar conditions as the learners in the current study (rural area), therefore, there are greater chances that their information needs, seeking and availability of information sources are the same.

Kolawole (2014:114) conducted a study in Nigeria with undergraduate students and academics on the use of Web 2.0 technologies for teaching and learning and also found that among the social networking sites, students were more familiar with using Facebook (95%), Whatsapp was the second most heavily used social networking site (94%); followed by 82% of students who used 2go. Twitter was used by 79% of the students, 39% used Badoo and 28.4% were familiar with LinkedIn. The findings indicated that most students were familiar with Facebook, Whatsapp, 2go and Twitter more than other social networking sites. Facebook and Whatsapp are the most used social networking sites by students, just like the learners in the current study. These could be because they are easily downloaded and do not consume too much data.

In Turkey, Tosun and Baris (2011:533) investigated the place and importance of computers and Internet in secondary school students' lives with students studying for Electric-Electronic Technologies and Information Technologies. The study discovered that majority of the students (191) subscribed to Facebook, Twitter was used by 30 students, 15 students indicated they used Myspace and 11 students mentioned that they used other social networking sites. Just like in the current study, students preferred to use social networks that are more popular to the young generation.

In Ghana, Augustine and Dadzie (2013:221) undertook a study on social media challenges in the marketing of library and information services using students in the Faculty of Social Sciences and as well as two librarians. The study support the above mentioned findings of the current study by stating that Facebook was the most popular social networking site used by 57% of the students. Twitter was used by 19% of the students, 14% of the students stated that they used other social networking sites while

7% of the students indicated that they used Skype and only 5% of the students used YouTube and Blogs respectively. Some social networks are costly to use them that is the reason most students do not use them. Since learners of the current study are from rural area and used their cell phones to access social networking sites, it should be noted that it is not every one of them who have smart phones so they only used social networks that are cheap and that could work effectively on their cell phones.

Bicen and Cavus (2010:5868) carried out a study with undergraduate students in Nicosia on their most preferred social network sites, and their findings showed that a majority of the students used Facebook. The studied University revealed that majority of the students equally used Facebook (38%) and Live Space (38%). Hi5 was used by few students (12%) and MySpace was used by 11% of the students while Orkut was used by only 1% of the students. Although some of the social networks used by these students are different from the current study, these results show that students are familiar with using different social networking sites.

### **5.8.2 Frequency on social network sites**

According to Pempek, Yermolayeva and Calvert (2005:227) many youth use social networking sites and there is little knowledge on why, how much and the reasons why they use these social networks sites. Hussain and Safdar (2008:48) opine that the Internet can supply learners with the updated relevant information to their need, at their own pace. The researcher wanted to know how often learners used the social networking sites and the findings showed that 47 (36.1%) of the learners used social networking daily. Thirty seven (28.5%) of the learners used social networks only on weekends, 23 (17.7%) of the learners used social networks monthly while 20 (15.4%) of the learners used social networks once a week. A minority of the students (0.76%) did not specify how often they used social networking sites. Since learners lacked access to the Internet, the current study does not see it as a bad idea that they are using social networking daily. Learners used social networking sites as another platform of accessing information.

Tertu (2013:62) conducted a study in Namibia on the Web-based information behaviour of grade 12 high school learners and found that almost half of the students accessed the Internet during weekends (46.4%), 29.7% of the students used the Internet after school while 23.9% of the students accessed the Internet during school hours. Learners could not access the Internet at the same frequency because accessing the Internet will depend on the availability of the Internet and the availability of other information sources. When there are other information sources available, there would be no need to always be on the Internet searching information. However, although learners of the current study do not have free access to the Internet, they indicated that they accessed the Internet daily because they had limited information sources that they can use to search for information instead of the Internet. This means that learners spent too much money buying mobile data for their cell phones so that they can be able to access the Internet and search for the information they need.

