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The Internet Information Seeking Behaviour of Grade 10 and 11 Learners at Gerson Ntjie Secondary School, at gaMagooa village, Limpopo Province, South Africa

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Abstract

The significant growth of the Internet has been the catalyst for an information revolution. The development of the Internet has been obvious benefits to individuals of being able to access information on any given topic from anywhere in the world. It is well known that many learners access the internet to seek information related to their school activities. Notwithstanding the notion that internet search has turn out to be a common activity for learners. Therefore, limited attention has been paid to ascertain how learners at Gerson Ntjie Secondary school seek information on the Internet environment, hence the need for a study to examine how learners seek information on the Internet. This paper is based on a study that investigated the information needs and information seeking behaviour of grade 10 and grade 11 learners at Gerson Ntjie secondary school in Limpopo Province. The study used quantitative approach adopting a positivism paradigm. Questionnaire was used to collect data from 159 grade 10 and 11 learners. The findings of the study indicated that learners are not progressing well and have challenges of availability and access to information sources of their need. Lack of access to computers and Internet connectivity is a challenge to learners. Learners used social networks on collaborate on school works since there are no e-learning platforms put in place. The study recommends that the school give learners access to the computers that are already available in the school and blend the traditional teaching and learning with e- learning. The study further recommends that the school includes the use of ICT in their curriculum.

Key words: Internet, Gerson Ntjie Secondary school, learners, education, information seeking behavior

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Introduction and Background

South African education system has a major problem in the whole country of enlarging the use of ICTs in education (Department of Education, 2001). Schools that are situated in rural areas seems to be those that are struggling the most from the misfortunate and disadvantages of not being exposed to the use and access of Internet Communication Technologies (ICT's). The lack of ICT in rural areas raises issue of equity amongst learners in terms of access and opportunities provided to them. This is a great concern because schools in rural areas constitute a large portion in South African education. Department of Education (2004) White paper on e-Education indicated that South African are still behind with access and use of Internet compared to International countries. The implementation of ICT in schools could improve the quality of the education and contribute to learners' social development. According to Furlonger as cited by Mireku (2016: 46):

Most rural high schools lack computer laboratories, let alone someone who is skilled with the knowledge of ICT and the Internet. This result in most rural schools not being able to offer computer courses, and this becomes difficult for learners in disadvantaged schools to find gainful employment since most jobs now require some knowledge of computers and the Internet.

The Department of Planning, Monitoring and Evaluation (2015) in South Africa ran the Operation Phakisa lab process where they work on proving electronic devices to each school in the country and ensuring the Internet connectivity of those devices. The ICT initiative for the Department of Basic Education was seen as one of the critical delivery in the National Development Plan, hence the project is called Operation Phakisa. 'Phakisa' is a Sesotho name for hurry up which is used to show the emergence of the project to be established. Operation Phakisa education lab process work streams include: digital content development and distribution, devices, connectivity, e-administration and teacher professional development (Department of Planning, Monitoring and Evaluation, 2015). The devices provided to each school include "24 tablets for learners, 3 laptops for teachers, 2 printers, and 1 projector, 1 server, wireless access point, and 1 e-beam" (Department of Planning, Monitoring and Evaluation, 2004). Although the Department is trying to close the digital divide within the country and also globally, but there is still a long way to go.

Realising a gap in knowledge makes an individual to undergo the information seeking process. 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) cited 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

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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.

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, Mutavi, Kokonya, Simiyu, Musungu, Obondo and Kuria, 2015: 171). Learners from schools in rural opt to using social networking sites as a platform to collaborate with classmates on school work. However, learners should have access to learning platform where they can interact with their teachers which also enable their learning process to be tracked. The South African rural schools are still behind in the technology development. Learners performance and careers are affected by the lack of ICT skills which makes them to not be able to compete with other learners or colleagues from urban areas. Students struggle to integrate with the university environment because that is where most of them start to be exposed to the use of ICT. This badly affects students' performance abilities because they struggle with the basics of ICT skills compared to learners from urban schools. With the world in the Fourth Industrial revolution, one cannot emphasis enough the need for learners to be equipped with ICT skills. Learners need knowledge that can connect them with the whole world and blending the traditional learning with ICT can provide better future for learners that come from rural areas.

