Winter 11-24-2023

Access to Electronic Information Resources and Attitude towards Plagiarism by Science Undergraduates in Three Universities in Oyo state, Nigeria

Mary Love Bamidele
marybamidele17@gmail.com

Olawale Oyewole
University of Ibadan, oyewolebaba01@gmail.com

Temitope Inioluwa Abegunde
Don Bosco Technical Institute, abegundetemitope24@gmail.com

ACCESS TO ELECTRONIC INFORMATION RESOURCES AND ATTITUDE TOWARDS PLAGIARISM BY SCIENCE UNDERGRADUATES IN THREE UNIVERSITIES IN OYO STATE, NIGERIA

By

Mary Love Bamidele
Librarian
e-mail: marybamidele17@gmail.com

and

Olawale Oyewole
Lecturer,
Department of Library, Archival and Information Studies,
University of Ibadan, Ibadan, Nigeria
e-mail: oyewolebaba01@gmail.com

Abstract

Undergraduates access electronic information resources for academic activities, however, this comes with abiding by good ethical behavior such as a negative attitude towards plagiarism. Literature have reported undergraduates' negative or positive attitude towards plagiarism in Nigeria, but few studies have been carried out in Oyo State and have not investigated how access to electronic information resources influence attitude towards plagiarism. Therefore, this study examined access to Electronic Information Resources (EIR) and Attitude towards Plagiarism (ATP) by undergraduates in Faculty of Science in three universities in Oyo state, Nigeria.

The descriptive survey design of the correlational type was adopted for this study. The population comprised 10,664 undergraduates from Faculty of Science in Universities of Ibadan (UI) Lead City University (LCU) and Ladoke Akintola University of Technology (LAUTECH). A two-stage random sampling technique was adopted to draw 336 respondents. Data was collected using a questionnaire and analysed with frequencies, mean, standard deviation, Pearson's Product Moment Correlation and multiple regression.

The highest number of respondents in LCU (100%) and UI (89.5%) aged between 21-25years while LAUTECH (54.8%) are 18-20years. The most accessible EIR in UI and LCU were e-journals ($\bar{x}$=4.31;$\bar{x}$=4.08) and in LAUTECH, the Internet ($\bar{x}$=3.65). There is a positive ATP in UI ($\bar{x}$=3.44), LCU ($\bar{x}$=3.38), and LAUTECH ($\bar{x}$=2.92). A significant relationship exists between access to EIR and ATP in UI (R=.284, $p < 0.05$) and LAUTECH (R=.185, $p < 0.05$), but none in LCU (R=.048, $p > 0.05$). There is a joint significant influence of access to EIR and ATP in UI (R=0.448, adj.R^2 of 0.180,F=9.439) and LAUTECH (R=0.372, adj.R^2 of 0.130,F=17.292), but not significant in LCU (R=0.065, adj.R^2 of -0.195,F=0.022).

Access to electronic information resources is a predictor of attitude towards plagiarism by undergraduates. Therefore, librarians should make use of different electronic platforms that are accessible to the students in providing instructions on how to write without plagiarising to reduce the rate of plagiarism among the undergraduates.

Keywords: Access to electronic information resources, attitude towards plagiarism, Science undergraduates, Oyo state, Nigeria.

Introduction

Plagiarism can be defined as producing a replica of an author's works, ideas and content without changing, paraphrasing the work and not making referral to the owner of the work. (Louw, 2017). Plagiarism can also be defined as the nefarious use of other people's publications by affirming the contents or parts as one's own without referencing or recognising the source to which the information was obtained. This means that plagiarism is the act of copying an individual or scholar's work directly and verbatim without citing the owner of the work. Plagiarism could manifest itself in student's assignments, term papers, presentations and projects. There are various types of plagiarism in which undergraduates could involve in: intentional and unintentional plagiarism, text/words or ideas/data plagiarism, mosaic/patch writing, ghost writing and self-plagiarism (Roka, 2017).

Intentional plagiarism is a type of plagiarism which occurs when the author deliberately, intentionally or knowingly copies the entire text, paragraph or data and presents it as its own. Unintentional plagiarism occurs when the author is not aware of the ethics involved in writing or does not know how to cite and thus, presents similar articles. Furthermore, text/words or ideas/data which is also known as "copy-cut-paste" or "word-to-word" writing is another type of plagiarism where complete sentences, paragraphs, pictures and tables are reproduced without acknowledgement. Also, mosaic/patch writing happens when a new author uses previous articles and texts by replacing and rephrasing the words or sentences to give it new look without acknowledging the original author. As for ghost writing, the principal contributor is not given the acknowledgement and someone who has not contributed is given due credit. Additionally, self-plagiarism occurs when an author presents old words or ideas as completely and originally new (Roka, 2017). Plagiarism is an issue in the global academic community that raises concern about academic integrity of academics and students. In order to stem the tide of plagiarism among undergraduates including those in the faculty of science, there is the need for the students to display an attitude that abhors the unethical act. This is because attitude has been viewed as an antecedent to behavior.