In Mpumalanga, Baldwin (2014: 62) studied how Facebook is being used for educational use in schools and discovered that grade 11 and 12 students did not spend too much of their time using Facebook. In school A, it was found that half of the students (50%) stated that they spent an hour or less on Facebook, followed by 20% who said they spent 1 to 2 hours on Facebook and students who spent 3 to 4 hours, 4 to 5 hours, 5 to 6 hours or those who did not spend any of their time on Facebook made up 10% of the respondents respectively. School B revealed similar findings (Baldwin, 2014:70), with nearly half of the students (44%) spending an hour or less on Facebook, 19% spent 1 to 2 hours, 13% spent 3 to 4 hours, 12% spent 2 to 3 hours, 6% spent 5 to 6 hours and another 6% stated that they did not spend time on Facebook. Unlike learners of the current study, these participants did not use social networks too much. Schools should note that social networking sites could be used to improve the reading and writing culture of the learners. They make learners to be daily readers and writers.

Sarfo and Ansong-Gyimah (2011: 220) conducted a study on Ghanaian senior high school students' access to and experiences in the use of information and communication technology and the participants were senior high school students between the age ranges of 14-21. The studied school also revealed that many students did not use the Internet

much. A majority of the students (85.1%) never used the Internet, some students (6.6%) used the Internet for at least 1 day in a week and while only (5.2%) of the students used the Internet every day. There were also other students (2.4%) who stated that they used the Internet for at least 3 days in a week. Most students did not use the Internet access because they did not have Internet at their homes and the study further indicate that lack of Internet is a problem faced by many developing countries. Most students did not use information and communication technologies (ICT) like mobile phones, computers or Internet at schools. The teachers are also “digital immigrants” and are reluctant to teach using ICT tools. In the current study, the teachers’ perceptions on the Internet or social networking sites are not known. When teachers have positive attitude towards the use of ICT’s in school, they could encourage the school leadership to implement the use of ICT’s for teaching and learning.

However, a study conducted by Hamutumwa (2014:105) in Namibia on the electronic resources use by distance learners at University of Namibia, discovered that most students (29%) used electronic resources “all the time” and 6% of the students indicated that they “rarely” used electronic resources. Two percent of the students did not indicate how often they used electronic resources and only 1% of the students said they “never” used electronic resources. The findings indicated that a majority of the students used the electronic resources “all the time” similarly to the students in the current study who preferred to use social networking sites daily, it is only few students who indicated that they “never” used electronic resources and that is surprising because they are University students and should be familiar with using electronic sources. These results are of university students and they indicated that most students used electronic resources daily, which means that learners in the current study are not wrong in using the social networking sites daily because they are familiarizing themselves in searching for information that could complement their school curricula on a daily basis.

Okite-Amugboro, Makgahlela and Bopape (2015:32) undertook a study with post-graduate students in Nigeria and the challenges they face when using electronic information. Students were asked to identify the electronic information resources and the results indicated that the majority of the students (70.7%) accessed them “often”. Other

post-graduate students (20.7%) indicated that they “always”, while 8.6% indicated that they “rarely” used electronic information resources. No student responded as “never” having used electronic information resources. From the findings of the studied University, it was not expected that only a few post-graduate students utilized the electronic information resources because a post-graduate students must be flexible in using almost all of the commonly sources of information available in Universities, including the electronic resources. These shows that the respondents of the current study are eager to find information, that is the reason why they use almost all information sources that are available, such as library and social networks, unlike some students in other who have an advantage of having information sources but not using them.

### **5.8.3 Uses of social networks**

Jones and Cuthrell (2011:72) emphasize that social media sites are designed to share information, opinions and photographs. Learners from the current school were asked their reasons for using social networking sites. Learners were asked about how they used social networking sites. The findings indicated that most learners 47 (36.2%) used social networks to chat with friends, 46 (35.4%) of the learners collaborated with classmates on school work and 15 (11.5%) of the learners used social networks to keep updated with the latest news. Twelve (9.2%) of the students indicated that they used social networking sites to meet new people while 10 (7.7%) used social networks to keep in touch with people they rarely see. The findings showed that 35.4% of the learners used social networking sites to help each other on school work. This proves that if teachers can also use social networks with their learners to do school works, an improvement can be seen on the performance of the learners. It should be noted that other learners are shy to ask questions in front of the class because they are not sure how their classmates will perceive them. Therefore, using social networking sites to complement the traditional classroom teaching could make learners feel free to ask their teachers for clarifications on issues they did not understand in class.

In the United States of America, Roblyer et al. (2010: 138) in a comparison of students' uses and perceptions on social networking sites reported similar findings in their study.



