BIOLOGY STUDENTS' ATTITUDES TOWARDS THE USE OF LIBRARY RESOURCES AS IT EFFECTS THEIR ACADEMIC PERFORMANCE

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Abstract
This research work examined Biology students and their attitudes towards the use of library resources as it effects their academic performance in Colleges of education in Oyo State. Two research hypotheses were formulated in this the study. The population of the study consisted of three (3) colleges of education in Oyo State. The sample size contained 300 respondents. The instrument used was a questionnaire to collect data from the respondents. Data collected were analyzed using simple percentage for section A while Pearson Product Moment Correlation (PPMC) and SPSS Version 2 were used to analyze the responses from the respondents in section B. The findings indicated that student attitudes towards the use of library resources have a positive effect on their academic performance and also use of library resources has a positive significant relationship with students' academic performance in those selected colleges of education in Oyo State. Unavailability of library resources also have a negative effect on student academic performance. The attitude of library personnel has a strong relationship with students' academic performance. Based on the finding, it was recommended among others that there should be adequate and up-to-date Biology text books and other science related text books. The library personnel should organize orientation on a regular bases for students at the beginning of the academic year and create awareness among students about the available resources and services; they should be enlightened about the benefits they could derive from using the library resources. The findings will help the management in Colleges of Education and other education stakeholders to put in their best by making learning resources more available in college libraries more than ever before.
Keywords: Attitude, Academic, College, Education, Library, Performance, Student

Introduction
Attitude plays an important role in the future of science students. Students' attitudes toward science affect their academic achievement in science. The identification and improvement of their attitudes are important in educational research studies (Prokop et. al., 2007). Attitude is defined as the predisposition to think, spirits or preferences that an individual has about an attitudinal object, based on his or her belief about the object, which can be positive or negative. According to Coll, Dalgety and Salter, 2002 and Kind, Jones and Barmi, 2007, the attitude can be considered as consisting of components such as cognitive (information, opinions and thoughts), affective (feeling, liking and disliking) and behavioral (tendency to action). The attitude that one has towards a particular object makes it possible to decide whether the considered object is good or bad, pleasant or unpleasant, advantageous or disadvantageous, important or irrelevant (Crano & Priskin, 2006 ; Oluwatelure, & Oloruntegbe, 2010; Salta & Tzougraki, 2004).
Libraries are as informant for children as education itself. Library services implies both availability and accessibility of library facilities and services to the use and the willingness and

ability of readers to use the facilities and services. Information is power and access to information is indispensable to individual advancement as well as corporate educational development. Student need the library for effective learning for lifelong education in consonance with the National Policy on Education, Federal Republic of Nigeria FRN (2004), which states that, "the aim of basic education is equip individual with such knowledge, skill and attitude that will enable them to live meaningful and fulfilling lives contribute to the development of the society. Stressing the role, the library plays in the environment of learning, Travaline (2005) maintains that today"s library is like a big playground waiting to be explored and the librarian the best playmate: one who makes the playground worthwhile. Herbert (2006) agrees, saying that children"s literacy develops and emerges as they explore and participate in a literacy-rich environment. In the light of creating a good attitude towards the use of library resources, student is often advised to have a particular study area, stick to a specific schedule and do one task at a time. However, school library provides a quiet study place and environment that is conducive to mental concentration. Adesoji (2010) cited Omoniwa who post that libraries have been associated with the concept of life-long reading and learning. It was stated further that library especially school libraries are desirable in order to inculcate into the student very early in life the attitude for various purposes such as education, pleasure, information etc.

Therefore, it is essential to create captivating, inviting and comfortable place for the student in order to help them cultivate good attitude towards the use of library resources. Library, more than any other place, provides ideal environment and vital information resources for student to develop excellent performance in academic works. Thus, it is imperative for the student to cultivate good attitude that will equip them for excellent performance in their academic work through the use of a school library. Farrant (2012) notes attitude is a major determinant of the individual orientation towards his social and physical environment including himself. Africans and indeed Nigerians are not used to reading because the predominantly medium of communication is oral. Africans are not reading society but chatting society.

Academic performance can be viewed as the extent to which a student has achieved the short or long-term educational goals; it can also be viewed as an intellectual competence indicator. Bhagat (2013) submitted that academic performance can be measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important procedural knowledge such as skills or declarative knowledge such as facts. According to Barry and Rhonda (2011) only motivated students can actually improve or perform better academically than peers with lower motivation. In other words, students with higher need for achievement have greater academic performance. Improving students' academic performance through library usage is one of the major goals of educational planning in Nigeria and in the world at large, so it is through academic performance that students can fully actualize their talents in line with educational goals. Notably, academic performance is considered as one important criteria of educational quality. Therefore, without doubt academic performance presently is a major issue among students, teachers, parents, school administrators, and the community at large. Researchers have made several attempts to unravel the complexities surrounding academic performance (Ikpi, Enya and Johnny, 2014). Karemera (2003) also submitted that students' performance is significantly correlated with satisfaction with academic environment and the facilities of library.