Attitude is an expression of favour or disfavour towards a person, place, thing or event. It is a very peculiar and imperative factor that defines an individual (Saci, 2014). An attitude could be formed from a person's past as well as present. It involves an assessment of something which

could range from extremely negative to extremely positive. This implies that attitude could be a positive or negative evaluation of people, objects, events, activities or ideas which is a central part of human identity. Attitude is influenced by three components which are affective, behavioural and cognitive components.

Thus, attitude towards plagiarism could either be positive or negative. If an undergraduate displays a positive attitude towards plagiarism, it implies that such undergraduate regard this form of academic dishonesty as normal and as such favours the act and or encourages it. On the other hand, a negative attitude towards plagiarism connotes that an undergraduate acknowledges plagiarism as an academic repercussion of integrity violation. Such undergraduate views plagiarism as an act that should be avoided and would not involve in it. Some studies have been conducted on attitude towards plagiarism by undergraduates including science undergraduates', and the magnitude of the problem of positive attitude towards plagiarism by undergraduates is partly as a result of unfettered access to electronic information resources and high academic workload that encourage surface approach to learning.

Adeleke and Nwalo (2017) defined electronic information resources as resources in which information is stored electronically. According to the International Federation of Library Associations (IFLA, 2015), electronic information resources consist of materials that are computer-controlled, including materials that require the use of a peripheral (for example, a CD-ROM player) attached to a computer. These electronic information resources may be accessed remotely via the Internet or locally. Some of the types of electronic information resources accessed by the science undergraduates' may include electronic journals (e-journals), electronic books (e-books), full-text databases, Compact Disc-Read Only Memory (CD-ROM) and Online Public Access Catalogue (OPAC).

According to Ternenge and Ksahimana (2019) access to electronic information resources means the ability to identify, retrieve and use information gotten from the electronic resources effectively. The aforementioned electronic information resources could be very readily accessible, readily accessible, accessible, not readily accessible and not accessible depending on the facilitating conditions available. Science undergraduates' can access electronic information resources remotely without restrictions, which could be in their various homes, information and communication technology centers, computer laboratories and on their phones without physical visit to the libraries. The frequency of access to electronic information resources by the science

undergraduates' could be daily, once a week, twice a week, once a month, twice monthly or occasionally.

Access to electronic information resources was noted as one of the leading causes of plagiarism by undergraduates (Jereb, Perc, Lammlein, Jerebic, Urh, and Podbregar, 2018). This is as a result of copy and paste activities, which makes undergraduates more prone to inappropriate paraphrasing and poor referencing of authors. It is based on this background that this study examines access to electronic information resources and attitude towards plagiarism by science undergraduates' in three universities in Oyo State, Nigeria.

Statement of the problem

Science undergraduates need to display an attitude that abhors plagiarism in order to develop ethical values that transcend their academics. An undergraduate in the faculty of science who displays a negative attitude towards plagiarism will cherish integrity, hard work and honesty. Such student will appreciate the need to be original in academic presentations. With this type of value, even after graduation, the student might benefit from it.

Despite the benefits associated with the display of negative attitude towards plagiarism, studies and anecdotal evidence have showed that undergraduates (those in the faculty of science inclusive) display a positive attitude towards plagiarism. This could be a function of the access to electronic information resources. It is assumed that the more the undergraduates have unfettered access to electronic information resources, the likelihood that they develop an attitude that supports plagiarism if they are not properly trained in information ethics. Thus, the study will examine access to electronic information resources and attitude towards plagiarism by science undergraduates' in three universities in Oyo State, Nigeria.

Objectives of the study

The specific objectives are to:

  i.   determine the attitude towards plagiarism by science undergraduates' in three universities in Oyo State, Nigeria.
  ii.   identify the types of electronic information resources accessed by science undergraduates' in three universities in Oyo State, Nigeria.
  iii. determine the points of access to electronic information resources by science undergraduates' in three universities in Oyo State, Nigeria.

iv.   determine the frequency of access to electronic information resources by science undergraduates' in three universities in Oyo State, Nigeria.

v.   examine the relationship between access to electronic information resources and attitude towards plagiarism by science undergraduates' in three universities in Oyo State, Nigeria.

Literature review

Bohner and Dickel (2011) defined attitude to be an evaluation of an object of thought. It entails anything a person may hold in mind ranging from the mundane to the abstract, ranging from things, people, groups and ideas. According to Jain (2014), the concept of attitude has gained attention in research because of how it affects human behavior. A person's attitude has been perceived to have a direct link to the way the person behaves. Attitude is formed by a consideration of the consequences of behavior as well as the appeal of the behavior.

According to Kececi, Bulduk, Oruc and Celic (2012), attitude toward plagiarism can be articulated as an acceptance or a condemnation of plagiarism. Positive attitude among undergraduates concerning academic dishonesty include justifying acts such as plagiarism for higher grades. This justification may result because of time constraints, defiance of academic ethics and low confidence in academic ability. While negative attitude toward plagiarism would mean the acceptance of the consequence for violating academic ethics, rejection and total disapproval of the act of plagiarism.