The results indicated that 111 students used Facebook to stay in touch with their friends, 72 students used Facebook to connect with people they have lost contact with, 48 students used Facebook to update people about their lives, 11 used Facebook for career networking and only 5 students used Facebook to communicate on class projects. These results are similar to the results of the current study which indicated that students did not use Facebook or social networking sites for academic purposes but to engage in conversation with their friends. Just like the findings of the current study, social networking was used to cut the distance between friends who rarely saw each other.

Baldwin (2014: 64; 72) investigated how Facebook is being used for educational purposes in schools by grade 11 and 12 students and found that in School A, a majority of the learners (38 learners) used Facebook to exchange school work and educational information with teachers and other learners, 23 learners used Facebook to communicate with their friend and other learners, 15 learners used it to chat with friend and also for search new friends, 18 learners chatted with parents and relatives and only 4 learners used Facebook to exchange music and photographs. The results indicated that most learners mainly used Facebook for educational purposes. Learners in the current study also used social networking sites as a platform to collaborate with friends on school works. This proves that social networking can be used to enhance the reading and learning of the learners.

However, in Botswana, Tella (2007:174) studied the use of the Internet by undergraduate students and how it impacts on their academic performance. Tella found that most students with the average of 7.68 used the Internet to obtain course related information. Students with an average of 7.06 used the Internet for communicating by email; and an average of 6.96 used the Internet to do school work (assignments). Students who used the Internet to obtain non-course related information were at the average of 6.39, average of 5.38 used Internet to chat with others, 5.33 used Internet for entertainment, 4.27 played games, 4.12 downloaded music, 4.10 downloaded games and the minimum average of students (3.74) used the Internet to create web sites. If learners of the current study had access to the Internet, they could be using it to satisfy different kinds of needs; starting from educational needs to personal needs. When learners have access to the Internet it

is much better and easier to search for information compared to when they are using their mobile phones.

In Namibia, Tertu (2013:64) studied the Web-based information behaviour of high school learners with grade 12 learners. Students were asked the reasons why they searched for information on the Web and found that a high number of students (73.9%) used the Web to do their school related work and 60.1% used the Web for entertainment, while 26.1% of the students used the Web to search for information awareness. The results further showed that of those students who searched for information on the Web, most of them (41.1%) used the Internet to do their homework and 29.4% used it to search for exam study notes. Using the Web to search for assignment and information on experiments was mentioned by 26.4% and 23.5% of the students respectively. A minimum number of students (11.8%) used the Internet to search for information on school experiments and 8.8% search for general study information.

In Nigeria, Kolawole (2016:117) undertook a study with academics and undergraduate students to find out how technologies are used for teaching and learning asked students to indicate their use of Web 2.0 technologies and revealed that majority of the students mentioned that they used Web 2.0 technologies to communicate with friends (94.6%). Followed by 87% of those who used Web 2.0 technologies to search for the information they need, 77% used them for research activities, another 77% to keep updated with the news and 74% for personal activities. 73% of the students indicated that they used Web 2.0 technologies to access lecture notes or materials, 73% to access learning resources, 70% for academic-related activities, 66% for online group discussion, 59% for sharing specific knowledge relating to learning, 54.7% to submit assignments or tests while 52.3% shared educational materials. Only 34.4% stated that they used Web 2.0 technologies to communicate with their lecturers. The results showed that although students used Web 2.0 technologies for other of the given reasons but most of the students used Web 2.0 technologies to do their academic work. Social networking sites could be used for many reasons (educational purposes included), therefore, if learners of the current study are

taught how to efficiently use them, they would still be able to search and find the information they need even in the absence of other information sources.

Hamutumwa (2014:120) on the study of electronic resources used by distance learners revealed that almost half of the students (41%) used electronic sources for writing assignments, followed by 25% of students who searched electronic resources for writing research projects. 18% used the electronic to get current information and 17% used electronic resources for all the purposes namely: assignments, writing research projects, searching current information to stay updated and also to get information for leisure purposes. Only 9% of the students used electronic resources to get information for leisure. The findings showed that majority of the students used electronic resources to do their school work. If learners of the current study had the Internet, they would be taught on how to access and use the electronic resources while they are still in secondary school so that they would not struggle when they reach higher institutions and are expected to use electronic resources for assignments.

