

# INFORMATION LITERACY STANDARDS OF SCHOOL LIBRARIES OF NAIROBI AND THARAKA-NITHI COUNTIES, KENYA

Ireri, J.M.<sup>1</sup>, Evans, N.<sup>2</sup> and Ocholla, D.<sup>2</sup>

<sup>1</sup>Chuka University, P. O. Box 109-44600, Chuka, <sup>2</sup>Department of Information Studies, University of Zululand.  
Email: [samtos.ireri@gmail.com](mailto:samtos.ireri@gmail.com), [jmwaura@chuka.ac.ke](mailto:jmwaura@chuka.ac.ke)

## ABSTRACT

Information literacy is described as a set of abilities that require individuals to recognize when information is needed and locate, evaluate, and use the needed information effectively (American Library Association, 2018). Information literacy skills are essential to secondary school students in developing countries such as Kenya. A preliminary investigation by the researcher revealed that many secondary schools in Kenya have poor literacy standards and have no room for information literacy programs for their students, despite the fact that secondary school education is transitional to university education. This study assessed the information literacy standards of school libraries in Nairobi and Tharaka-Nithi Counties. The study selected Nairobi and Tharaka-Nithi counties, which represent urban (Nairobi) and rural populations (Tharaka-Nithi). Data was collected using questionnaires. Systematic sampling was used to select 30 secondary schools (20 schools from Nairobi and 10 from Tharaka-Nithi) out of 304 secondary schools, while stratified random sampling was used to classify the students into four strata (Form 1-4). A total of 385 students were sampled (255 from Nairobi and 130 from Tharaka-Nithi). The results show that more needs to be done towards improving the libraries so that the students can be encouraged to visit them frequently. Secondary school libraries do not have apart from books various formats of information resources that would be more appealing to the students. Secondary school libraries should incorporate in their collection a variety of formats of information resources that are more captivating than books.

**Keywords:** Library use, Standards, Students, Information resources, Information literacy

## INTRODUCTION

The concept of information literacy (I.L.) came into existence in 1974, when Paul Zurowski indicated that information literates are trained to apply information resources to their work (Durodolu, 2016). Over the years, several definitions of I.L. have been reported in extant literature. For instance, as opined by Armstrong et al. (2005), information literacy is the knowledge of when and why you need information, where to find it, and how to evaluate, use, and communicate it ethically. On the other hand, the American Library Association (2018) describes it as a set of abilities requiring individuals to recognize when information is needed and locate, evaluate, and use it effectively. American Library Association (ALA) goes further to highlight that Information literacy is fundamental to lifelong learning. It is relevant to all fields of learning and all environments of learning and levels of education. I.L. equips learners to understand contents, to be able to carry out investigations, be self-directed, and take control of their learning. Premised on the findings of ALA (2004), an information literate individual is summarily able to define the degree of information needed; effectively and efficiently gain access to the needed information; critically assess the information and its sources; apply the information chosen into personal knowledge base; successfully use the selected information to achieve a specific task; understands the economic, legal, and social issues guiding information

use; and access and ethically use information. Thus, it can be said that people who recognize their own need for good information and who have the skills to identify, access, evaluate, synthesize and apply the needed information are information literate.

Most basic schools in Kenya face the non-availability of properly established libraries and literacy programs. The facilities are poorly stocked with outdated books that may not motivate students to read for those with libraries. Tilwawala et al. (2009) relate the poor performance of secondary students in Kenya to poor library environment and lack of necessary information literacy development. This implies that the lack of school libraries and poorly established libraries may hurt the literacy level of secondary school students. The non-availability of library resources may force students to read only what they are taught in the classroom. This situation encourages students to read only to pass an examination, which results in a total decline in their literacy level and making Kenya the 144th out of the 179 countries ranked by the United National Development Programme report (UNDP, 2008). Adequate studies have not been done on information literacy standards of school libraries in Nairobi and Tharaka Nithi Counties thus making the current study relevant.

The relevance of information literacy cannot be over-emphasized in library activities. Ghavifekr and Rosdy (2015) note that in the current digital world of Information Communication Technology (ICT), where there is a continuous increase in global information, students must evaluate resources carefully and know how to use information effectively. The authors further say that libraries and librarians have great roles in promoting information literacy, particularly through user education on information literacy. Durodolu (2016) notes that there should be good interactions between the students and their libraries for effective I.L. among secondary school students.