Statement of the Problem

Students studying Biology and other science related courses should firmly embrace the usage of libraries, although this is not always the case. Not all students will immediately benefit from libraries. For students to understand the true value of a library, they must be inspired. There are many resources available, both in print and electronically, but only if the students can find these information sources efficiently. Therefore, understanding the value of using library resources and having a positive attitude towards that can go a long way to help every Biology student. Williamson (2010) asserted that a lot of students receive poor grades in school as a result of their attitude toward their academics and library use. Additionally, students' academic performance suffers when they do not use the school library's resources to deepen their research. With the advent of this technologically advanced period, the formats of resources have changed noticeably from printed books and journals to numerous electronic formats. Students of this generation are more likely to prefer digital information sources to learn quickly. Consequently, more virtual libraries can be of help in this area. Therefore, this study investigates attitudes of Biology students towards library use and effcets on their academic performance in colleges of education in Oyo State.

Purpose of the Study
The purpose of this study is to explore biology students and attitudes towards the use of library resources as it effects their academic performance in colleges of education in Oyo State.

Objectives of the Study
The objectives of this study are as follows:
i. To examine the attitudes of Biology students towards the use of library facilities.
ii. To find out the effectiveness of library resources on their academic performance

Research Hypotheses
To achieve the objectives of this study the following null hypotheses were formulated and tested at 0.05 significant level.
Ho_1: There is no significant relationship between student attitudes and the use of library resources.
Ho_2: There is no significant effect between the library and students' academic performance.

Significance of the Study
The findings of this study may be useful to researchers, educational planners, scholars and other stakeholders on how to improve students' attitudes towards the use of library and library services to improve their leaning. The results of the study will be of help to College management to motivate students so that they can use library services to improve their academic performance. The findings will also encourage other researchers to continue searching for best strategies in using library services for improving student leaning.

Scope of the Study
This study is limited to two colleges of education in Oyo state, Nigeria. The colleges of education are; Federal College of education (special), Oyo and Emmanuel Alayande College of Education, Oyo, Nigeria. The study will be carried out among the biology students in 100, 200 and 300 levels. The principal focus on the study is to find out the attitudes of biology students towards the use of library resources as it effects their academic performance in colleges of education in oyo state.

Review of Related Literature

Meaning of a Library

According to International Federation of Library Association (2013), a library is a physical structure or room, a virtual location, or both to offers physical or digital access to materials, the materials in a library's collection might be in a variety of formats, including books, magazines, newspapers, manuscripts, videos, maps, prints, documents, CDs, DVDs, audiobooks, databases, and many more, however all these are crucial for student development, learning and reading culture.

School library is very important in shaping students' habit as regard reading for leisure, to pass examinations and to obtain information on different aspects of life (George, 2011). School library is an unlimited store house of unrestricted information resources in diverse formats systematically organized for users. Thus, a school library cannot be separated from the school–parent institution and expect all round development of the students. Library users make use of library for different purposes. While some users use it for reading their notes and personal books, others use library to do assignments. Yet, others visit library to prepare for examination, recreation and relaxation. Ogunbote and Odunewu (2008) cited Kumar (1991) and stated that the performance of students could be improved considerably if they use the library regularly. Students should therefore maximize the use of school libraries to their advantage since school libraries provide favourable environment where the students can discover and develop their abilities and talents as well as improving their reading and study skills.

The main purpose of the Library is to support the objectives of the Colleges of Education, which is to promote teaching, learning and research. The College library is meant to serve the students, lecturers and other members of the college community. The quality of a college is measured largely by the quality of its library because of its unique role in the college system. There can never be the existence of a college without a library since the college is meant to teach and carry out research. For the students and teaching staff, the college library is supposed to provide information resources and services of sufficient quality and diversity. Jato (2014) observed that school librarians guide students reading and research process as well as helping them to choose books that fit their interests.

Impact of using The Academic Library

Academic library will go a long way to effectively, adequately and efficaciously impact the reading culture of every student positively, and will also allow the under listed to be achieved

1. Student retention is enhanced through the use of library
2. A student's long-term academic experience is improved by library instruction.
3. The library helps the student's academic relationships by having contact with the library
4. The use of the library contributes to improved academic achievement and learning for students.
5. Students' learning abilities are improved by collaborative academic programme and services that involve the library.
6. Teaching information literacy improves general education results.

Library Services and Academic Performance

If library resources are effectively managed by library personnel such a library will adequately make provision for any students or researcher that want to access any library material and this in turn help student perform better in his/her courses at all levels. Francis et al (2010) noted that when students visit the library often to enjoy its services, this will go a long way to improve the

performance of such students in different courses. However, creating a conducive learning environment for students by making library resources available will help the students to cultivate good study habits and this must be the topmost priority of any higher institution of learning in Nigeria. For higher institutions of learning to cultivate these habits, the sound and effective library comes to mind with the primary aim of contributing towards sound academic performance. The essence of the use of libraries is to provide the ideal environment and vital information resources for students to develop and sustain good study habits that are necessary for outstanding academic performance (Jato, Ogunniyi and Olubiyo, 2014)

Students' Attitudes Toward the Use of Library

Good study habits can be embraced by the students by effectively using the library to gather information and knowledge which will in turn lead to outstanding performance in their academic performance and this is achievable via effective use of a library.

Habits are a well-planned and deliberate pattern of study that has attained a form of consistency on the part of the students toward understanding academic subjects and excelling at examinations (Jato *et al,* 2014). Therefore, a student's study habit is a life-long or continuous, and regular performance of the act of reading. In similar submission by Gurcu and Husne (2009) students can be intellectually sound through the use of the library continuously and regularly to aid what he/she has been taught in the four-wall classroom. Therefore, this habit of reading can be gained if such an individual has the right attitude toward reading and learning (Haliru, Abdulkarim, Mohammed and Dangani, 2015).