## **5.9 Summary of the chapter**

This chapter discussed the findings presented in Chapter 4. The discussion was based on the research questions underpinning the study which focused on the information needs of grade 10 and 11 learners of Gerson Ntjie secondary school; their information seeking behaviour; their uses of the library and social networking sites. The next chapter will provide conclusion, recommendation and suggestions for further research.

## **Chapter 6: Summary, Conclusion and Recommendations**

### **6.1 Introduction**

The purpose of the study was to investigate the information need and information seeking behaviour of grade 10 and 11 learners of Gerson Ntjie secondary school situated in Limpopo province. This chapter provides the summary of the chapters of the study; conclusion and recommendations for further research are given. A summary for each research questions is given focusing mostly on the most important findings. The research questions were:

- What information do the grade 10 and 11 learners of Gerson Ntjie secondary school need?
- Which sources of information are mostly used by the grade 10 and 11 learners of Gerson Ntjie secondary school?

- How do the grade 10 and 11 learners of Gerson Ntjie secondary school seek information?
- What are the challenges the grade 10 and 11 learners of Gerson Ntjie secondary school face when seeking information?
- How has social networks changed the information needs of the grade 10 and 11 learners of Gerson Ntjie secondary school?

## **6.2 Summary of the chapters**

Chapter 1 provided the introduction and background of the study. Statement of the problem, objectives, research questions, delimitations and limitations of the study, and significance, summary of theories, preliminary literature review and methodology were presented. Institutional background was provided as well as the outline of the study.

Chapter 2 focused on the theoretical framework of the study and the literature review relating to the information needs and information seeking behaviour of grade 10 and 11 learners. The study was underpinned by Wilson's 1999 Information Behaviour model complemented by Kuhlthau's 2004 Information Search Process (ISP) model.

Chapter 3 discussed the research design and methodology used in the study. The study used a mixed method approach with a survey design, using a questionnaire as an instrument to collect data. The validity and reliability of the instruments were established by pre-testing the questionnaire with 20 grade 10 and 11 learners at Klaas Mothapo secondary school. Statistical Package for Social Sciences (SPSS) software was used to analyze quantitative data.

Chapter 4 presented the results of the survey of 382 grade 10 and 11 learners from Gerson Ntjie secondary school. The data was mainly presented with charts and figures.

Chapter 5 discussed the findings of the study presented in Chapter 4. The study found that majority of the learners needed information to improve their reading skills and mainly searched for information from books.

## **6.3 Conclusions**

The conclusions made were guided by the research questions. This section provides the research questions and conclusion relating to the question given.

### **6.3.1 What information do the grade 10 and 11 learners of Gerson Ntjie secondary school need?**

The study found that grade 10 and 11 learners mostly needed information to improve their reading skills 64 (40.2%). Learners needed information to be able to do their academic work 46 (28.9%) and 23 (14.5%) of the learners needed general information. Sixteen (10.1%) of the learners needed health information and the smallest number of 10 (6.3%) of the learners needed information for personal interest. The findings showed that a majority of the learners needed information to improve their reading skills. In this case, the researcher concludes that there is some level of culture of reading in the studied schools. Learners may use these reading skills to read for leisure or academic purposes.

### **6.3.2 Which sources of information are mostly used by the grade 10 and 11 learners of Gerson Ntjie secondary school?**

The study found that most learners 50 (31.4%) preferred to use the Internet as their source of information while 41 (25.8%) of the learners used the library as their source of information. Lecturers' notes and handouts were preferred by 35 (22.0%) of the learners, 28 (17.6%) preferred subject textbooks and a minimum of 5 (3.1%) of the learners preferred to use friends and colleagues as the sources of information. Therefore the study concludes that as the school in the study did not have a library, the nearby community and academic libraries was used. The study concludes that students preferred to use different sources when they need information, however, some of the information sources that they preferred to use are not available in their school, like access to the Internet.

### **6.3.3 How do the grade 10 and 11 learners of Gerson Ntjie secondary school seek information?**

The study revealed that although most learners preferred the Internet as their source of information, most of them used books when they searched for information because it is difficult for them to have access to Internet. Fifty two (32.7%) of the students used books as their main source of information, 43 (27%) indicated that they searched information from the Internet, 37 (23.3%) used teachers as their information sources while 22 (13.8%) discussed with friends when they needed information and only 5 (3.1%) browsed the library collections. Learners used books as source of information over their preferred source of information which is the Internet, because they do not have computers with Internet connectivity at school and cannot always afford to use Internet cafés or buy mobile data whenever they need to search for information. The study concludes that few learners search information from library collections due the absence of the school library. This means that learners use information resources that are available to them even when it is not the type of information they would like to use when they search for information.