Corrall (2008) opines that many schools do not see the need to cooperate and collaborate with librarians to adopt information literacy in the school curriculum, which is becoming a problem since students need high-quality information literacy instructions that can only be provided in libraries by professional librarians. Derakhshan and Singh (2011) highlights ways that librarians can impart information literacy to students while educators can do this by giving assignments to learners. Baro and Eze (2015) reinstates that the acceptance and use of ICTs in libraries have brought about changes in information literacy in libraries. They further identified basic computer skills and knowledge of network-based and digital library skills as the necessary skills that librarians must possess to provide effective I.L. initiatives in libraries. It is not a gainsaying that for 21<sup>st</sup> librarians to meet the I.L. of students, they need to do more online and be familiar with the rudiments and effective use of search engines. In addition, librarians need to locate quality information on the internet for students' use in order build their confidence on matters regarding I.L. development. Baro and Eze (2015) further argues that reference librarians should provide reference services online, either through email or synchronous chat in order to locate quality information on the net for students' use so that librarians can build confidence in students regarding IL development.

Baro (2011) notes that librarians need necessary comprehensive competencies that will be used to provide I.L. skills to enhance the provision of adequate and timely information to library users. Alakpodia (2010) conducted a study in a state university in Nigeria on librarians' role in promoting I.L. The findings revealed that many of the librarians are handicapped on the new ways of promoting I.L. The majority of the librarians admitted that they did not have the necessary computer skills and that this hindered the acquisition of necessary professional I.L. skills. Omosor (2012) ~~reported~~ did a study on librarians handling I.L. skills development at Delta State

Polytechnic and revealed that most librarians had very low computer skills. It has been attested that libraries play a significant role in developing information literacy skills and supporting information literacy by providing ICT training and teaching information literacy skills through the library's information desks (Onohwakpor, 2012).

Information literacy development of users' needs to be considered in this age that information explosion is the order of the day. As information gatekeepers, librarians need to do more to facilitate quality information access, use, and transfer, through effective information literacy development. One way of achieving this is through cataloguing. I.L. can be seen as a relevant weapon for life-long learning. Hence, it is not enough for library users to recognize and locate information; they should also have the skills to identify the cognitive contents of library materials (Ilogbo and Nkiko, 2014).

Secondary school students' lack of information search skills is one reason school libraries develop library orientation programs (Ilogbo & Nkiko, 2014). The ultimate goal of any library is to collect information and make the information accessible and available to users. Cataloging in libraries creates the avenue for library materials' easy location using author, title, subject, or format (Owolabi et al., 2020). Extant literature indicates that the subject catalogue is the most used catalogue that assigns subjects to various library items, thereby assisting library users in locating required items easily (Owolabi et al., 2020). There are different subject headings, such as Library of Congress subject headings, commonly used in big libraries, and Sears List of Subject Headings that are more popular in smaller libraries. The most common form of classification in school libraries is the Dewey Decimal Classification System (DDC). A Dewey Decimal number, commonly called a call number, is placed on each item. This ensures that items on the same topic are shelved together in the collection (Owolabi et al., 2020).

The internet, a short form for an interconnected network of networks, links tens of thousands of smaller computer networks (Nadakalu, 2014). The internet enables users worldwide to send and receive messages, share information in various forms, and even play computer games with people living in other countries. Today, tens of millions of people and businesses use the internet and the web daily. The major uses include communication, research, publishing, business transactions, and push technology, which employs the web to broadcast video and audio programs (Gakibayo, Ikoja-Odongo & Okello-Obura, 2014). According to

Hamidu and Hauwa (2015), internet service provision is quite indispensable in school libraries in this era. It is believed that ICTs form the basis of all development cycles in digital services in this 21st century.

In support of this, Ajileye and Joseph (2002) opines that for any school library to be relevant in this age, such must embrace internet services and ICT applications for service delivery. The internet has, therefore, integrated nearly all aspects of library activities. Librarians can now use the internet to exploit the other institutions' catalogues, order books and journals online, participate in ILL, use email, discuss through list serves, support reference services through remote databases. Most importantly, establish library/home pages to project their collections and services on their websites (Bedi & Sharma, 2008).

### Statement of the Problem

Information literacy skills are essential to secondary school students in developing countries such as Kenya. A preliminary investigation by the researcher revealed that many secondary schools in Kenya have no room for information literacy programs for their students, despite the fact that secondary school education is transitional to university education. Studies have shown that many new secondary schools have very little or no basic knowledge about library use, computer literacy, and information searching skills after enrolling at universities or any other higher institutions. This problem can be attributed to students being educated in environments with poor learning facilities, such as lack of well-equipped school libraries, lack of computers in schools, and failure to recognize the school library (where in existence) as a learning resource. In this information technology age, Kenyan secondary school students need to be equipped to develop the skills to help them search for information and evaluate and utilize the information effectively. The preceding confirms the need for students to be information literate in preparation for university life. Shih, Kraemer, and Dedrick in Tilwawala, Myers, and Andrade (2009) note that the advent of the information age has brought about a shift in global economies, from physical resources to the ways and manners in which information is being manipulated, with ICT becoming the major driving force. However, one major barrier to the effective utilization of ICTs in most developing countries, such as Kenya, is the relatively low level of information literacy and therefore need for the study.