The word study habits and academic performance are being used interchangeably and the two concepts are also interrelated and dependent on each other. Students come from different environments and have different levels of academic performance or achievement in terms of being high or low. These concepts also vary in the pattern of study habits. This is evident as Miguel and Ksenia (2015) exemplified that among other aspects, high-performing students give opinions based on reading material and class content. Thus, to improve the academic performance of students, it seems essential to improve their study habits without which desired outcomes cannot be achieved. Study habits in any student can be developed by both the teacher and the parent of such student (Kizlik, 2011). Danskin and Burnett (2005) also pointed out that many students that have higher marks had adequate and sufficient study habits as compared to students who had insufficient study habits and thus lagged in their studies.

Challenges Facing Students in the Use of School Library

Numerous difficulties that students encounter when using school libraries have been identified by many scholars. According to Benard & Dulle (2014), submitted that there are not enough current books to read, there are not enough places to sit, and there are not enough librarians or other information professionals to process the books. Ladelunuri (2012) also corroborates the submission of Benard & Dulle (2014) that the lack of modern text and reference materials in school libraries is a major contributing factor to the poor performance of Biology students in Nigeria. On the other hand, a significant issue that prevents students from accessing school libraries is the absence of library personnel who can process reading materials in the majority of colleges of education in Nigeria. For instance, in the research areas such as Biology and other science-related courses in the college of education. As a result, it might be challenging for students to access the appropriate material at the appropriate time and receive the proper instruction on how to find and use information in such libraries (Benard & Dulle, 2014).

Research Design
The study employed a descriptive survey design as the researcher is interested in gathering information on Biology students attitudes towards the use of library and effects on their academic performance in Colleges of Education in Oyo State.
The use of this method was considered appropriate because it suits a study of this nature. A questionnaire was used as a tool for data collection.

Population of the Study
The target population for this study comprised of 300 respondents from three Colleges of Education in Oyo, Oyo State, Nigeria

Sample and Sampling Techniques
The three Colleges of Education that were selected are:
1. Emmanuel Alayande College of Education, Oyo, Oyo State, Nigeria and
2. College of Education Lanlate, Lanlate, Oyo State, Nigeria
3. Federal College of Education (Special), Oyo

Research Instrument
The research instrument adopted for this study was questionnaire and the instrument was divided into two sections. The questionnaire was titled 'Biology students attitudes towards the use of library and effects on their academic performance in Colleges of Education in Oyo State'.
Section A was designed to collect data on the personal background of the respondents which include: Gender, age, level, and department.
Section B contained items relevant to the variable under study. The rating technique for the questionnaire is the listed four (4) point rating scale weighted as follows: SA - Strongly Agreed, A-Agreed, D- Disagreed, SD-Strongly Disagreed

Validation of this Instrument
The research instrument is valid only when it measured what it is supposed to measure or what is meant to be measured. The research questionnaire was drafted and presented to the supervisor for necessary corrections and amendments.

Reliability of Research Instrument
The reliability of a questionnaire was measured using various methods which include parallel form, Spearman-Brown Split-half, Test-retest as well as Kuder Richardson methods. For this study, the reliability of the instrument was determined through test-retest technique.

Methodology of Data Collection
The researcher visited the selected Colleges of Education to personally administer the questionnaire. The researcher presence accorded him the opportunity to establish a good rapport with the respondents and he explained items that were not clear to the respondents. The act enabled the researcher to retrieve copies of the questionnaire personally which was used for the analysis of the data.

Method of Data Analysis
The data collected for this study was analyzed using simple percentage to analyze section A while Pearson Product Moment Correlation (PPMC) and SPSS Version 2 was used to analyze the responses of the respondents in section B.

Data Analysis and Discussion of Findings
Analysis of Demographic Data

Table 1: Frequency Distribution based on the Gender of the Respondents

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	102	34%	34%	34%
Female	198	66%	66%	100%
Total	300	100%	100%	

Source: **Field survey 2023**

From Table 1, it was found that 102 (34%) of the respondents were males compared to 198 (66%) female respondents. This shows that the majority of the respondents who took part in the study were females across the selected three Colleges of Education.
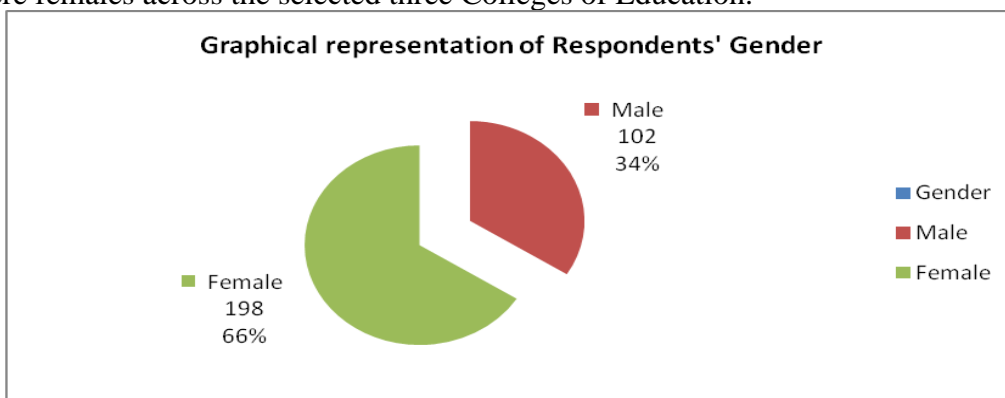

Figure 1: Graphical representation of Respondents'' Gender

Figure 1 above shows a graphical representation of the respondents' gender that took part in the research. 66% (198) of the respondents were female while 34% (102) of the respondents were male. Therefore, from the above graphical representation it is observed that the majority of the respondents were female which indicates that female was more than male in the Biology department in selected colleges of education.