Digital divide is still a problem in South Africa. Learners from schools in rural areas are not getting the same benefits of education such as those that are studying in urban areas. The digital divide destroys the social and economic development pf the country. With the world being in Fourth Industrial Revolution where individuals with ICT's skills are the ones' who will survive in the job markets. Schwab (2016:37) emphasised that "new technologies will dramatically change the nature of work across all industries and occupations. The fundamental uncertainty has to do with the extent to which automation will substitute for labour." Therefore, exposing learners to the use of ICT's could benefit their social life and careers. Youth enjoy using the Internet inside and outside the classroom and their interest for using ICT's could develop the love for learning and deepen understanding of the curriculum. The teaching and learning vision in schools should go beyond the traditional classroom face-to face learning. Using ICT's for teaching and learning could improve the communication between teachers and their learners. Learners that are shy or afraid to raise questions or comments in class, could use online tools to communicate with their teachers about what was taught in class. Internet enable the virtual classroom where teaching and learning can take place within and outside the classroom.

Statement of the Problem

Learners from Gerson Ntjie secondary school are no exceptions from all the challenges that are faced by learners from rural schools. Gerson Ntjie secondary school has computers in the school but learners do not have access to use them. The computers are only allowed to be used by the teachers which still leave learners with information need and access gap. Gerson Ntjie secondary school is fortunate to have computers in the school unlike other rural areas but the use of those computers should be integrated in the school curricula to support the learning development of the learners. Learners need to use Internet connected computers to search for information that would complement information from the traditional teaching.

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Learners were only able to access Internet from their cellphone which is another digital divide within the school because not all learners have cellphones or can afford to buy mobile data especially learners that are situated in arural areas. 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 ICT skills to be able to identify, search and gather their needed information. There is also use of ICT in school which will also be preparing for their careers and being able to understand and meet the changing dynamics of the world at larger.

Learners at Gerson Ntjie Secondary school struggle to complete their secondary school on record time. 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. However, in this school there are a number of learners above the age of 18 years. This is a call for help as learners may not be able to complete their secondary schooling on time due to the fact that they may not know their information gap or they may not be able to utilize existing information. For learners to choose to come back to school even after they are above their secondary school age group is a sign that they have passion to learn and excel but they are experiencing challenges in some areas.

The low pass rate might also be due to the fact that there are too many learners in one class. For instance, there are some classes that have about 47 learners. According to the Department of Education (n.d) the recommended class size for secondary school is 35 learners per class. In smaller classes, learners are encouraged to participate and the teacher is able to identify those who are struggling and assist them individually, therefore, their class performance is much better than learners who are in large classes. Large classes are managed better with the implementation of blended learning because the teacher can be able to communicate virtually with learners individually or as a group even outside the classroom.

The Main objective of the study is:

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

The study will aim to address the following research questions:

1. What is the preferred source of information for grade 10 and 11 Gerson Ntjie Secondary School learners?
2. What channels of information do grade 10 and 11 learners at Gerson Ntjie Secondary use when seeking information?
3. What challenges do grade 10 and 11 learners at Gerson Ntjie Secondary School encounter when seeking information?
4. What uses of social networking sites are used by grade 10 and 11 learners at Gerson Ntjie Secondary School?

Literature Review

Providing internet connected computers will not solve the digital divide problem but could lead to the solution. Since learners from rural schools have never been exposed to the use of ICT’s in schools, there is a need for training so that learners can fully utilise ICT’s once they have access to them. In Washington, Fidel et al. (1999) carried out a study on the Web

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searching behavior of grade 11 and 12 high school students and found that students are still struggling to search on the Web. The search for information on the Web give rise to different emotions. Students indicated that they felt frustrated when the Web search did not produce the results in the time they thought was reasonable. As one student put it: “it is frustrating when you cannot find something you are looking for”, while another student who waited a long time due to the slow response of the Web that did not even produce desired results expressed his emotions by saying “I hate it when they have something up there and it ain’t there” (Fidel et.al 1999:31). 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.