### LITERATURE REVIEW

Zervas, Stavrous, and Kounoudes (2015) submit that school libraries should be considered in IL development, while Baro and Fyneman in Okoh and

Ijiekhuamhen (2014) maintain that there is a need for adequate funding and necessary equipment that will facilitate IL development in libraries. By showing a library user how to access articles in databases, evaluate websites, use the classification system, or even use the index at the back of a book all provide opportunities to teach IL skills. In addition, libraries use various marketing methods to promote the IL needs of their users. This is through use of print and electronic communication tools. Library websites are also created to propagate information in various formats (Omosor, 2012).

Ocholla, Mutsvunguma, and Hadebe (2016) reported the University of Zululand Library's role in promoting effective IL to the users. They clearly stated that the university library organized training, workshops on new library products, and ways the users can access the university e-resources in order to prevent plagiarism. This implies that the university library has taken information literacy to its users. In a similar study at Oregon and Purdue Universities by Shao and Purpur (2016) on library and IL, the finding revealed that university students that heeded library instructions and attended workshops developed critical thinking skills more. Effective IL development in school libraries need the availability of professional librarians that will manage the collections and diverse learning resources to support IL to see that the students developed necessary IL skills in line with the school curriculum (Baro & Zuokemefa, 2015).

Thanuskodi (2019) noted that it is the responsibility of professional libraries to integrate IL skills into the secondary school curriculum. The Society of College National and University Libraries (SCONUL) (1999) maintained that libraries need to teach and develop students' understanding of IL. The Society also suggests that libraries need to have required information resources and promote cooperation between librarians and students to teach students IL. Maitaouthong, Tuamsuk & Tachamanee (2012) indicate that secondary school libraries in Thailand note the importance of IL among secondary school students since they make them knowledgeable and competent in thinking critically and solve problems systematically. The government developed a policy to develop every student's IL skills through training, teaching, and IL in the school curriculum.

The need for a library to support IL in different ways was reinstated by ACRL (2008) through orientation, seminars and reference section use and also teaching IT. Varlejs and Stec (2009) maintain that librarians in secondary schools in the United States of America (USA) teach IL for between 1 to 2 hours, emphasizing

computer training and library usage. Also, that there is need to present IL as part of the school activities, build a good relationship with students, encourage them to develop an interest in IL and assist in the design of teaching websites.

## METHODOLOGY

### Research Design

This study used a survey research design. Brink et al. (2014) maintain that survey research is widely used in mixed-methods research because it enables access to a representative of the research population. Furthermore, the survey design in this research allowed for the effective use of questionnaires for a more accurate result. Using survey research in the study was based on Cohen, Manion and Morrison (2007) that use of survey provides the opportunity to generate descriptive and inferential data. The design also encourages the researcher to gather reliable data through questionnaires (Brink et al., 2014). This study adopted survey design because it allows for the effective validation of the research instrument, which led to the reliability of the research instrument.

### Research Population

The population of this study was derived from Nairobi and Tharaka Nithi Counties of Kenya. The schools in these two counties represent urban and rural secondary schools in other counties in Kenya. Thus, the findings from the two counties can easily be generalized to the whole country. According to the records from the ministry of education offices in both counties, Nairobi County has 200 secondary schools while Tharaka Nithi County has 104 secondary schools, totaling 304 secondary schools.

### Sampling Technique and Sample Size

Systematic sampling was used in the study, which involves selecting at equal intervals every fifth, eighth or tenth element, as deemed fit by the researcher (Brink et al., 2014). The total number of secondary schools from the two counties being 304, each sampled school was randomly selected using a sampling interval of 10<sup>th</sup>. Based on this, 20 secondary schools were selected from Nairobi and 10 from Tharaka-Nithi. To obtain respondents from form 1 to form 4, stratified sampling was used to classify the students into four strata. The approximate population of students in the two counties is 304 times 200 = 60,800 students. This is based on a report from the education offices in the study sites. To determine the sample size, Raosoft Online Sample Size Calculator was used. It uses the following formula:

In terms of the numbers selected the sample size  $n$  and margin of error  $E$  are given by:

$$x = \frac{Z(c/100)2r(100-r)}{N} \\ n = \frac{x}{(N-1)E^2 + x}$$

$$E = \text{Sqrt}[(N - n)x/n(N-1)]$$

Where  $N$  is the population size,  $r$  is the fraction of responses that one is interested in, and  $Z(c/100)$  is the critical value for the confidence level  $c$ .