Table 2: Frequency Distribution based on the Age of the Respondents

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18-25	276	92%	92	92%
26 -30	22	7.3%	7.3	99.3%
31-35	2	0.7%	0.7	100%
36-40	0	0%	0%	-
Total	300	100%	100%	

Source: **Field survey 2023**

From Table 2, it was found that 276 (92%) of the respondents were between the age range of 18-25 years, 22 (7.3%) of the respondents were between the age range of 26-30 years, 2 (0.7%) of the respondents were between the age range of 31-35 years while 0 (0%) of the respondents were between the age range of 36-40 years. This means that the age range of 18-25 years is more represented in this research work.
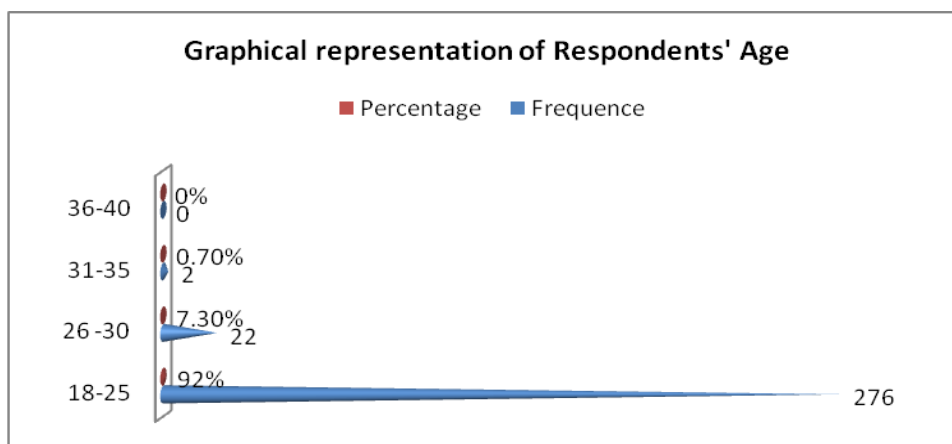
Figure 2: Graphical representation of Respondent's Age

Figure 2 above depicts a graphical representation of the respondents' age that participated in this research work. The 18-25 age range of the respondents have 92%, 26-30 age range of respondents have 7.30%. 31-35 age range of the respondents have 0.70% while the 36-40 age range have no respondents. Therefore it is clearly stated that respondents between the age ranges of 18-25 fully participated in the research.

Table 3: Frequency Distribution based on the Department of the Respondents

Department	Frequency	Percent	Valid Percent	Cumulative Percent
Biology: Emmanuel Alayande College of Education, Oyo, Oyo State, Nigeria	100	33.3%	33.3%	33.3%
Biology: College of Education Lanlate, Lanlate, Oyo State, Nigeria	100	33.3%	33.3%	66.6%
Biology: Federal College of Education (Special), Oyo	100	33.3%	33.3%	100%
Total	300	100%	100%	

Source: **Field survey 2023**

From Table 3, it was found that 100 respondents which represent (33.3%) percent were from the department of Biology at Emmanuel Alayande College of Education, Oyo, Oyo State. Likewise, 100 respondents represent (33.3%) of the College of Education Lanlate, Lanlate, Oyo State and 100 respondents represent (33.3%) of the Federal College of Education (Special), Oyo. This shows that 100 respondents each were represented from three Colleges of Education in Oyo State.
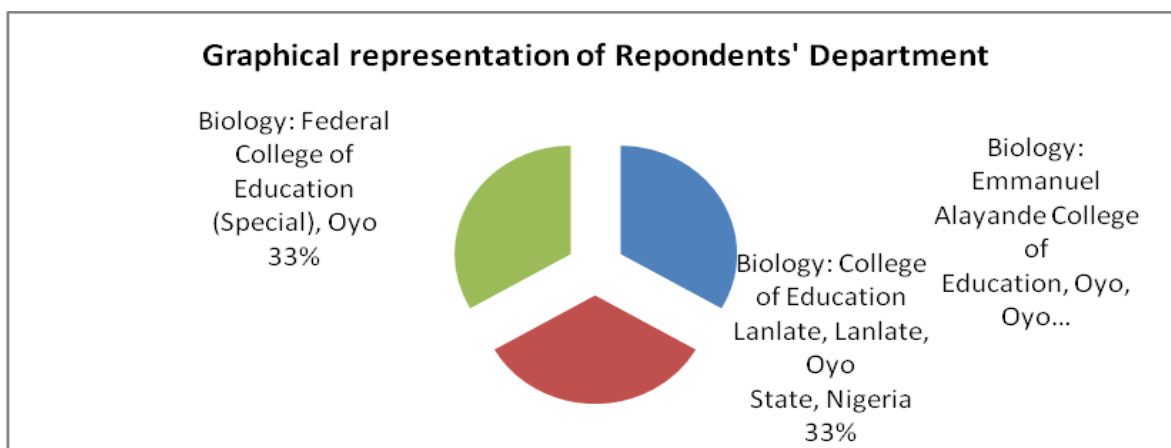
Figure 3: Graphical Representation of Respondents' Department

Figure 3 above depicts a graphical representation of the respondents. 100 respondents which represent (33.3%) percent were from the department of Biology at Emmanuel Alayande College of Education, Oyo, Oyo State. Likewise, 100 respondents represent (33.3%) were from Biology department, of the College of Education Lanlate, Lanlate, Oyo State and 100 respondents represent (33.3%) were also from Biology department of the Federal College of Education (Special), Oyo. This shows that 100 respondents each were represented from three Colleges of Education in Oyo State.