A quantitative survey was conducted on 227 Malaysian public university students' attitude towards plagiarism by Singh (2014 The findings show that the students are unable to fully comprehend plagiarism due to low level of awareness and little knowledge about the definition of plagiarism and about writing conventions in academic writing, consequently indicating a positive attitude towards plagiarism.

Hosny and Fatima (2014) conducted a study on the attitude towards cheating and plagiarism by undergraduates in King Saud University, Riyadh, Saudi Arabia.. The results showed that 83.48% of the respondents attested to using electronic sources as a means to plagiarise. As 62.61% had used print sources, while 51.31% of the respondents had used other sources asides from this to indulge in plagiarism during their studies. When the undergraduates were asked whether or not plagiarism is ethical, 34.75% responded in the affirmative. This implied a positive

attitude towards plagiarism among the undergraduates. From this study, it can be deduced that the access to electronic information resources has made it easy for the undergraduates to plagiarise.

Varghese and Jacob (2015) conducted a study on attitude towards plagiarism among 423 medical undergraduates at the Christian Medical College, Vellore, India. The descriptive survey research design was used and the questionnaire was the research instrument for data collection. The result showed that the undergraduates have little knowledge on plagiarism and have no idea on issues related to plagiarism. These findings indicated a positive attitude towards plagiarism with the excuse of unawareness about plagiarism. Perhaps, if the undergraduates are aware of plagiarism and the consequences involved, the undergraduates might have a negative attitude towards plagiarism.

The findings reveal that in recent times, the attitude towards plagiarism of undergraduates in higher institutions is generally positive than negative and this do not rule out any institution of learning. It is paramount to note that many of the acts of plagiarism are due to little or no knowledge at all about acts that constitutes plagiarism. Many institutions seem not to make the issue of plagiarism important in their institutions, paving way for some students to indulge in it since there is no serious consequences to back it up. The non uniformity as regards plagiarism has made the menace prevalent and linger on in higher institutions which is due to the numerous electronic information resources accessed.

Das and Anushadan (2013) conducted a study on the types of electronic information resources accessible for use to 350 undergraduates of Berhampur University, Berhmpur, India. The descriptive survey research design was used and the questionnaire was the instrument for data collection. It was found that the undergraduates accessed E-books, E- journals, online databases, the Internet, The digital copies CD-Rom databases and E-Newspapers. Whereas OPAC/Web OPAC, Digital Library/Information, E-DDS are not accessed by the undergraduates of the Berhampur University. It can be deduced from the study that access to electronic information resources has assisted the undergraduates of various institutions in their academic activities.

Oghenetega (2014) carried out a descriptive survey on the types of electronic information reseources accessed by 1,088 undergraduates in the federal and state universities located in Abraka, Benin City, Ekpoma and Ugbomro in Delta and Edo states, Nigeria. Observation and structured questionnaire were the instruments for data collection. The findings from the study showed that 79% of the undergraduates in the universities access e-projects, e-journals, e-books, e-

seminar paper and e-reference materials, while 21% access e-Newsletters, e-Thesis and e-Dissertations for their day to day academic activities in their institution.

Some undergraduates may make use the advantage of the access to electronic information resource to meet up with deadlines for assignments and presentations, whereas, some students who are not painstaking may find their academics difficult even with the access to electronic information resources. This can increase and compile the academic workload of such undergraduates.

Methodology

Descriptive survey research design of the correlational type was adopted for the study. The population of this study consisted of the regular science undergraduates' in three universities in Oyo State, Nigeria. These are University of Ibadan, Ibadan, Lead City University, Ibadan and Ladoke Akintola University of Technology, Ogbomosho. These institutions were selected because they offer undergraduate courses and were willing to release their data as at the time of need. According to the data collected from the institutions, the total number of students is 10,664. The two-stage random sampling technique will be used for this study. At the first stage, 60% of the departments in the Faculty of Science in these universities were selected randomly. This presents seven departments in the University of Ibadan, seven in Lead City University and four departments in Ladoke Akintola University. In order to get the sample size, 5% of undergraduates in the selected departments were selected. Thus, the sample size of the study is 346. The questionnaire was the only instrument used for data collection, while descriptive statistics such as frequencies, percentages, mean and standard deviation, correlation and multiple regression analysis was used.