Relevant skills to search the Internet is essential because Tosun and Baris (2011: 533) found that students used the Internet to research on their school work and for homework preparation. Although learners enjoy searching the Web, but their Web searching skills are inadequate. Using the Web to search for information has emotional experiences where feeling of uncertainty and confusion overpower optimism and enthusiasm (Kalbach 2003: 1). Kuhlthau (1993) conducted the information search process model with school learners’ doing their assignment. The model indicated that learners undergo three stages which are feeling, thoughts and actions when doing their school work. Uncertainty due to not understanding a topic or problem or a gap in lack of meaning lead to information seeking (Kuhlthau 1993). In New Jersey, Kuhlthau and Heinström 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.

Students fail to evaluate the information and judge the source of where the content of the information came from, the students even expressed that they do not know when the information is good (Lorenzon 2001: 161). He further emphasises that in South Africa inadequate skills to access, use and evaluate information from the Internet is still a challenge on students. High cost of ICT equipment’s, 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 were amongst factors that hinder the implementation of ICT in public secondary school in Kenya (Mingaine 2013: 234). Many schools in Kenya are unable to use ICT’s because of their high cost of acquisition and implementation (Mingaine, 2013: 236). Sarfo and Ansong-Gyimah (2011) also found that Ghanaian senior high school students do not use mobile phones, computers or Internet at schools and the teachers are “digital immigrants” and are reluctant to teach using ICT tools.

Shiweda (2013) found that in Namibia schools, the curriculum is structured in a way that does not encourage learners to use the Web to search for information. While there are other schools that allowed learners to access the Internet during school hours, there were other schools that required learners to pay to attend Computer Science learners which created a division within the school. Learners indicated that they encounter challenges such as limited time to use the Internet, slow internet connection and inadequate resources. When school children search the Web, they experience challenges such as spelling, typing, formulating search strategies, evaluating search results and extracting key concepts (Chen 2003: 29). Nkomo (2009: 98) also found that lack of searching skills, inability to reference Internet sources, inadequate resources and poor Internet connections are challenges that encountered by South African students. Although Nkomo conducted his study with University students, but these are the same challenges that are faced by secondary school students.

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Methodology

The study used quantitative approach with a survey design. Population of the study was grade 10 and 11 learners because those are learners that should be preparing to study at higher education institution. During data collection of the study, the school had 230 learners in grade 10 and 152 who are in their grade 11. From a population of 382 learners in grade 10 and 11 class at Gerson Ntjie secondary school, questionnaire was used to collect data from 196 learners. Out of 181 questionnaires, 159 were returned yielding 88% response rate. The researcher obtained permission from the Department of Education Kgakotlou circuit before conducting the study. The researcher also obtained ethical clearance from University of KwaZulu-Natal Ethics Committee. The researcher explained to the learners about what the study is about before signing the consent form.

Findings

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.