Table 4: Frequency Distribution based on the Level of the Respondents

Level	Frequency	Percent	Valid Percent	Cumulative Percent
200 Level	192	64%	64%	64%
300 Level	108	36%	36%	100%
Total	300	100%	100%	

Source: **Field survey 2023**

From table 4, it was shown that 192 (64%) of the respondents were 200 Level Students while 108 (36%) of the respondents were 300 Level students. It can therefore be inferred that the majority of the respondents were 200 Level, students
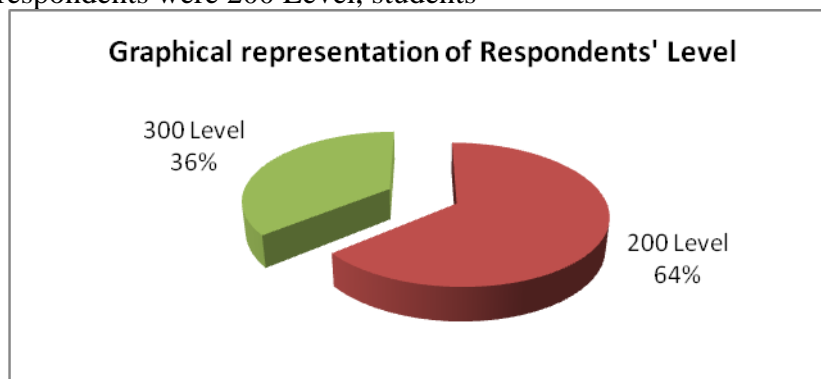

Figure 4: Graphical Representation of Respondents' Level

Figure 4 above shows the graphical representation of respondents' Levels in their various Colleges of education. 64% of the respondents were 200-level students that took part in the research while 36% of the respondents that took part in the research were at 300 level. Therefore,

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Indexed in Google Scholar, School of Secondary Education (Science), Federal College of Education, Abeokuta, Nigeria.

this points to the fact that 200 level respondents were more than 300 level respondents in this research work.

Data Analysis

(H_0): This represents the null hypothesis

(H_a): This represents the alternative hypothesis

The decision rules state that if the value of PPMCC (Pearson Product-moment Correlation Coefficient) gives a positive answer, we will accept the null hypothesis i.e. +1, we will accept null hypothesis (H_0) and reject alternate hypothesis (H_a). But if Pearson Product-moment Correlation Coefficient gives a negative answer i.e.-1 we will reject the null hypothesis (H_0) and accept the alternate hypothesis (H_a). But if Pearson Product-moment Correlation Coefficient gives a zero answer i.e. 0 this shows that there is no relationship at all.

Research Hypothesis 1

Ho$_1$: There is no significant relationship between student attitudes towards the use of library resources.

Ha: There is a significant relationship between student attitudes towards the use of library resources.

Table 5

Item No	X	Y	XY	X^2	Y^2
1	205	95	19475	42025	9025
2	194	106	20564	37636	11236
3	251	49	12299	63001	2401
4	123	177	21771	15129	31329
5	262	38	9956	68644	1444
Total 5	**1035**	**465**	**84065**	**226435**	**55435**

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Where N = 5

$n\sum xy$ = 5 x 84065 = 420325

$\sum x \sum y$ = 1035 x 465 = 481275

$n\sum x^2$ = 5 x 226435 = 1132175

$(\sum x)^2$ = 1035 x 1035 = 1071225

$n\sum y^2$ = 5 x 55435 = 277175

$(\sum y)^2$ = 465 x 465 = 216225

$$\frac{420325 - 481275}{\sqrt{[1132175 - 1071225]}\sqrt{[277175 - 216225]}}$$

= $\frac{901600}{(60950)\ (60950)}$

= $\frac{-\ 901600}{3714902500}$ = -0.00024

As presented in Table 5 from the calculated Pearson Product-Moment Correlation Coefficient (PPMCC), it has showed that the calculated PPMCC is negative i.e. -0.00024 therefore null

hypothesis is rejected. This indicated that the respondents agreed that there is a significant relationship between student attitudes toward the use of library resources. This implies that student attitude toward library resources has a significant effect on their academic performance; therefore, students that use library resources perform better than those who don't use them. The result also reveals that most of the respondents or Biology students access library resources; the result also shows that the reading habit of respondents changed due to the accessibility of library resources. It also helps the respondents to cultivate a habit of self-study because of the availability of library resources to some extent. The result also reveals that respondents devoted interest to library resource utilization. Furthermore, the result reveals that library resources help the respondents to improve their academic performance.