The study found that although there was no school library, 106 of the learners stated that they have used a library before while 53 learners mentioned that they had never used a library before. There are two libraries outskirts the school; the community library which is about 5km away from the school and an academic library which is about 8km from the school. Almost half of the learners (49.9%) indicated that they used these libraries to search for information; slightly less (45.2%) used the library to study; 2.8% of the learners used the library for discussions while another 2.8% used the library to access free Wi-Fi. The study found that most learners (95%) used library materials while minority (11%) of the learners stated that they used the books they brought along with them to the library.

The study also revealed that learners go through different emotions when they seek information. When an information search could not produce the results they wanted, learners felt confused, frustrated, sad, irritated and felt like giving up. However, when the information search was successful, learners felt happy, confident, inspired, relieved and amazed. Therefore, the study concludes that students use different information sources to search for information. Students try their best to have access to a variety of information

sources including those that they have to pay in order to access them (the Internet). The study also concludes that even in the absence of the school library, students make an effort of accessing the library by visiting those that are nearby.

#### **6.3.4 What are the challenges the grade 10 and 11 learners of Gerson Ntjie secondary school face when seeking information?**

The challenges that learners encountered when seeking information were: community library being far, no access to computers and the Internet, difficulty in understanding the English language, insufficient knowledge in using the library and insufficient information resources. The study concludes that students are experiencing a number of challenges when they are in need of information and they undergo different emotions during the information seeking process.

#### **6.3.5 How has social networks changed the information needs of the grade 10 and 11 learners of Gerson Ntjie secondary school?**

The study concludes that learners are using social networking sites for social purposes. This was evidenced by (36.2%) used social networks for chatting with friends; slightly fewer (35.4%) used social networks to collaborate with classmates on school works, 11.5% used social networks to keep updated with the latest news while 9.2% used social networks to meet new people. The smallest number of respondents (7.7%) used social networking sites to be in contact with people they rarely saw.

The study indicated that learners mainly needed information to improve their reading skills, followed by for academic information purposes with the Internet being the preferred source of information. Learners are engaged in social networking on a daily basis. Learners used mainly books to search for information since they had limited access to the Internet. Despite the growth of the Internet and increasing access to it, learners still value libraries as an information source. With limited information resources in the village, learners are able to use their mobile phones and social networking sites by collaborating with other learners about their school work. Having access to the Internet was a positive impression on the learners because they were able to use it efficiency. Social networking sites simplified the information seeking process of the learners.



## 6.4 Recommendations

### ➤ School library

Research has shown that student perform better by between 10% and 25% when “a stocked, staffed and fully-funded library is in operation within a school” (Equal Education, 2010:6). School libraries are essential in the education system especially because they because complement the school curricula (Equal Education, 2010: 6). The government must ensure that all public schools have their own school library because school libraries enable learners to be better information seekers. It was noted that learners needed information to improve their reading skills, therefore, an establishment of a school library will expose learners to the reading environment. The more they read, the more they will improve their reading skills.

### ➤ School library policy

The South African Department of Education must make the creation of a school library policy a priority. A school library policy will be a guide in the establishment and running of any school library. With the school library policy, the school principals would be able to ask the Department of Education about the progress of establishing a library in their school.

### ➤ Increase funding in public schools

The Department of Education smust increase their funding to public schools. With an adequate budget, the school can have better information resources as well as computers. The Department of Education must also ensure that the allocated budget to the school is spent effectively. The school must also take the initiative to look for sponsors to donate information resources.

### ➤ Computers with Internet connectivity

The study found that learners preferred to use the Internet to search for information; therefore, it is recommended that the school obtain computers with Internet connectivity

for learners. The school must not restrict learners' access to social networking sites on the school computers but instead they should promote and even practice complementing their traditional face to face classes with social networking. It must be noted that "social media gives school children meaningful ways to use and improve reading and writing skills because all the social software requires users to read and write" (Plockey and Amuda, 2013:207)

- Information resources in African languages

The Department of Arts and Culture (2014:48) emphasized that "teachers might teach children how to read but everyday access to attractive books in their home languages leads children to enjoy reading. The more they enjoy reading, the more they will read – and the better they will read." There must be more books written in African languages in schools. When information is available in the different languages of the users, there is surety better chance that an information user will understand information found.