Result and discussion

Table 1: Attitude towards plagiarism by Science undergraduates' in three universities in Oyo State, Nigeria

Table 1a: Attitude towards plagiarism by Science undergraduates' in three universities in Oyo State, Nigeria

Statement	University of Ibadan						Lead City University					
	SA	A	D	SD	X	Std. Dev	SA	A	D	SD	X	Std. Dev
I have engaged in the act of plagiarism before	45 57.7%	22 28.2%	11 14.1%	-	3.44	.731	6 46.2%	5 38.5%	2 15.4%	-	3.15	1.068
There is no way one can escape plagiarism	33 42.3%	18 23.1%	22 28.2%	5 6.4%	3.01	.987	6 46.2%	4 30.8%	2 15.4%	1 7.7%	3.15	.987
Students will definitely plagiarise no matter what	41 52.6%	19 24.4%	15 19.2%	3 3.8%	3.26	.904	6 46.2%	5 38.5%	-	2 15.4%	3.15	1.068
Everyone plagiarises including the lecturers	47 60.3%	22 28.2%	1 1.3%	8 10.3%	3.38	.943	8 61.5%	3 23.1%	1 7.7%	1 7.7%	3.38	.961
I plagiarise because there was no time to properly research and submit an assignment on time	36 46.2%	31 39.7%	2 2.6%	9 11.5%	3.21	.958	6 46.2%	6 46.2%	-	1 7.7%	3.31	.855
I plagiarise because I had easy access to electronic materials for the assignment	36 46.2%	20 25.6%	9 11.5%	13 16.7%	3.01	1.122	6 46.2%	5 38.5%	1 7.7%	1 7.7%	3.23	.927
Plagiarism should not be punishable for cases of assignment since it won't be published	28 35.9%	30 38.5%	11 14.1%	9 11.5%	2.99	.987	7 53.8%	3 23.1%	2 15.4%	1 7.7%	3.23	1.013
I plagiarise because I do not understand the assignment's topic	36 46.2%	27 34.6%	9 11.5%	6 7.7%	3.19	.927	5 38.5%	5 38.5%	2 15.4%	1 7.7%	3.08	.954
I plagiarise more when an assignment is too bulky	15 19.2%	40 51.3%	16 20.5%	7 9.0%	2.81	.854	6 46.2%	4 30.8%	2 15.4%	1 7.7%	3.15	.987
I sometimes forget to paraphrase in other to meet deadline	21 26.9%	34 43.6%	17 21.8%	6 7.7%	2.90	.891	7 53.8%	4 30.8%	1 7.7%	1 7.7%	3.31	.947
I don't plagiarise because it's unethical	15 19.2%	24 30.8%	22 28.2%	17 21.8%	2.47	1.041	6 46.2%	3 23.1%	1 7.7%	3 23.1%	2.92	1.256
Plagiarism should not be tolerated by the management	20 25.6%	20 25.6%	18 23.1%	20 25.6%	2.51	1.137	4 30.8%	4 30.8%	1 7.7%	4 30.8%	2.62	1.261
I don't plagiarise even under deadline pressure	16 20.5%	17 21.8%	16 20.5%	29 37.2%	2.26	1.167	6 46.2%	3 23.1%	1 7.7%	3 23.1%	2.92	1.256
I have never copy and paste online documents because of assignment deadline	18 23.1%	20 25.6%	14 17.9%	26 33.3%	2.38	1.176	3 23.1%	6 46.2%	2 15.4%	2 15.4%	2.77	1.013
Plagiarism is as bad as stealing an exam	15 19.2%	25 32.1%	13 16.7%	25 32.1%	2.38	1.131	5 38.5%	5 38.5%	1 7.7%	2 15.4%	3.00	1.080
Plagiarism impoverishes the investigative spirit	13 16.7%	32 41.0%	21 26.9%	12 15.4%	2.59	.946	2 15.4%	9 69.2%	2 15.4%	-	3.00	.577
The names of authors who plagiarise should be disclosed to the scientific community	14 17.9%	27 34.6%	16 20.5%	21 26.9%	2.44	1.076	4 30.8%	5 38.5%	2 15.4%	2 15.4%	2.85	1.068
Plagiarists do not belong to the scientific community	18 23.1%	35 44.9%	14 17.9%	11 14.1%	2.77	.966	3 23.1%	8 61.5%	2 15.4%	-	3.08	.641

Table 1b: Attitude towards plagiarism by Science undergraduates' in three universities in Oyo State, Nigeria