Descriptive Statistical Table for the Mean and Standard Deviation

	Mean	Std. Deviation	N
Student attitudes towards the use of library resources.			
1. The first place that I go when I need to find information is the library.	1.6800	.93073	300
2. My reading habit has developed since I started using the library.	2.1700	1.01559	300
3. The library helped me to cultivate a habit of self-study.	3.2700	3.2700	300
4. I have a devoted interest in library resource utilization.	2.6400	1.00020	300
5. Using the library helped me to improve my academic performance	2.6300	1.02154	300

The result from the table goes thus: The first place that I go when I need to find information is the library (The mean value for this statement is 1.6800, while the standard deviation is .93073); My reading habit has developed since I start using the library (The mean value for this statement is 2.1700, while the standard deviation is 1.01559); The library helps me to cultivate a habit of self-study (The mean value for this statement is 3.2700, while the standard deviation is 3.2700); I have a devoted interest in library resources utilization (The mean value for this statement is 2.6400, while the standard deviation is 1.00020); and using the library help me to improve my academic performance (The mean value for this statement is 2.6300, while the standard deviation is 1.02154). Therefore, the results revealed that almost all the respondents were in support of the above statements.

Correlations

		Student attitudes towards the use of library resources.	The first place that I go when I need to find information is the library.	My reading habit has developed since I start using the library.	The library helps me to cultivate a habit of self-study.	I have a devoted interest in library resource utilization.	Using the library help me to improve my academic performance
Student attitudes towards the use of library resources.	Pearson Correlation	1	.087	.041	.126	-.036	.133
	Sig. (2-tailed)		.388	.687	.213	.726	.186
	N	300	100	100	100	100	100
The first place that I go when I need to find information is the library.	Pearson Correlation	.087	1	.507**	-.032	-.136	.002
	Sig. (2-tailed)	.388		.000	.753	.178	.987
	N	300	100	100	100	100	100
My reading habit has developed since I start using the library.	Pearson Correlation	.041	.507**	1	-.094	.051	.100
	Sig. (2-tailed)	.687	.000		.352	.615	.321
	N	300	100	100	100	100	100
The library helps me to cultivate a habit of self-study.	Pearson Correlation	.126	-.032	-.094	1	.097	.025
	Sig. (2-tailed)	.213	.753	.352		.336	.809
	N	300	100	100	100	100	100
I have a devoted interest in library resource utilization.	Pearson Correlation	-.036	-.136	.051	.097	1	.353**
	Sig. (2-tailed)	.726	.178	.615	.336		.000
	N	300	100	100	100	100	100
Using the library help me to improve my academic performance	Pearson Correlation	.133	.002	.100	.025	.353**	1
	Sig. (2-tailed)	.186	.987	.321	.809	.000	
	N	300	100	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

The p-value quoted under Significant (2-tailed) is .000 (reported as $p < 0.01$) which is less than 0.05 we, therefore have significant evidence to reject the null hypothesis that there is a statistically significant relationship between student attitudes and the use of library resources.

Research Hypothesis 2

$H0_2$: There is no significant effect between the library and students' academic performance.

H_a: There is a significant effect between the library and students' academic performance.

Table 6

Item No	X	Y	XY	X^2	Y^2
6	257	43	11051	66049	1849
7	271	21	5691	73441	441
8	232	68	15776	53824	4624
9	281	19	5339	78961	361
10	211	89	18779	44521	7921
Total 5	**1252**	**240**	**56636**	**316796**	**15196**

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

Where N = 5
$n\sum xy = 5 \times 56636 = 283180$
$\sum x \sum y = 1252 \times 240 = 300480$
$n\sum x^2 = 5 \times 316796 = 1583980$
$(\sum x)^2 = 1252 \times 1252 = 1567504$
$n\sum y^2 = 5 \times 15196 = 75980$
$(\sum y)^2 = 240 \times 240 = 57600$

$$\frac{283180 - 300480}{\sqrt{[1583980 - 1567504]}\sqrt{[75980 - 57600]}}$$

$= \dfrac{-17300}{(16476)\,(18380)}$

$= \dfrac{-17300}{302828880} = -0.0000571$

As presented in Table 6 from the calculated Pearson Product-moment Correlation Coefficient (PPMCC), it can be seen that the answer obtained is negative i.e. -0.0000571. Therefore, the null hypothesis is rejected; this indicated that the respondents agreed that there is a significant effect between the library and students' academic performance. This implies that a library is a place where meaningful information and reading resources are kept, therefore the use of the library has positive effects on the academic performance of Biology students in higher institutions of learning, and the results also show that most of the Biology students have access to Biology textbook in the library. Furthermore, the result reveals that the accessibility of library resources and virtual libraries greatly leads to better academic performance of Biology students and other students in higher institutions of learning in general.

Descriptive Statistical Table for the Mean and Standard Deviation

	Mean	Std. Deviation	N
The library and students'' academic performance.			
6. The absence of library and library services can lead to poor performance.	2.8100	.88874	300
7. Students who use library resources perform better than those who don't use them.	2.4467	1.10962	300
8. Regular use of the library leads to better performances in class.	2.0633	1.12407	300
9. The use of the library resources has positive effect on my academic performance	2.4267	1.15574	300
10. Students that use the library in my college perform better academically	2.4567	1.25167	300

From the table above, the average mean scores and standard deviation of each of the statements are as follows: (2.8100, .88874); (2.4467, 1.10962); (2.0633, 1.12407); (2.4267, 1.15574) and (2.4567, 1.25167). These results revealed that most of the respondents agreed that the absence of library and library service can lead to poor performance. Again, most of the respondents agreed that students who use library resources perform better than those who don't use them. Respondents also agreed that regular use of the library leads to better performances in class. Regular use of the library leads to better performances in class. It was also agreed by the respondents that the use of the library has a positive effect on their academic performance, it was also gathered from the result that students that use the library in colleges of education perform better academically. Therefore, the above result revealed that almost all the respondents were in support of the statements.