## **6.5 Future research**

The following studies should be conducted:

- A similar study should be conducted in years to come with the same school to check if there is any development or changes with how students seek information.
- A comparative study on the information needs and information seeking behaviour of grade 10 and 11 learners in other high schools situated in rural and urban areas.
- A study should be carried out on with school principals on how the absence of the school library affects the information seeking behaviour of learners and the school performance.
- A study should be conducted on the attitude of school principals to the school library and whether they find school libraries significant to the teaching and learning.
- A study that will increase the scope of the study

## **6.6 Summary of the chapter**

This was the last chapter of the study. The chapter provided an overview of the whole study of the information needs and information seeking behaviour of grade 10 and 11 learners of Gerson Ntjie secondary school in Limpopo province. The research questions underpinning the study were revisited in terms of the results gained from the study. Conclusions and recommendations for further study based on the findings of the study were given, which could benefit the school in the study and others like it. In summary, the learners at the school have limited information resources which hinder them in answering their information needs.

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Appendix 1 Department of Education approval letter



**LIMPOPO**  
PROVINCIAL GOVERNMENT  
REPUBLIC OF SOUTH AFRICA

KGAKOTLOU CIRCUIT  
PRIVATE BAG X 1108  
SOVENGA  
0727  
TEL: 015 267 5641/2/5523  
082 937 2975

DEPARTMENT OF  
**EDUCATION**

**KGAKOTLOU CIRCUIT**

**Enq: Rammala M F**  
**082 386 9542**

**10 OCTOBER 2016**

**Dear Madam**

**YOUR REQUEST FOR PERMISSION TO COLECT RESEARCH DATA AT GERSON NTJIE  
SECONDARY SCHOOL**

1. The matter above bears reference
2. The Circuit Office acknowledges receipt of your letter dated 06 October 2016.
3. This letter serves to be your permission to peruse your study at Gerson Ntjie for research purposes.
4. Your study should not in any way disturb the teaching and learning activities at the school. Ensure that proper arrangement is in place with the school management at all times.
5. We wish you well in your study and hope that your findings will be shared with this office to enhance our systems in the department.

Regards



18 November 2016

Ms Asania Reneliwe Maphoto 216041770  
School of Social Sciences  
Pietermaritzburg Campus

Dear Ms Maphoto

Protocol reference number: HSS/1859/016M  
Project title: Information need and Information seeking behavior of Grade 10 and 11 learners of Gerson Ntji Mothapo Secondary School, at GaMagowa Village, Limpopo Province

**Full Approval – Expedited Application**

In response to your application received 25 October 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

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 Shenuka Singh (Chair)  
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Ms MJ Monyela  
cc Academic Leader Research: Professor Maheshvari Naidu  
cc School Administrator: Nancy Mudau & Shulika Lukong Stella

---

**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 4809 Email: [simscap@ukzn.ac.za](mailto:simscap@ukzn.ac.za) / [govmamr@ukzn.ac.za](mailto:govmamr@ukzn.ac.za) / [modulip@ukzn.ac.za](mailto:modulip@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



100 YEARS OF ACADEMIC EXCELLENCE

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## Appendix 3: Informed consent letter to the school





School of Social Sciences  
Department of Information Studies  
P/ Bag X01  
Scottsville  
3209  
Contact: 033 260 5097

30 June 2016

The Principal

Gerson Ntjie Secondary School

437 GaMagooa

Tholongwe

0734

Dear, Sir

**RE: REQUEST LETTER FOR SCHOLARLY RESEARCH DATA COLLECTION**

This serves to certify that Ms. Reneilwe Asania Maphoto is a registered MLIS student in the Department of Library and Information Studies at the University of KwaZulu Natal, Pietermaritzburg campus. I am writing to you to request you to grant Ms Maphoto permission to collect research data at Gerson Ntjie Secondary School. She wishes to study the Information needs and information seeking behaviour of Grade 10 and 11 learners.

Should the permission be granted to her by you, she will be collecting data in October 2016. Specific dates will be liaised in due course

The study will adhere to the general principles of research ethics as set by the University of KwaZulu Natal and also comply with principles relating to access, power, harm, deception and confidentiality.