The study accepted a margin error of 5%, confidence level of 95% and a population probability of 50%. Since the students from the two counties are 60800, applying it in the calculator gives 382 as the sample size for the study. The sample size for each of the two counties was determined by first calculating the ratio of schools for Nairobi County and Tharaka Nithi County, which is, 200:104=2:1. Therefore using this ratio and the total sample size of 382, the sample size of Nairobi County and Tharaka Nithi is 255 and 127 students respectively.

This study employed a questionnaire to collect quantitative data for the study. Mugenda (2008) affirms that the questionnaire is very cheap, fast and efficient in gathering large amounts of information from a large sample of people. The questionnaires were given to the students and a representative of the student body through the schools' captains. The questionnaires were filled and picked on the same day in some schools while in others, arrangements were made with the principals on the pick-up day when the filled questionnaires were collected. To determine the study's statistical analysis, the respondents' data was fed into the Statistical Package for the Social Sciences version 25.0. Descriptive statistics were presented in graphs, tables and pie charts.

## RESULTS

### Gender of the Students

The gender of the students was established and denoted in Figure 1 below. Results showed that 63.3% of the students were boys while 36.7% were girls. Results shown revealed that more male students participated in the study compared to their counterparts in both Counties. There have been discussions on gender parity and diversity in the field of education especially in Sub-Saharan Africa and the debate on gender equity in education presently revolves around the Education for All (EFA) targets and the Millennium Declaration Goals (MDGs) (Mumiukha *et al.*, 2015). There was introduction of Free Secondary Education (FSE) in Kenya in 2008 which has increased enrolment in secondary schools, however, attainment of gender equality in education in Kenya is not yet as shown in the results of this study where more male students participated in the study compared to female students.

### Age of the Students

The age of the students involved in the study is shown in Table 1 below. According to the results, most

students (41.3%) were aged 16-17 years. A further, 29.7% were aged 18-19 years while 21.7% were 15 years old. Only 4.3% and 3.1% were aged 20-21 years and 13-14 years respectively. Having about 30% of the

students being aged 18-19 years can be explained by the fact that students spend more years in their early school (three years in Montessori/ nursery school).

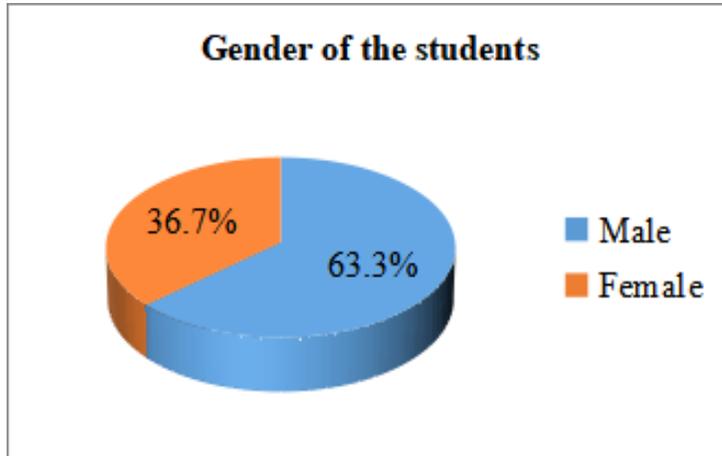


Figure 1: Gender of the students

Table 1: Age of the Students

Age	Frequency	Percentage
13-14 years	10	3.1
15years	71	21.7
16-17 years	135	41.3
18-19 years	97	29.7
20-21 years	14	4.3
Total	327	100.0

**Form of the Students**

The research determined the students' form, and the results are as shown in Figure 2 below. The results showed that 36.1% of the students were in Form 2, 32.1% were in Form 3, 17.7% were in Form 1, and 14.1% were in Form 4. The high participation of form two and three students in this study was of advantage because issues related to library visits and information are important to them since they are at a point of building a strong foundation in the studies and therefore those interested in study are very serious with their books as compared to the form one students who were new in the schools and the form four students who were not easily accessible, due to the fact that they were busy as they prepared for their final examinations.

**Frequency of visiting the library**

The frequency of visiting the library by the students was established, as shown in Figure 3 below. Results show that 30.9% of the students visited the library 2-3 times a week or rarely. Results also showed that 17.4% of the students visited the library daily, while 13.8% visited weekly. Only 1.2% of the students had never

visited the library. The inference to be drawn from the results shown is that a large number of students rarely visited the library which means that the information literacy standards in the school libraries is low. This is because physical visits to libraries is gradually being replaced by virtual visits as a result of the introduction of internet in most schools especially due to electricity connectivity in most schools. The results of this study are echoed by observations in university libraries' in Nigeria made by Chen (2015) and Ibrahim and Sakiyo (2015) in that there is an underutilization of the library facilities in most educational institutions, secondary schools notwithstanding which means that the goals and objectives of the libraries regarding enhancing access to information is in most cases not achieved. Further, a study by Moruf (2015) showed that the school libraries are not properly utilized in public schools because of inadequate provision of library resources and non-exposure of students by teachers to use library materials for assignments and other class works that will improve or arouse their interest in using the libraries.