Statement	Ladoke Akintola University of Technology					
	SA	A	D	SD	X	Std. Dev
I have engaged in the act of plagiarism before	61 27.9%	62 28.3%	56 25.6%	40 18.3%	2.66	1.074
There is no way one can escape plagiarism	60 27.4%	69 31.5%	59 26.9%	31 14.2%	2.72	1.018
Students will definitely plagiarise no matter what	76 34.7%	67 30.6%	59 26.9%	17 7.8%	2.92	.962
Everyone plagiarises including the lecturers	82 37.4%	61 27.9%	37 16.9%	39 17.8%	2.85	1.113
I plagiarise because there was no time to properly research and submit an assignment on time	67 30.6%	80 36.5%	31 14.2%	41 18.7%	2.79	1.076
I plagiarise because I had easy access to electronic materials for the assignment	43 19.6%	87 39.7%	50 22.8%	39 17.8%	2.61	.995
Plagiarism should not be punishable for cases of assignment since it won't be published	75 34.2%	71 32.4%	35 16.0%	38 17.4%	2.84	1.084
I plagiarise because I do not understand the assignment's topic	57 26.0%	63 28.8%	64 29.2%	35 16.0%	2.65	1.036
I plagiarise more when an assignment is too bulky	40 18.3%	103 47.0%	34 15.5%	42 19.2%	2.64	.991
I sometimes forget to paraphrase in other to meet deadline	34 15.5%	106 48.4%	43 19.6%	36 16.4%	2.63	.936
I don't plagiarise because it's unethical	56 25.6%	56 25.6%	62 28.3%	45 20.5%	2.56	1.083
Plagiarism should not be tolerated by the management	51 23.3%	70 32.0%	55 25.1%	43 19.6%	2.59	1.051
I don't plagiarise even under deadline pressure	48 21.9%	51 23.3%	62 28.3%	58 26.5%	2.41	1.102
I have never copy and paste online documents because of assignment deadline	43 19.6%	47 21.5%	60 27.4%	69 31.5%	2.29	1.111
Plagiarism is as bad as stealing an exam	48 21.9%	64 29.2%	49 22.4%	58 26.5%	2.47	1.106
Plagiarism impoverishes the investigative spirit	33 15.1%	99 45.2%	53 28.8%	24 11.0%	2.64	.868
The names of authors who plagiarise should be disclosed to the scientific community	45 20.5%	85 38.8%	61 27.9%	28 12.8%	2.67	.944
Plagiarists do not belong to the scientific community	43 19.6%	93 42.5%	50 22.8%	33 15.1%	2.67	.959

The scales used in measuring the attitude towards plagiarism by undergraduates were: strongly agree, agree, disagree, and strongly disagree. But for the purpose of reporting, means and standard deviation will be used. Findings revealed that respondents from University of Ibadan have engaged in the act of plagiarism before ($\bar{x}$ = 3.44; std dev. = .732), and believes that everyone including the lecturers plagiarises ($\bar{x}$ = 3.38; std dev. = .943). Respondents from Lead City University also believes that everyone plagiarises including the lectures ($\bar{x}$ = 3.38; std dev. = .951), there was no time to properly research and submit an assignment on time ($\bar{x}$ = 3.31; std dev. = .855). The respondents in Ladoke Akintola University, believe that students will definitely plagiarise no matter what ($\bar{x}$ = 2.92; std dev. = .962) since everyone plagiarises including the lecturers ($\bar{x}$ = 2.85; std dev. = 1.113). This reveals a positive attitude towards plagiarism among the three universities in the study.

2. **Types of electronic information resources accessed by Science undergraduates in three universities in Oyo state, Nigeria**

Table 2: Types of electronic information resources accessed by Science undergraduates' in three universities in Oyo State, Nigeria