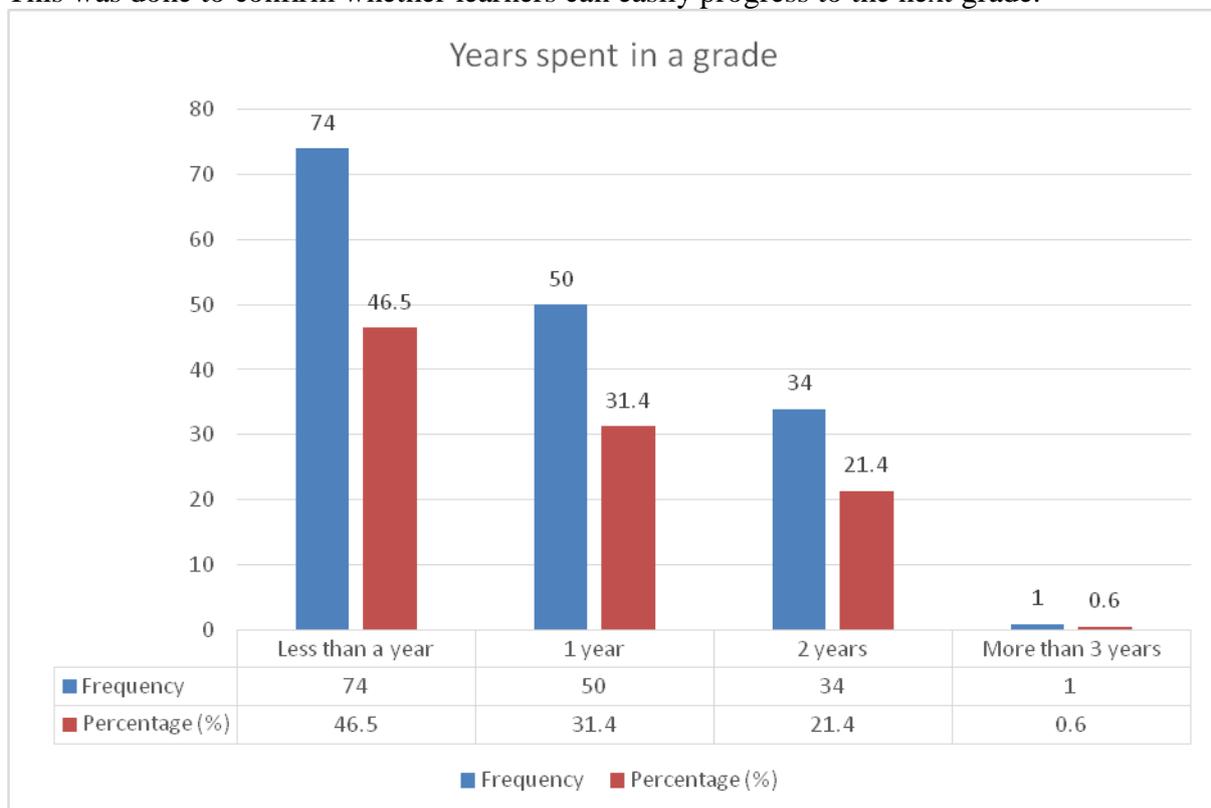


Figure 1: Years spent in a grade

Source: Maphoto (2016:58)

The results on figure 1 above indicate that 46.5% of the respondents are not repeating the grade they are in. However, 31.4% are repeating their grade for the 1st time whereas 21.4% of the respondents are on the second year repeating their current grade. The results further indicated that one learner (0.6%) is repeating the grade for the third time. 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. The teaching method or platform could also not be ideal

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to the students which call for blended learning in the classroom. The result makes it clear why the school has more grade 10 learners than grade 11 because some students are repeating their grades.

Learners preferred Source 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 2 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