In the event of any problems or concerns/questions you may contact the researcher or supervisor at the above contacts, or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION**

Research Office, Westville campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

Your cooperation will be highly appreciated

Yours sincerely

A handwritten signature in black ink, appearing to be 'MS', is written over a light grey rectangular background.

.....

## Appendix 4: Parental consent letter

### **UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)**

#### **APPLICATION FOR ETHICS APPROVAL**

#### **For research with human participants**

#### **INFORMED CONSENT RESOURCE TEMPLATE**

Note to researchers: Notwithstanding the need for scientific and legal accuracy, every effort should be made to produce a consent document that is as linguistically clear and simple as possible, without omitting important details as outlined below. Certified translated versions will be required once the original version is approved.

There are specific circumstances where witnessed verbal consent might be acceptable, and circumstances where individual informed consent may be waived by HSSREC.

#### **Information Sheet and Consent to Participate in Research**

Date: 14 November 2016

Greeting: Dear Parent

My name is Asania Maphoto from the Department of Information Studies, University of KwaZulu Natal, Pietermaritzburg campus. My contact details are as follows: 076 2855 736/maphotoasania@gmail.com. Your child is being invited to consider participating in a study that involves information needs and information seeking behaviour of grade 10 and 11 learners of Gerson Ntjie secondary school. The aim of this study is to find out the type of information that the grade 10 and 11 learners of Gerson Ntjie secondary school needs and also to investigate their information seeking behaviour.

The study is expected to enroll 181 grade 10 and 11 learners of Gerson Ntjie secondary school. Systematic random sampling will be used to ensure that learners have equal chances of being chosen for participation. The duration of participation if you allow your child to enroll and remain in the study is expected to be about 15 minutes.

The study will provide no direct benefits to participants. The study may make the Department of Education to ensure that every school is provided with a school library which can be used to help and improve learners' school performance.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSS/1859/016M\_\_\_\_\_).

In the event of any problems or concerns/questions you may contact the researcher at the above contacts or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

### **HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION**

Research Office, Westville campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

Participation in this research project is voluntary. You may refuse your child to participate or withdraw from the research project at any stage and for any reason without any form of disadvantage. There will be no monetary gain from participating in this research project. Confidentiality and anonymity will be strictly observed. No name is required on the questionnaire and no one will link your child's answers to him/her provided if you decide that he/she participate in the study. Data will be stored in a lockable steel cabinet in my supervisor's office and will only be used for the purpose of this study

### **CONSENT**

I have been informed about the study entitled Information needs and information seeking behaviour of grade 10 and 11 learners of Gerson Ntjie secondary school, in GaMagooa village, Limpopo province.

I understand the purpose and procedures of the study as to find out the type of information that grade 10 and 11 learners of Gerson Ntjie secondary school needs. Additionally the study seeks to investigate their information seeking behaviour.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my child participation in this study is entirely voluntary and that he/she may withdraw at any time without affecting any of the benefits that he/she is usually entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at the following contacts: 0762855736/[maphotoasania@gmail.com](mailto:maphotoasania@gmail.com) or the supervisor at 0332605097/[0795543583/monyelam@ukzn.ac.za/madirengm@gmail.com](mailto:0795543583/monyelam@ukzn.ac.za/madirengm@gmail.com)

If I have any questions or concerns about my child's rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

## **HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION**

Research Office, Westville campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

---

**Signature of Parent**

---

**Date**

Appendix 5: Child assent letter



**Researcher:** Asania Maphoto

Institution; University of KwaZulu-Natal

Telephone number: 076 285 5736

Email address: [maphotoasania@gmail.com](mailto:maphotoasania@gmail.com)

**Supervisor:** Ms. M.J Monyela

Institution: University of KwaZulu-Natal

Telephone number: 033-260 5097

Email address: [monyelam@ukzn.ac.za](mailto:monyelam@ukzn.ac.za)

Dear participant/ Learner

I, Asania Reneilwe Maphoto kindly invite you to participate in the research project entitled Information needs and information seeking behaviour of grade 10 and 11 learners of Gerson Ntjie secondary school, in GaMagooa village, Limpopo province.