Electronic Information Resources	University of Ibadan							Lead City University							Ladoke Akintola University of Technology						
	VRA	RA	A	NRA	NA	X	Std. Dev.	VRA	RA	A	NRA	NA	X	Std. Dev	VRA	RA	A	NRA	NA	X	Std. Dev.
Electronic journals	37 47.4%	34 43.6%	2 2.6%	4 5.1%	1 1.3%	4.31	.857	1 7.7%	12 92.3%	-	-	-	4.08	.277	48 21.9%	70 32.0%	47 21.5%	30 13.7%	24 11.0%	3.40	1.272
Electronic books	31 39.7%	36 46.2%	7 9.0%	3 3.8%	1 1.3%	4.19	.854	1 7.7%	8 61.5%	4 30.8%	-	-	3.77	.599	46 21.0%	69 31.5%	57 26.0%	30 13.7%	17 7.8%	3.44	1.189
Electronic mails	32 41.0%	25 32.1%	8 10.3%	11 14.1%	2 2.6%	3.95	1.150	1 7.7%	7 53.8%	1 7.7%	4 30.8%	-	3.38	1.044	65 29.7%	56 25.6%	61 27.9%	24 11.0%	13 5.9%	3.62	1.188
Full text data base	17 21.8%	33 42.3%	9 11.5%	17 21.8%	2 2.6%	3.59	1.133	2 15.4%	3 23.1%	1 7.7%	7 53.8%	-	3.00	1.225	35 16.0%	47 21.5%	68 31.1%	58 26.5%	11 5.0%	3.17	1.139
Online Public Access Catalogue (OPAC)	20 25.6%	31 39.7%	15 19.2%	9 11.5%	3 3.8%	3.72	1.092	1 7.7%	8 61.5%	4 30.8%	-	-	3.46	1.050	33 15.1%	55 25.1%	54 24.7%	54 24.7%	23 10.5%	3.10	1.232
Institutional repository	14 17.9%	34 43.6%	16 20.5%	11 14.1%	3 3.8%	3.58	1.063	-	7 53.8%	2 15.4%	4 30.8%	-	3.23	.927	42 19.2%	51 23.3%	55 25.1%	46 21.0%	25 11.4%	3.18	1.282
Internet	26 33.3%	28 35.9%	13 16.7%	9 11.5%	2 2.6%	3.86	1.090	2 15.4%	4 30.8%	2 15.4%	4 30.8%	1 7.7%	3.15	1.281	78 35.6%	38 17.4%	64 29.2%	27 12.3%	12 5.5%	3.65	1.233
Intranet	29 37.2%	28 35.9%	7 9.0%	11 14.1%	3 3.8%	3.88	1.173	2 15.4%	2 15.4%	2 15.4%	7 53.8%	-	2.92	1.188	50 22.8%	58 26.5%	60 27.4%	32 14.6%	19 8.7%	3.40	1.232
Electronic Newspapers	27 34.6%	26 33.3%	11 14.1%	10 12.8%	4 5.1%	3.79	1.199	2 15.4%	8 61.5%	1 7.7%	2 15.4%	-	3.77	.927	48 21.9%	46 21.0%	59 26.9%	46 21.0%	20 9.1%	3.26	1.267
Electronic Magazines	24 30.8%	31 39.7%	10 12.8%	10 12.8%	3 3.8%	3.81	1.129	1 7.7%	4 30.8%	1 7.7%	6 46.2%	1 7.7%	2.85	1.214	35 16.0%	42 19.2%	71 32.4%	48 21.9%	23 10.5%	3.08	1.213
Electronic abstracting and indexing	27 34.6%	26 33.3%	8 10.3%	16 20.5%	1 1.3%	3.79	1.166	2 15.4%	4 30.8%	1 7.7%	5 38.5%	1 7.7%	3.08	1.320	24 11.0%	45 20.5%	68 31.1%	51 23.3%	31 14.2%	2.91	1.200
Digital references services	20 25.6%	28 35.9%	13 16.7%	13 16.7%	4 5.1%	3.60	1.188	1 7.7%	4 30.8%	2 15.4%	6 46.2%	-	3.00	1.080	40 18.3%	45 20.5%	62 28.3%	45 20.5%	27 12.3%	3.12	1.276
Electronic dictionaries	26 33.3%	30 38.5%	12 15.4%	6 7.7%	4 5.1%	3.87	1.121	2 15.4%	5 38.5%	2 15.4%	4 30.8%	-	3.38	1.121	52 23.7%	62 28.3%	44 20.1%	28 12.8%	33 15.1%	3.33	1.365

Key: Very Readily Accessible (VRA), Readily Accessible (RA), Accessible (A), Not Readily Accessible (NRA) and Not Accessible (NA)

Table 2 presents information on the types of electronic information resources accessed by science undergraduates in three universities in Oyo state Nigeria. The findings revealed that the most accessible electronic information resources in University of Ibadan and Lead City University were electronic journals ($\bar{x}$ = 4.31; std dev. = .857; $\bar{x}$ = 4.08; std dev. = .277), electronic books ($\bar{x}$ = 4.19; std dev. = .854; $\bar{x}$ = 3.77; std dev. = .599) respectively. In Ladoke Akintola University of Technology, the Internet ($\bar{x}$ = 3.65; std dev. = 1.233) and electronic mails ($\bar{x}$ = 3.62; std dev. = 1.188) were the most accessible electronic information resources to the undergraduates.

The least accessible electronic information resources in the University of Ibadan are institutional repository ($\bar{x}$ = 3.58; std dev. = 1.063) and full text data base ($\bar{x}$ = 3.59; std dev. = 1.133). Electronic magazines ($\bar{x}$ = 2.85; std dev. = 1.214), and intranet($\bar{x}$ = 2.92; std dev. = 1.188) were least accessible in Lead City University, while electronic abstracting and indexing($\bar{x}$ = 2.91; std dev. = 1.200) and electronic magazines ($\bar{x}$ = 3.08; std dev. = 1.213) were the least accessible in Ladoke Akintola University of Technology.

This implies that the undergraduates in the three universities access electronic journals, electronic books, the Internet and electronic mails easily as these electronic information resources contain important and significant information that aids them in their academics. While, the undergraduates in the three universities least access institutional repository, full text data base, electronic magazine, intranet and electronic abstracting and indexing as they found it not completely useful to them.

3. **Points of access to electronic information resources by Science undergraduates' in three universities in Oyo State, Nigeria**

Table 3: **Points of access to electronic information resources by Science undergraduates' in three universities in Oyo State, Nigeria**