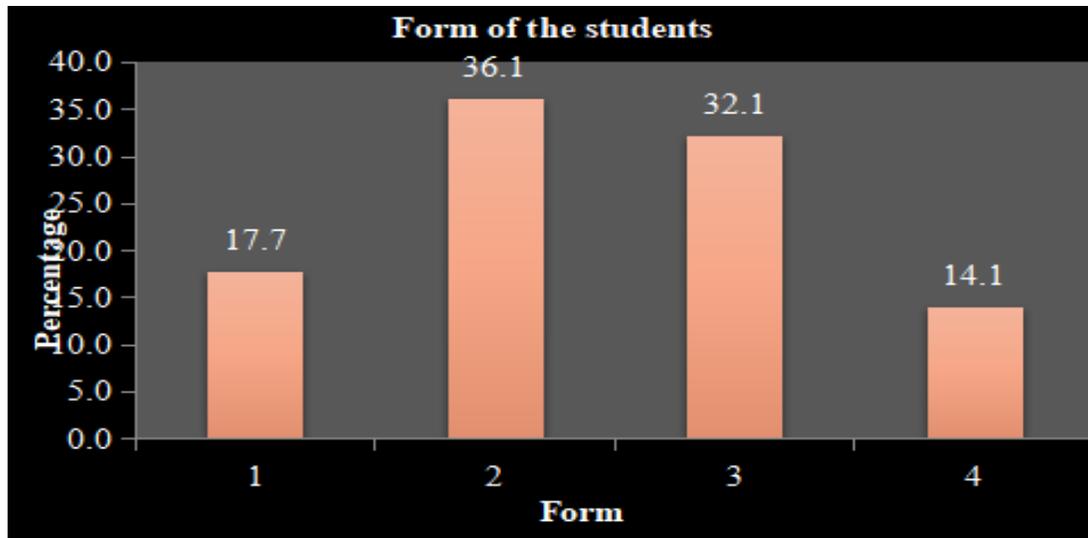


Figure 2: Form of the Students

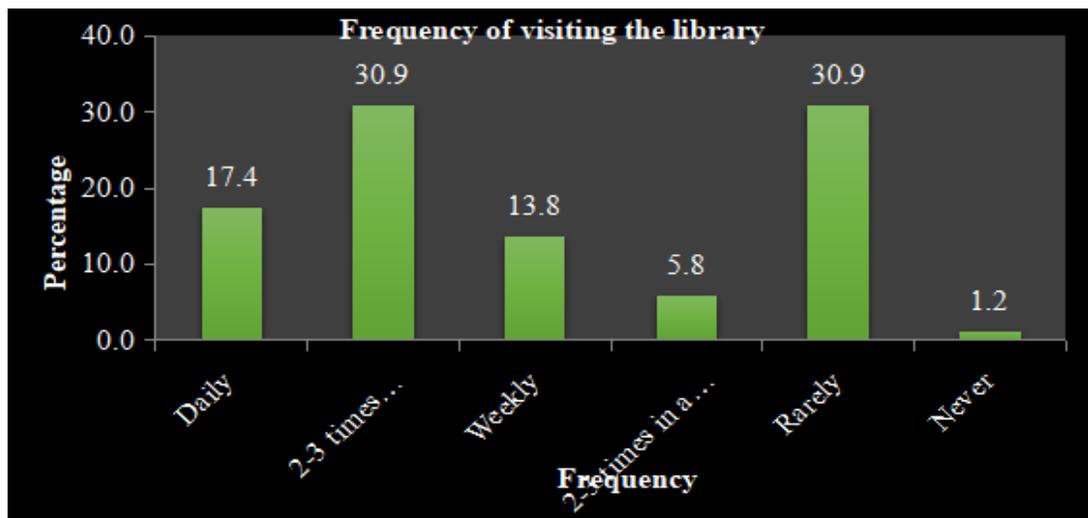


Figure 3: Frequency of visiting the library

### The purpose for visiting the library

The purpose of visiting the library was determined, and the results are shown in Table 2 below. Studying and borrowing books were the major purposes for students visiting the library, with 43.0% and 31.4% of the students. Results further showed that 8.9% of the students visited the library to find books/ articles, with 8.7% to read newspapers/ magazines. Only 3.9% of the students visited the library to attend lessons. This infers that the schools need to equip their libraries with reference materials which could be lacking in the sampled schools and in instances where the libraries have the reference section, ways of encouraging the students to visit the section should be devised. Awan (2019) in a study where postgraduate students were sampled showed that unawareness and misconceptions