Correlations

		Use of library and students'' academic performance.	The absence of library use and library service can lead to poor performance.	Students who use library resources perform better than those who don't use them.	Regular use of the library leads to better performances in class.	The use of the library has positive effect on my academic performance	Students that use the library in my college perform better academically
Use of library and students'' academic performance.	Pearson Correlation	1	-.026	.235**	.151**	.168**	.232**
	Sig. (2-tailed)		.650	.000	.009	.004	.000
	N	300	300	300	300	300	300
The absence of library use and library service can lead to poor performance.	Pearson Correlation	-.026	1	.215**	-.028	.323**	.180**
	Sig. (2-tailed)	.650		.000	.628	.000	.002
	N	300	300	300	300	300	300
Students who use library resources perform better than those who don't use them.	Pearson Correlation	.235**	.215**	1	.288**	.292**	-.248**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	300	300	300	300	300	300
Regular use of the library leads to better performances in class.	Pearson Correlation	.151**	-.028	.288**	1	.162**	-.068
	Sig. (2-tailed)	.009	.628	.000		.005	.239
	N	300	300	300	300	300	300
The use of the library has positive effect on my academic performance	Pearson Correlation	.168**	.323**	.292**	.162**	1	.087
	Sig. (2-tailed)	.004	.000	.000	.005		.134
	N	300	300	300	300	300	300
Students that use the library in my college perform better	Pearson Correlation	.232**	.180**	-.248**	-.068	.087	1
	Sig. (2-tailed)	.000	.002	.000	.239	.134	

| academically | N | 300 | 300 | 300 | 300 | 300 | 300 |

**. Correlation is significant at the 0.01 level (2-tailed).

The p-value quoted under Significant (2-tailed) is .000 (reported as p < 0.01) which is less than 0.05, therefore have significant evidence to reject the null hypothesis that there is a statistically significant relationship between the library and students'' academic performance.

Discussion of Findings

This research work focused on biology students and attitudes towards the use of library resources as it effects their academic performance in Colleges of Education in Oyo State. The purpose of this research is to find out the relationship between student attitudes toward the use of library resources. It also attempts to find out if there are positive effects between the library and students' academic performance. More so it also examines if there is a relationship between the availability of library resources and the attitude of students towards the use of the library. A self-designed instrument was used to collect data from Biology students in three colleges of education in Oyo State. Simple percentage was used to analyze section A which asks about the demography of the respondents while Pearson Product Moment Correlation (PPMC) and SPSS Version 2 were used to analyze responses of the respondents in section B. Based on the result obtained from Table 5 it showed that students' attitudes towards the use of library resources improve the academic performance of students. This is in line with the submission of Ogunbote and Odunewu (2009) cited Kumar (2000) and stated that the performance of students could be improved considerably if they make use of the library often.

The second hypothesis tends to determine the positive effect between the library and students' academic performance. The result in Table 6 depicts that there is a strong relationship between the library and students' academic performance. This is in line with the submission of Daniel (2007) that the school library remains the powerhouse of educational schools which enhances students' academic performance.

Conclusions

The library is an important part of any college of education. It is a Universe of knowledge, a place for acquiring or providing information through various sources made available in various formats. It plays a vital role in widening the knowledge of students which leads to the attainment of Intellectual achievement. It is quite evident that students as a whole use physical libraries to a great extent for study purposes. Students who often visit the library to inquire about the books for the intention of lending and returning have a positive effect on their academic performance than those who do not. Students today have taken to heart digital access to collection of resources and they use these resources to a great extent due to the easy interface of a search engine. Students today are more dependent on the Internet and World Wide Web as it could be accessed from anywhere like home, cyber or any place they could find the computers. Google is the most used search engine that is employed for study purposes. For a large portion of heavy Google users, the use of a search engine is more informative, efficient, and updated than the use of libraries and library resources. The Internet has contributed positively to providing reference services and has improved their academic performance. Users today need to be information literate to acquire the information made available to them in different areas. The student has to know how to use these resources to make properly exploitation of the information at hand and achieve their academic performance in school. Libraries in Nigerian secondary schools and higher institutions should be evaluated regularly and adequately in other to meet up with the quality of library services stipulated by IFLA which was the aim of this study. Library resources

when adequately provided and used would produce great critical thinkers and well-taught students for academic improvement.

Recommendations

i. The Physical library is still very important and well-liked by students. The library should focus on being more adequately resourceful to students.

ii. Students are easily intimidated when they do not get a response properly so to make them familiar with the resources, the librarian should be more friendly, cooperative, and helpful to the students for academic improvement.

iii. Libraries should aim to make all the users aware of the information resources and services available, both directly and through external sources at the library, and enable users to enjoy the search for information.

iv. Teaching staff and library staff should collaborate to ensure that library resources along with electronic resources are appropriately used by the students.

v. Libraries should also consider the Internet as one of the most important information sources and develop its infrastructure accordingly.

References

Acido, M. B. (2010). High school students' reasoning skills and their study habits and attitude toward learning. Alipato. *J. Basic Edu*. 4:108-117.

Asikhia, O. A. (2010). Students and teachers' perception of the causes of poor academic performance in Ogun State Secondary Schools Nigeria: Implications for counseling for national development. *Eur. J. Soc. Sci*. 13(2):229-242.

Alex, G. (2011). Definitions of Study Habits Retrieved on 4th February, 2013 from: www.answers.com.