Electronic Information Resources	University of Ibadan					Lead City University					Ladoke Akintola University of Technology				
	HOM	LIB	C-RM	HTL	I-LB	HOM	LIB	C-RM	HTL	I-LB	HOM	LIB	C-RM	HTL	I-LB
Electronic journals	20 25.6%	42 53.8%	8 10.3%	5 6.4%	3 3.8%	1 7.7%	11 84.6%	-	1 7.7%	-	49 22.4%	84 38.4%	26 11.9%	24 11.0%	36 16.4%
Electronic books	13 16.7%	38 48.7%	17 21.8%	5 6.4%	5 6.4%	2 15.4%	8 61.5%	-	3 23.1%	-	43 19.6%	80 36.5%	34 15.5%	33 15.1%	29 13.2%
Electronic mails	13 16.7%	21 26.9%	13 16.7%	6 7.7%	25 32.1%	2 15.4%	3 23.1%	-	1 7.7%	7 53.8%	47 21.5%	32 14.6%	29 13.2%	52 23.7%	59 26.8%
Full text data bases	20 25.6%	33 42.3%	7 9.0%	10 12.8%	8 10.3%	-	10 76.9%	2 15.4%	-	1 7.7%	43 19.6%	66 30.1%	40 18.3%	26 11.9%	44 20.1%
Online public access Catalogue (OPAC)	11 14.1%	38 48.7%	10 12.8%	11 14.1%	8 10.3%	-	5 38.5%	6 46.2%	1 7.7%	1 7.7%	33 15.1%	75 34.2%	45 20.5%	25 11.4%	41 18.7%
Institutional repository	13 16.7%	15 19.2%	21 26.9%	18 23.1%	11 14.1%	1 7.7%	3 23.1%	1 7.7%	8 61.5%	-	36 16.4%	69 31.5%	43 19.6%	31 14.2%	40 18.3%
Internet	13 16.7%	18 23.1%	11 14.1%	19 24.4%	17 21.8%	1 7.7%	2 15.4%	2 15.4%	8 61.5%	-	59 26.9%	38 17.4%	42 19.2%	44 20.1%	36 16.4%
Intranet	18 23.1%	24 30.8%	7 9.0%	15 19.2%	14 17.9%	1 7.7%	10 76.9%	1 7.7%	-	1 7.7%	54 24.7%	37 16.9%	51 23.3%	30 13.7%	47 21.5%
Electronic Newspapers	13 16.7%	26 33.3%	18 23.1%	17 21.8%	4 5.1%	-	5 38.5%	5 38.5%	1 7.7%	2 15.4%	58 26.5%	52 23.7%	29 13.2%	45 20.5%	35 16.0%
Electronic Magazines	20 25.6%	31 39.7%	8 10.3%	15 19.2%	4 5.1%	-	5 38.5%	3 23.1%	4 30.8%	1 7.7%	53 24.2%	54 24.7%	30 13.7%	41 18.7%	41 18.7%
Electronic abstracting and indexing	21 26.9%	31 39.7%	13 16.7%	9 11.5%	4 5.1%	2 15.4%	1 7.7%	2 15.4%	8 61.5%	-	38 17.4%	54 24.7%	38 17.4%	39 17.8%	50 22.8%
Digital reference services	22 28.2%	21 26.9%	17 21.8%	14 17.9%	4 5.1%	2 15.4%	6 46.2%	1 7.7%	3 23.1%	1 7.7%	47 21.5%	28 21.9%	42 19.2%	35 16.0%	47 21.5%
Electronic dictionaries	20 25.6%	25 32.1%	16 20.5%	6 7.7%	11 14.1%	1 7.7%	2 15.4%	6 46.2%	2 15.4%	2 15.4%	43 19.6%	47 21.5%	40 18.3%	45 20.5%	44 20.1%

Key: HOM = Home; LIB = Library; C-RM = Classroom; HTL = Hostel; and I-LB = ICT Laboratory

Table 3 revealed that the major point of access of electronic information resources was the library for undergraduates in the University of Ibadan (electronic journals 53.8%, electronic books 48.7%, Lead City University (electronic journals 84.6% and the intranet 76.9%) and Ladoke Akintola University (electronic journals 38.4% and electronic books 36.5%). The least point of access of electronic information resources was the ICT laboratory for undergraduates in the University of Ibadan (electronic journal 3.8% and electronic abstracting and indexing 5.1%). The least point of access of electronic information resources was the hostel for undergraduates in Ladoke Akintola University of Technology (electronic journal 11.0% and Online Public Access Catalogue (OPAC) 11.4%). This finding indicates that, the undergraduates of the three universities visits the library mostly for their academic purposes as they access various electronic information materials without restriction. While the hostel and ICT laboratory were the least point of access of electronic information resources to avoid distractions and loafing around

4. **Frequency of access to electronic information resources by Science undergraduates' in three universities in Oyo State, Nigeria**

Table 4: **Frequency of access to electronic information resources by Science undergraduates' in three universities in Oyo State, Nigeria**