in regard to the librarian's professional skills, multiple previous bad experiences, assignments and theses not requiring exploration, misconceptions in regard to the use of journal article and lack of scholarship and interpretation in research projects and theses were some of the reasons students did not visit the libraries. Program teachers were requested to assign topics which required extensive use of published and unpublished literature which positively increased the frequency of the students visiting the libraries and their interaction with the librarian. A study by Mwatela (2013) also found out that utilization of the library and the library resources was a factor of awareness and familiarity of library and information resources which includes their arrangement, retrieval tools, library skills and information literacy.

**Table 2: Purpose for visiting the library**

Purpose	Frequency	Percentage
To borrow books	130	31.4
To study	178	43.0
To find books/ articles	37	8.9
To use computers	17	4.1
To read newspapers/ magazines	36	8.7
To attend lessons	16	3.9
Total	414	100

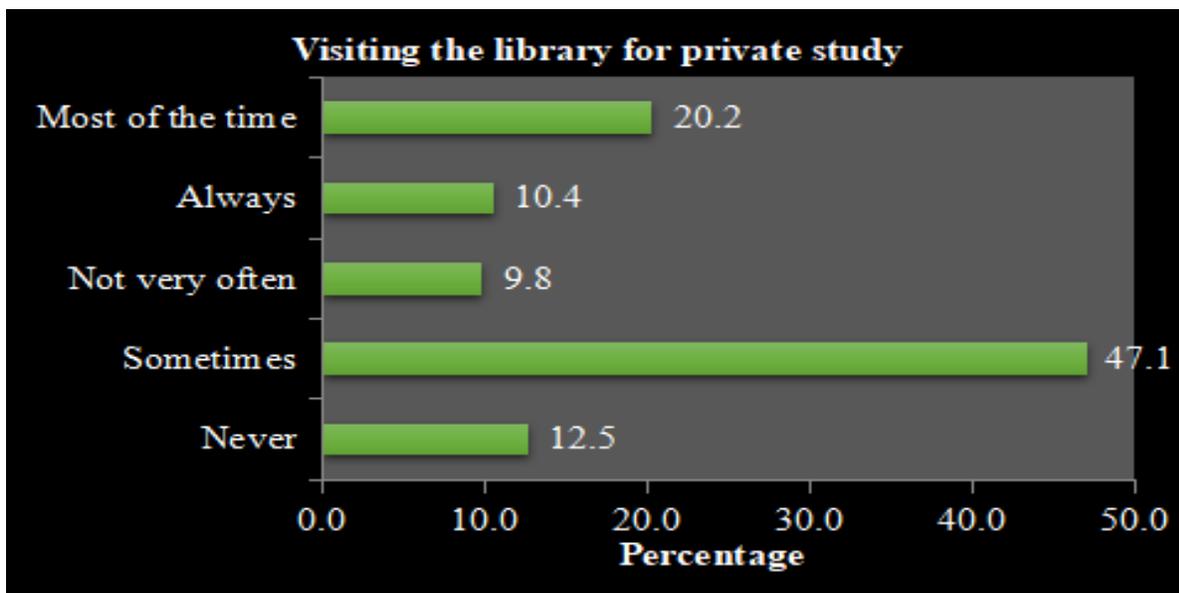
**Use of the library for private study**

The research established whether the students use the library for private study. Results in Figure 4 showed that 47.1% of the students sometimes used the library for private study. Further, 20.2% of the students used the library for private study most of the time, with 10.4% always using the library for private study. Results also showed that 12.5% of the students never used the library for private study. The inference that can be drawn from the results is that use of the school libraries by the students for private study in both counties is insignificant and thus, there is need to increase the library spaces through construction of big and spacious libraries so that students would be encouraged to have private study in the libraries.

**Description of the library**

The students described the library, and the results are shown in Table 3 below. Results showed that 75.5% of the students described the library as a quiet place to

concentrate while studying. Another 19.7% of the students described the library as very important for helping them with the school work. A library was described as hot and stuffy by 2.7% of the students, while 1.2% described the library as noisy and frantic. Only 0.9% of the students described the library as a place where they chat with their friends. The inference drawn from the results is that although most students in secondary schools were not using the library for private study, they considered the library a quiet place where concentration while doing study was possible and therefore ways of encouraging it should be put in place in the school libraries. A quiet and safe study space of the library is a haven for students whose home environment and conditions may be different thus allowing the students the opportunity to engage effectively with information literacy leading to higher confidence and enjoyment of reading and writing outside class (Wood et al., 2020).