This research project is undertaken as part of the requirements of the Masters of Information Studies which is undertaken through the University of KwaZulu-Natal, Information Studies Department.

The aim of this study is to find out the type of information that the grade 10 and 11 learners of Gerson Ntjie secondary school needs and also to investigate their information seeking behaviour.

Participation in this research project is voluntary. You may refuse to participate or withdraw from the research project at any stage and for any reason without any form of disadvantage. There will be no monetary gain from participating in this research project. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Department of Information Studies, at the University of KwaZulu-Natal.

If you have any questions or concerns about participating in this study, please feel free to contact myself or my supervisor at the numbers indicated above. You can also contact the UKZN Humanities & Social Sciences Research Ethics Committee at the following contact details:

### **HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION**

Research Office, Westville campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

The questionnaire will take about 15 Minutes to complete

Thank you for participating in this research project.

A. R. Maphoto

14-11-2016

Signature

Date

I ..... hereby consent to participate in the above study.

Name: ..... Date: ..... Signature: .....

**Supervisor's details**

Ms. M.J Monyela

University of Kwa Zulu Natal

Tel 033 260 5097

Email: [monyelam@ukzn.ac.za](mailto:monyelam@ukzn.ac.za)

**Student's details**

Ms. A. R Maphoto

University of KwaZulu Natal

Cell 076 285 5736

Email: [maphotoasania@gmail.com](mailto:maphotoasania@gmail.com)

**Questionnaire**

Information needs and information seeking behaviour of grade 10 and 11 learners of Gerson Ntjie secondary school, in GaMagooa Village, Limpopo province

**Section A**



**1. Background information**

Please tick on the appropriate answer

1.1. What is your gender?

Male  Female

1.2. What is your age group?

15-16  17-18  19-20  21+

1.3. What grade are you in?

Grade 10  Grade 11

1.4. How many years have you been in that grade?

Less than a year  1 year  2 years  More than 3 years

1.5. Home language

Sepedi	
Tsonga	
Ndebele	
Zulu	
English	

**Section B**

**Information needed by Grade 10 and 11 learners**

2. What do you need information for? (Please tick one that is more appropriate)

Academic work	
Personal interest	
Health information	
Improve reading skills	
Improve library skills	

3. What is your preferred source of information? (Please tick one that is more appropriate)

Subject textbooks	
Teachers notes and handouts	
Library	
Internet	
Friends or classmates	

4. Library use

4.1. Have you ever used the library?

Yes  No

4.2. If yes, what did you use the library for? (Please tick one that is more appropriate)

To study	
For discussions	

To search for information	
To access free Wi-Fi	
Others (please specify	

4.3. At the library, which materials do you mostly use? (Please tick one that is more appropriate)

Library books/materials  Books/ materials you brought along

### Section C

#### 5. Information seeking

5.1. How do you search for information? (Please tick one that is more appropriate)

Teachers	
Books	
Discussion with classmates	
Internet	
Browse library collections	
Others (specify)	

5.2. Do you experience challenges when searching for information? (Please tick one that is more appropriate)

Yes  No

5.3. If yes, which challenge are you encountering? (Please tick one that is more appropriate)

Type of barrier	Male	Female
No access to computers & internet connection		
Community library is very far		
Insufficient knowledge in using library		
Not easy to approach teachers		
Insufficient resources		
Difficulty in understanding English		
Other (specify)		

5.4. How do you feel when you do not find the information you need? (Please tick one that is more appropriate)

Frustrated	
Confused	
Sad	
Giving up	
Irritated	

5.5. How do you feel after finding the required information? (Please tick one that is more appropriate)

Inspired	
Happy	
Relieved	
Amazed	
Confident	

## Section D

### 6. Social networks

6.1. Do you use social networks?

Yes  No

6.2. Which social network site do you mostly use? (Please tick one that is more appropriate)

Social networking sites	
Facebook	
Twitter	
Whatsapp	
Mxit	
Other(specify)	

6.3. How often do you access the social network site? (Please tick one that is more appropriate)

Frequency	
Daily	
Once a week	
Only on weekends	
Monthly	
Other (specify)	

6.4 What do you use social networks for? (Please tick one that is more appropriate)

Chats with friends	
Keep in touch with people they rarely see	
Meeting new people	
Collaborating with classmates on school works	
Keep updated with latest news	

**THANK YOU**