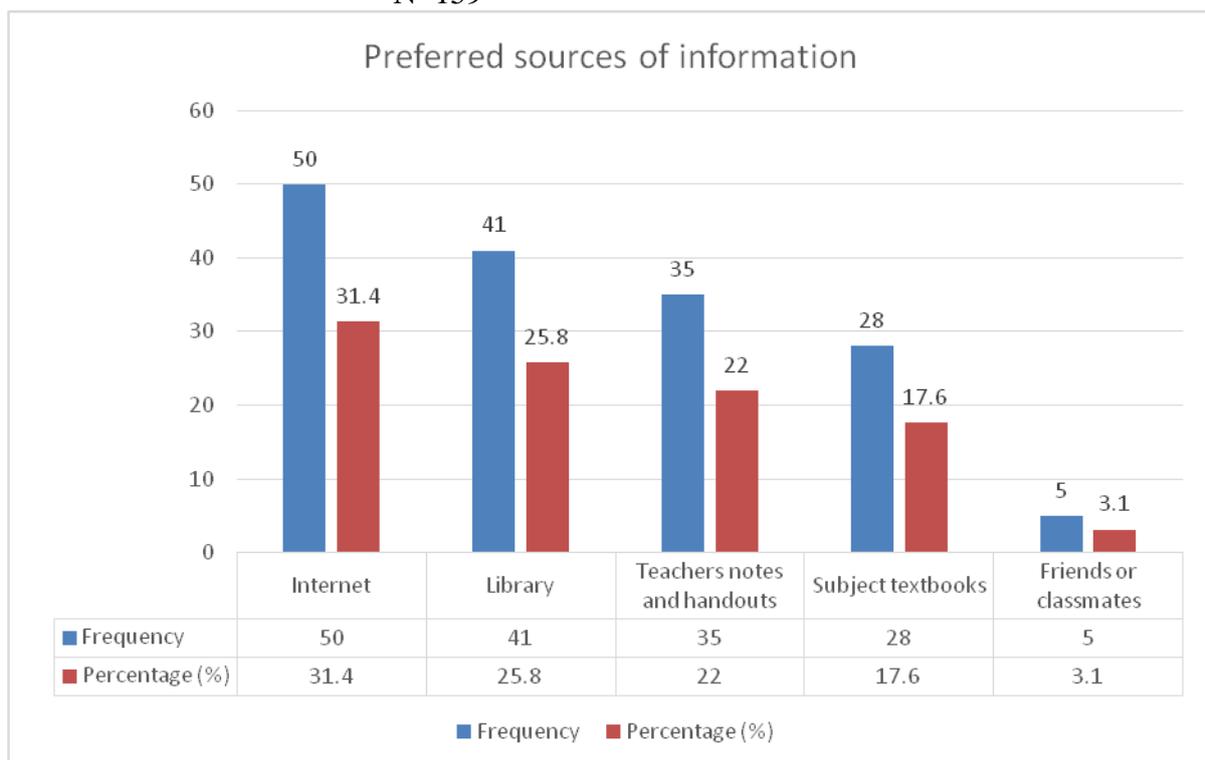


Figure 2: Preferred source of information

Source: Maphoto (2016:62)

Sources Used to Seek Information

Information seeking is the process where an individual engages 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.

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The results demonstrated in Figure 3 below demonstrate that study 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. There are other respondents that discuss with their classmates when they are given an activity and those that browse the library collections when they start to search for information.

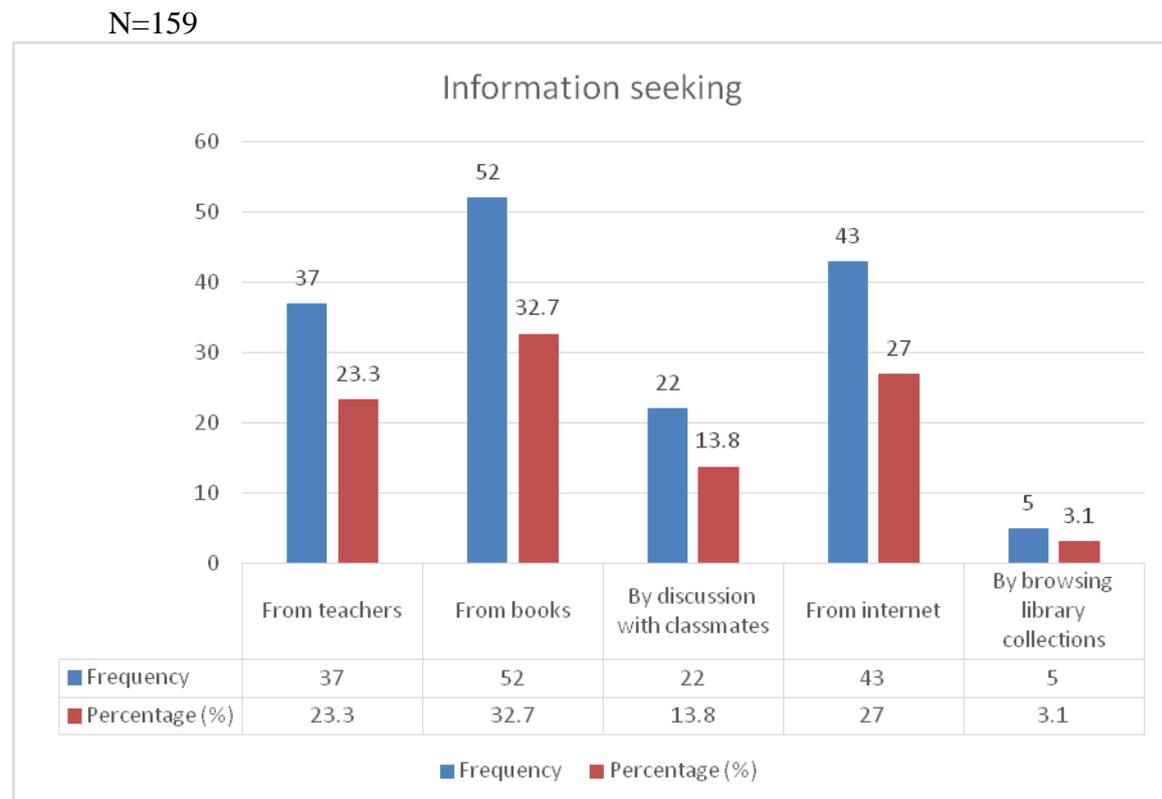


Figure 3: Sources used to seek information
Source: (Maphoto: 2016: 67)

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. Learners are talking about curriculum books which they are given in school because they are the only books they have access to since they do not have the school library. Therefore, curriculum books are easily accessible hence learners use them instead of Internet which will require them to buy mobile data.