**Figure 4: Use of the library for private study**

**Table 3: Description of the library**

Description	Frequency	Percentage
A quiet place where I concentrate while doing the study	253	75.5
Hot and Stuff	9	2.7
Noisy and frantic	4	1.2
Very important for helping me with my school work	66	19.7
A place where I get together with my friends and chat	3	0.9
Total	335	100

### CONCLUSION AND RECOMMENDATIONS

The study concludes that more needs to be done towards improving the library standards in secondary schools so that the students can be encouraged to visit the library frequently. This will be made possible by introducing the students to the libraries as soon as they join Form one to develop the library visiting culture whilst training the librarians to sharpen their skills to provide the necessary services to the students. There is a need for information literacy courses to be introduced in the curriculum of the secondary schools that would expose students to the library information resources as well as helping them to cultivate the habit of library use for long-life learning.

### REFERENCES

- Alakpodia, O.N. 2010. Assessment of information literacy skills among librarians in Delta State University, Abraka. *The Information Technologist*, 7(1):55–63.
- American Library Association. 2018. <https://literacy.ala.org/information-literacy/>. Accessed May 24, 2019.
- Armstrong, C., Boden, D., Town, J., Woolley, M., Webber, S. and Abell, A. 2005. Defining Information Literacy for the U.K. *Library and Information Update*, 4.
- Awan, A. 2019. Why are they not visiting the library? Understanding political science postgraduate students. *Evidence Based Library and Information Practice*, 14(2):106-108.
- Ajileye, E.O. and Joseph, M.B. 2002. Repositioning the polytechnic libraries in Nigeria for research and development in the 21st Century. *Communicate*. 4(1&2): 56-58.
- Baro, E.E. 2011. A survey of information literacy education in library schools in Africa. *Library Review*, 60(3):202–217.
- Baro, E.E. and Eze, E. 2015. Colleges of education librarians in Nigeria: An investigation into the self-perception of ICT-related information literacy skills. *Communication in Information*, 9(2):198 -209.
- Brink, H., Walt, C.H., B. and van Rensburg, G. 2014. *Fundamental of research methodology for healthcare professionals* (5<sup>th</sup> edition) Cape Town: Juta.
- Chen, Y.H. 2015. Testing the impact of an information literacy course: Undergraduates' perceptions and use of the university libraries' web portal. *Library and Information Science Research*, 37(3):263-274.
- Cohen, L. Manion, L. and Morrison, K. 2007. *Research methods in education*. 6<sup>th</sup> edition. London: Routledge.
- Corrall, K. 2008. Information literacy strategy development in higher education: An exploratory study. *International Journal of Information Management*, 28(1):26-37.
- Derakhshan, M. and Singh, D. 2011. Integration of information literacy into the curriculum: A meta-synthesis *Library Review*, 60(3):218-229.
- Durodolu, O.O. 2016. Information literacy skills and personal abilities of secondary school teachers in Lagos Nigeria and Durban, South Africa. PhD thesis, University of Zululand.
- Ghavifekr, S. and Wan Rosdv, W.A. 2015. Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education Science*, 1(2):175-191.
- Hamidu, C.A. and Hauwa, A. 2015. Availability and utilization of internet facilities by users in Federal Colleges of Education Libraries in north eastern Nigeria. *Information Impact Journal of Information and Knowledge Management*, 6(5).
- Ibrahim, F.L. and Sakiyo, J. 2015. Aesthetics and utilization of university libraries in North East zone of Nigeria. *Information Impact Journal of Information and Knowledge Management*, 6(3):1-20.
- Ilogho, J. and Nkiko, C. 2014. Information literacy search skills of students in five selected private universities in Ogun State, Nigeria: A survey. *Library Philosophy and Practice*. 1040. <https://digitalcommons.unl.edu/libphilprac/1040>
- Maitaouthong T., Tuamsuk, K. and Tachamane, Y. 2012. The roles of university libraries in