Adesoji, F. F. (2007). Need for Re-Introduction of Reading Corners in Primary School Libraries in Nigeria: A Cursory Look at NonConventional School Libraries. *Niger. Sch. Libr. J*. 6:73-83.

Bhagat, V. (2013). Extroversion and academic performance of medical students. *International Journal of Humanities and Social Science Invention, 2(3)* 2319 – 7722

Benard, R. and Dulle, F. (2014). Assessment of access and use of school library information resources by secondary school students in Morogoro Municipality, Tanzania, 2(3), 3229-3341

Coll, R. K., Dalgety, J. and Salter, D. (2002). The development of the chemistry attitudes and experiences questionnaire (CAEQ). *Chemistry Education Research and Practice in Europe, 3*(1), 19-32.

Crano, W. D. and Priskin, R. (2006). *Attitudes and Persuasions.* Ann.Revis.Psychol. 57:345-374.

Danskin, D. and Burnet, A. (2005). The study techniques of superior students. *Journal of Superior Guidance*, *37*(2), 23-29.

Dinah, C. S. (2013) 'Factors which influence academic performance in biology in Kenya: a perspective for global competitiveness' *International Journal of Current Research,* 5(12), pp 4296-4300

Dent, V. F. (2006). Observations of School Library Impact at two rural Uganda Schools. Retrieved on 4th February, 2013 from: http://www.kitengcsalibrarv.org/images/observationsarticle.pdf

Francis, B. H., Lance, K. C. and Lietzau, Z. (2010). School librarians continue to help students achieve standards: The third Colorado study. Colorado: Library Research Service

George, A. (2011). The School library in a megacity setting: The case of Lagos State. Gateway J. 14(1):76-86.

Gurcu, K. E. and Husne, D. (2009). The library use habits of student teachers - World

Haliru, R. A., Abdulkarim, Abdulkarim, M, A. and Dangani, M. (2015). An assessment of reading habit among secondary school students in Kaduna metropolis. IOSR Journal of Humanities and Social Science, 20(10), 12-17.

International Federation of Library Association, (2013). The School Library in Teaching and Learning for All Retrieved on May, 2023 from: http://archive.ifla.org.

Jato, M., Ogunniyi, S. O. and Olubiyo, P. O. (2014). Study habits, use of school libraries and students' academic performance in selected secondary schools in Ondo West local government area of Ondo State. *International Journal of Library and Information Science*, 6(4), 57-64.

Laddunuri, M. M. (2012). Status of school education in present Tanzania and Emerging Issues. *International Journal of Educational Research and Technology*. 3(1), 223-243.

Jato, M., Ogunniyi, S. O. and Olubiyo, P. O. (2014). Study habits, use of school libraries and students' academic performance in selected secondary schools in Ondo West local government area of Ondo State. *International Journal of Library and Information Science*, 6(4), 57-64.

Kind, P. M., Jones, K. and Barmi, P. (2007). Developing Attitude Towards Science Education. *J. Attitude Towards Sci. Educ*. 29(7): 871-893.

Kizlik, R. D. (2011). *ABC of academic success*. London: Harper & Co

Kumar, K. (1991). Library Manual. New Delhi. Vikas Publishing House.

Lance, K. (2000), How School Librarians Can help Kids Achieve Standards: The Second Colorado Study. Castle Rock, CO: Hi Willow Research and Publishing.

Lonsdale, M. (2003). Impact of School Libraries on Student Achievement: a Review of the Research. Report for the Australian School Library Association, Australian Council for Educational Research (ACER). http://www.asla.org.au/site/defaultsite/filesystem/documents/research .pdf.

Miguel, A. and Ksenia, P. (2015). Influence of study habits on academic performance of international college students in Shanghai. Canadian Center of Science and Education, 5(4), 42-55.

Ogunbote, K. O. and Odunewu, A. O. (2008). School Library and Utilization in Ijebu North Local Government Area of Ogun State, Nigeria. Niger. School Libr. J. 7:42-57.

Omoniwa, M. A. (1995). The computerization of Kashim Ibrahim Library of Ahmadu Bello ... adoption in Hong Kong. *J. Inf. Sci*. 21(1): 11-19.

Ogunniyi, S. O., Adeniji, M. A. and Jato, M. (2011). Availability of resources and services to students in selected private secondary schools in Ondo West Local Government Area of Ondo State. *Int. J. Libr. Sci*. 4(A11):48-55.

Oluwatelure, T. A. and Oloruntegbe, K. O. (2010). Effects of parental involvement on students' attitude and performance in science. *African Journal of Microbiology Research*, *4*(1), 001-009.

Orodho, J. A. (2009). Elements of Education and Social Science Research Methods,

Second Edition. Maseno: Kanezja

Prokop, P., Tuncer, G. and Chudá, J. (2007). Slovakian students' attitudes toward biology. *Eurasia Journal of Mathematics, Science & Technology Education, 3*(4), 287-295.

Salta, K. & Tzougraki, C. (2004). Attitudes toward chemistry among 11th grade students in high schools in Greece. *Science Education*, *88*(4), 535-547.

Sax, G. (1997). Principles of educational and psychological measurement and evaluation. Wadsworth publishing company.

Singh, G. (2002). Use of College Libraries by faculty members of University of Delhi in Library Herald. 40(4)

Travaline, (2005) Why do librarian join library association, or do they? *New Zealand librarian* 49(6) p.199-207

Williamson, M. (2010) Analytical study on students' academic performance in library skill. 12(6), 87-92.