Challenges Encountered When Seeking Information

113 learners indicated that they encounter challenges when they have to search for 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.

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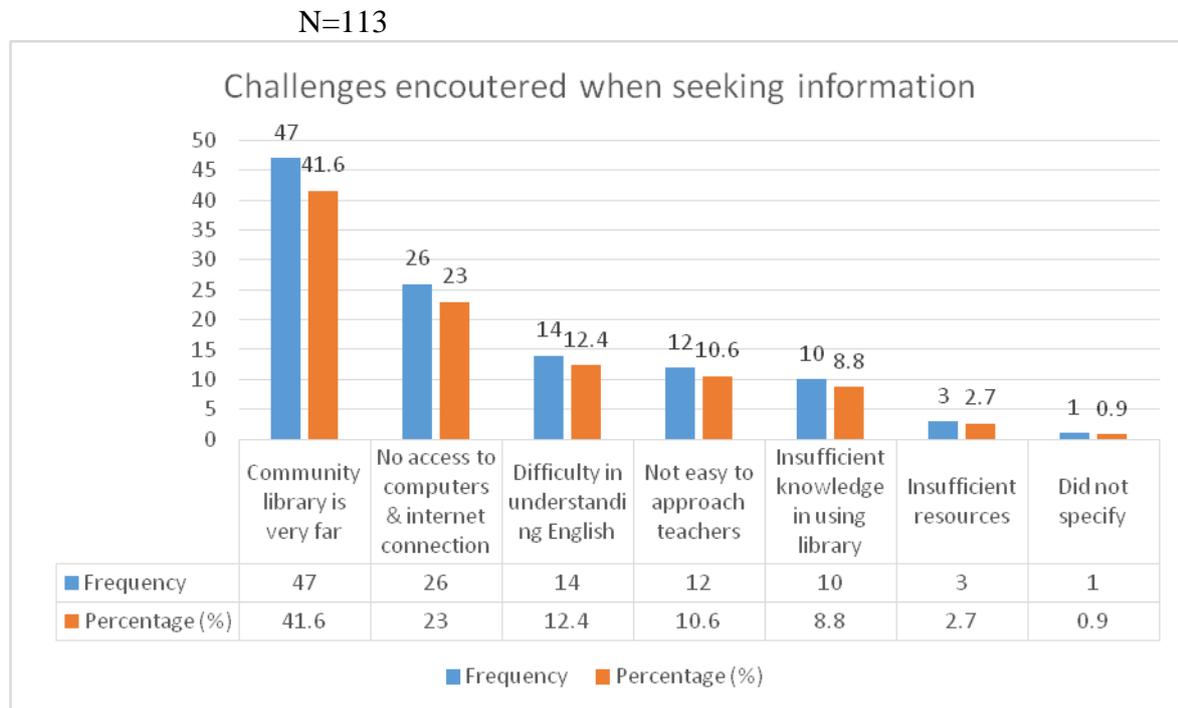


Figure 4. Challenges encountered when seeking information

Source: Maphoto (2016: 69)

The results demonstrated in figure 4 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 indicated that the challenges encountered were the difficulty in understanding English as a language of instruction 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. The results indicate that learners have a challenge of access to computers and Internet connectivity even though the school has computers because learners are not allowed to use them.

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 59.2% of the respondents used Whatsapp, followed by Facebook (37.7%). Twitter, Mxit and Instagram were used by small percentage of 0.76 % respectively. The choice of social network is affected by the cost and speed of that social networking site. A majority of the respondents preferred to use Whatsapp because it is speed and cheap and because it does not consume too much data. Figure 4.15 below is a pictorial illustration of the mostly used social network by respondents.