- supporting the integration of information literacy in the course instruction. *Malaysian Journal of Library and Information Science*, 17(1):51-64.
- Moruf, H.A. 2015. Students' utilization of secondary school libraries in Akinyele Local Government Area of Oyo State, Nigeria. *IOSR Journal of Research and Method in Education*, 5(3):60-66.
- Mugenda, A. 2008. *Social science research: applied research and training services*. Nairobi.
- Mumiukha, C.K., Ngugi, M.N., Ndiga, B.A. and Fedha, F. 2015. Transitional enrolment trends within the different educational levels in Kenya: An analysis of promoting facets. *Journal of Education and Practice*, 6(33):21-32.
- Mwatela, W.M. 2013. Factors influencing utilization of library services and resources: The case of University of Nairobi, Mombasa Campus Library. Research project, University of Nairobi.
- Nadakalu, O.A. 2014. Access and utilization of digital information services in academic libraries: A case of university of Nairobi. Nairobi: Department of Library and Information Science. (Unpublished Masters Thesis), University of Nairobi. *Information Impact: Journal of Information and Knowledge Management*, 6(2).
- Ocholla, L, Mutsvunguma, G. and Hadebe, Z. 2016. Impact of new information services on teaching, learning and research at the University of Zululand Library. *South African Journal of Libraries and Information Science*, 82(2):11-19.
- Okoh, M.I. and Ijiekhuamhen, O.P. 2014. Information seeking behaviour of undergraduates in a Nigerian university. *Information Impact: Journal of Information and Knowledge Management*, 5(2):69-83.
- Omosor, U.A. 2012. Assessment of computer literacy skills of librarians in Delta State polytechnics. *Information Impact Journal of Information and Knowledge Management*, 1(3):20-26.
- Onohwakpor, J.E. 2012. A survey of information and communication technology (ICT) literacy skills level of professional librarians in Delta State University Library, Abraka, Nigeria. *Library and Information Practitioner*, 5 (1&2):459-474.
- Owolabi, K.A, Adeyeye, Y.S. Salihu, M. Pelemo, G.D, Adesina, O.A and Adeleke, O.A. 2020. Utilisation of online public access catalogue among students of Federal University of Agriculture, Abeokuta, Nigeria. *Information Technologist International Journal of Information and Communication Technology*, 17(1):56 -64
- Puarungroj, W., Pongpatrakant, P., Boonsirisumpun, N. and Phromkhot, S. 2018. Investigating factors affecting library visits by University Students using data mining. *Libres*, 28(1):25-33.
- Shao, X. and Purpur, G. 2016. Effects of information literacy skills on student writing and course performance. *Journal of Academic Librarianship*, 42(6):670-678.
- Shrestha, N. 2008. A study on student's use of library resources and self-efficacy. Research Project, Tribhuvan University.
- Teoh, Z.M. and Tan, A. K. 2011. Determinants of library use amongst university students. *Malaysian Journal of Library and Information Science*, 16(2):21-31.
- Thanuskodi, S. 2019. Information literacy skills among library and information science professionals in India. *Library Philosophy and Practice*. 2126 <http://digitalcommons.unl.edu/libphilprac/2126>
- Tilwawala, K., Myers, M. and Diaz, A.A. 2009. Information literacy in Kenya. *Electronic Journal of Information Systems in Developing Countries*, 39(1):1-11.
- UNDP. 2008. Human Development Report 2007/2008. The Human Development Index - Going Beyond Income [http://hdrstats.undp.org/es/2008/countries/country\\_fact\\_sheets/cty\\_fs\\_KEN.html](http://hdrstats.undp.org/es/2008/countries/country_fact_sheets/cty_fs_KEN.html)
- Vance, J.M, Kirk, R and Gardener, J.G. 2012. Measuring the impact of library instruction on freshmen success and persistence: A quantitative analysis. *Communication in Information*, 6(1) 23-34.
- Varlejs, J., & Stec, E. 2009. Factors affecting students' information literacy as they transition from high school to college. *School Library Research*, 17(1):102-120.
- Varlejs, J., Stec, E. and Kwon, H. 2014. Factors affecting students' information literacy as they transition from high school to college. *American Association of School Librarians*.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. 2003. User acceptance of information technology: toward a unified view. *MIS Q*, 27:425-478.
- Venkatesh, V., Thong, J. Y. and Xu, X. 2012. Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 157-178
- Vygotsky, L. 1978. *Mind in society: development of higher psychological processes*. Cambridge MA: Harvard University Press.

- Welman, J.C. Kruger S.J. and Mitchell, B. 2012. Research methodology. Cape Town Oxford University Press.
- Wood, C., Clark, C., Teravainen-Goff, A., et al. 2020. Exploring the literacy-related behaviors and feelings of pupils eligible for free school meals in relation to their use of and access to school libraries. [http://www.ala.org/aasl/sites/ala.org.aasl/files/content/pubs/slr/vol23/slr\\_exploringliteracyrelatedbehaviors\\_V23.pdf](http://www.ala.org/aasl/sites/ala.org.aasl/files/content/pubs/slr/vol23/slr_exploringliteracyrelatedbehaviors_V23.pdf) (accessed 20 January 2022).
- Zervas, M., Stavron, C. and Kounoudes, A.D. 2015. Important role of school libraries in the development of students' information literacy skills conference: QQML 2015 7<sup>th</sup> International Conference on Qualitative and Quantitative Methods in Libraries.