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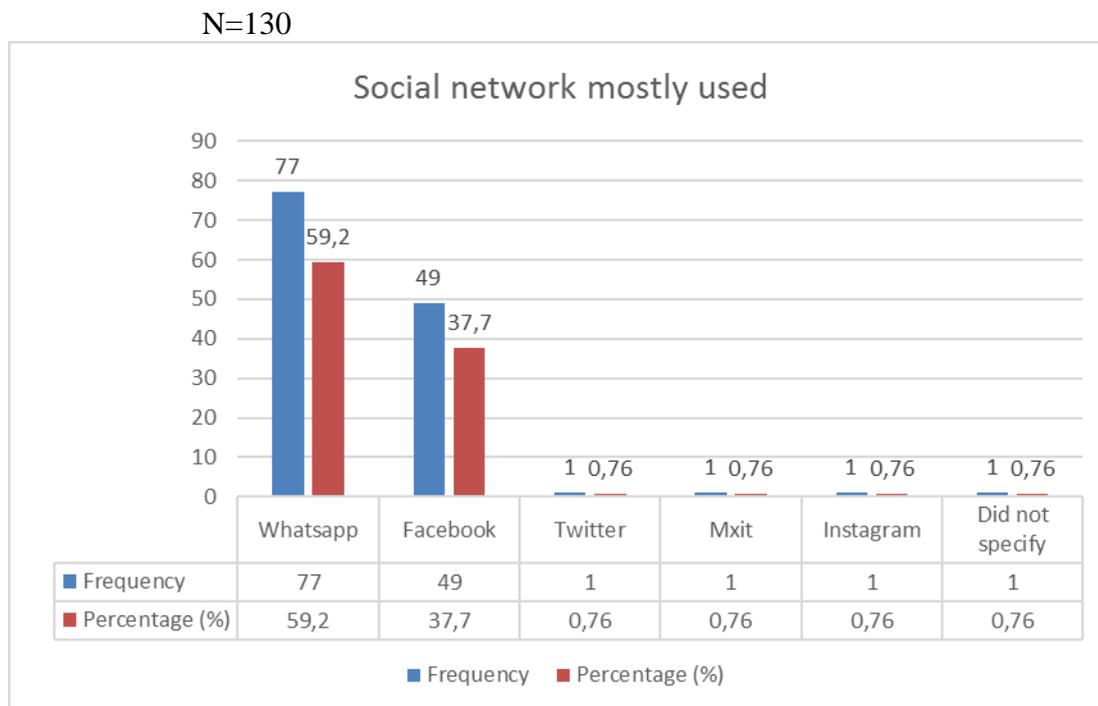


Figure 5: Social network mostly used

Source: Maphoto (2016: 74)

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 wanted to find out how learners are using social networking sites to bridge the digital gap. Figure 4.17 below shows the results about the use of social networking by learners. Of 130 respondents, 36.2 % of the respondents used social networks to chat with their friends, followed by 35.4 % who used them to collaborate with classmates on school works. 11.5% of the respondents used social networks to keep updated with the latest news. The lowest number of respondents (9.2%) used social networking sites to meet new people and to keep in touch with people they rarely see (7.7%).

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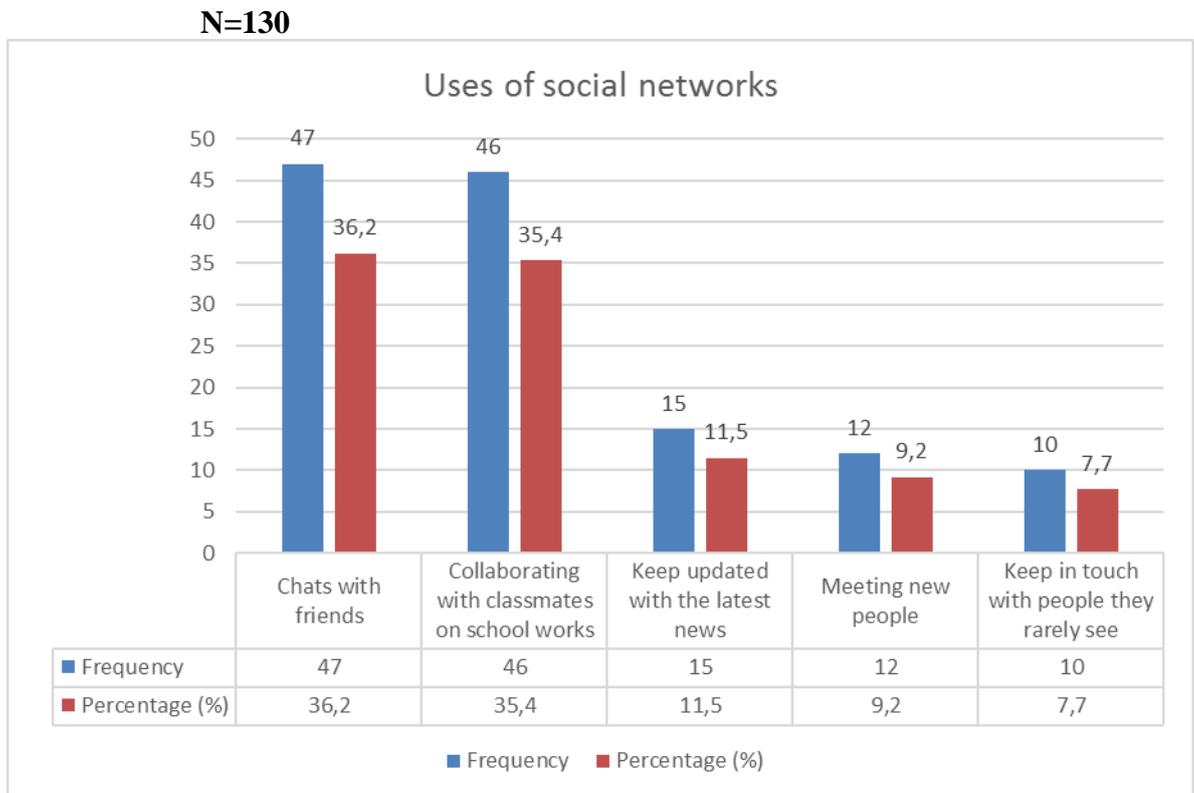


Figure 6: Uses of social networks

Source: Maphoto (2016: 76)

Summary, Conclusion and Recommendations

Lack of ICT's in schools make it difficult for learners from rural areas to compete with learners from urban areas who have access to Internet connected computers in schools and the world at large. Cope and Ward (2002) have observed that effective usage of ICT in teaching will promote enhanced learning outcomes. More than half of the participants are repeating their grade. This proves that learners are struggling with their studies which calls for need to blend the traditional teaching and learning with the use of ICT's. Teachers need to be flexible in their teaching method to accommodate learners that are struggling. Internet is one of the preferred sources of information by learners, however, learners have to self-teach themselves on how to search for information on the Internet. Internet has too much information and learners need the necessary training and skills for searching and retrieving information. Wilson (1999:252) states that in the process of seeking information to satisfy a need, an individual will encounter different challenges. Learners from Gerson Ntjie Secondary School find a way to access the Internet regardless of the challenges they encounter. Learners still prefer to search for information using the Internet despite the fact that the school do not provide them with even access to use computer. This proves the eager that learners in rural areas also need technologies in their learning hence they even opt to accessing Internet from their cellphones for school work. Today's youth find it difficult to live without using social networking sites.

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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). In South Africa, Matlala (2015: 66) found that most learners were using social networking sites such as Facebook, Whatsapp and Twitter due to their popularity and ease of use. Social networks are social communication tools that are used by people of different ages for different reasons. Majority of the learners indicated that they engage in social networking and one of the reasons is to collaborate with other learners on their school works. The school could use social networks as a platform to reach out to learners outside the classroom. Some learners are free to communicate digitally than face-to-face, so teachers can create a group chat on one of the social networking sites where school related works are discussed. Videos could be imbedded into the curriculum to complement the text or discussion from the classroom. Respective teachers can also use the very same site to upload videos that are relevant to their module. However, the first step will be allowing students to use the school computers so that there will not be another division between learners that have cellphones and those that do not or could not afford to buy cellphones or mobile data.

The Department of Education should increase their funding to public schools. With an adequate budget, the school can have better information resources including Internet connected computers. The Department of Education should also ensure that the allocated budget to the school is spent effectively. The school should also take the initiative to look for sponsors to donate information resources. 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 should 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 should 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). Teachers should be taught about the importance of using ICT's for teaching and learning and be provided with training to utilize the ICT resources. 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.

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