Electronic Information Resources	University of Ibadan							Lead City University							Ladoke Akintola University of Technology						
	D	W	F	M	N	X	Std. Dev.	D	W	F	M	N	X	Std. Dev	D	W	F	M	N	X	Std. Dev.
Electronic journals	17 21.8%	47 60.3%	7 9.0%	6 7.7%	1 1.3%	3.94	.858	2 15.4%	10 76.9%	1 7.7%	-	-	4.00	.707	35 16.0%	62 28.3%	31 14.2%	59 26.9%	32 14.6%	3.04	1.335
Electronic books	16 20.5%	40 51.3%	15 19.2%	4 5.1%	3 3.8%	3.79	.958	2 15.4%	7 53.8%		4 30.8%	-	3.54	1.127	53 24.2%	58 26.5%	50 22.8%	39 17.8%	19 8.7%	3.40	1.268
Electronic mails	21 26.9%	24 30.8%	20 25.6%	9 11.5%	4 5.1%	3.63	1.152	1 7.7%	7 53.8%	1 7.7%	2 15.4%	2 15.4%	3.23	1.301	60 27.4	51 23.3%	38 17.4%	48 21.9%	22 10.0%	3.36	1.352
Full text data base	20 25.6%	23 29.5%	16 20.5%	14 17.9%	5 6.4%	3.50	1.235	-	5 38.5%	4 30.8%	3 23.1%	1 7.7%	3.00	1.000	31 14.2%	45 20.5%	49 22.4%	50 22.8%	44 20.1%	2.86	1.339
Online Public Access Catalogue (OPAC)	22 28.2%	23 29.5%	13 16.7%	12 15.4%	8 10.3%	3.50	1.327	1 7.7%	5 38.5%	2 15.4%	4 30.8%	1 7.7%	3.08	1.188	39 17.8%	45 20.5%	43 19.6%	48 21.9%	44 20.1%	2.94	1.395
Institutional repository	13 16.7%	30 38.5%	16 20.5%	10 12.8%	9 11.5%	3.36	1.238	6 46.2%	2 15.4%	2 15.4%	3 23.1%	-	3.85	1.281	58 26.5%	31 14.2%	44 20.1%	45 20.5%	41 18.7%	3.09	1.469
Internet	33 42.3%	24 30.8%	17 21.8%	3 3.8%	1 1.3%	4.09	.956	1 7.7%	6 46.2%	2 15.4%	2 15.4%	2 15.4%	3.15	1.281	85 38.8%	41 18.7%	42 19.2%	41 18.7%	10 4.6%	3.68	1.284
Intranet	23 29.5%	27 34.6%	19 24.4%	5 6.4%	4 5.1%	3.77	1.104	1 7.7%	2 15.4%	2 15.4%	5 38.5%	3 23.1%	2.46	1.266	54 24.7%	45 20.5%	47 21.5%	47 21.5%	26 11.9%	3.25	1.352
Electronic Newspapers	29 37.2%	20 25.6%	14 17.9%	10 12.8%	5 6.4%	3.74	1.263	2 15.4%	4 30.8%	3 23.1%	3 23.1%	1 7.7%	3.23	1.235	43 19.6%	40 18.3%	49 22.4%	61 27.9%	26 11.9%	3.06	1.314
Electronic Magazines	18 23.1%	22 28.2%	16 20.5%	14 17.9%	8 10.3%	3.36	1.299	1 7.7%	6 46.2%	4 30.8%	1 7.7%	1 7.7%	3.38	1.044	43 19.6%	41 18.7%	43 19.6%	59 26.9%	33 15.1%	3.01	1.361
Electronic abstracting and indexing	16 20.5%	32 41.0%	9 11.5%	10 12.8%	11 14,1%	3.41	1.333	2 15.4%	1 7.7%	5 38.5%	2 15.4%	3 23.1%	2.77	1.363	25 11.4%	46 21.0%	48 21.9%	54 24.7%	46 21.0%	2.77	1.307
Digital references services	17 21.8%	19 24.4%	20 25.6%	10 12.8%	12 15.4%	3.24	1.350	4 30.8%	3 23.1%	1 7.7%	5 38.5%	-	3.46	1.330	34 15.5%	39 17.8%	44 20.1%	59 26.9%	43 19.6%	2.83	1.354
Electronic dictionaries	18 23.1%	26 33.3%	18 23.1%	5 6.4%	11 14,1%	3.45	1.306	2 15.4%	4 30.8%	4 30.8%	2 15.4%	1 7.7%	3.31	1.182	51 23.3%	47 21.5%	52 23.7%	43 19.6%	26 11.9%	3.25	1.328

Key: D = Daily; W = Once a Week; F = Twice a Week; M = Once a Month; N = Never

Table 4 revealed that the Internet ($\bar{x}$ = 4.09; std dev. = .956); and electronic journals ($\bar{x}$ = 3.94; std dev. = .858) were the most frequently accessed electronic information resources in University of Ibadan. In Lead City University, electronic journals($\bar{x}$ = 4.00; std dev. = .707) and institutional repository ($\bar{x}$ = 3.85; std dev. = 1.281)were the most frequently accessed. While the Internet ($\bar{x}$ = 3.68; std dev. = 1.284) and electronic books($\bar{x}$ = 3.40; std dev. = 1.268) were the most frequently accessed electronic information resources to undergraduates in Ladoke Akintola University of Technology. The least frequently accessed electronic information resources are institutional repository ($\bar{x}$ = 3.58; std dev. = 1.063);and full text data base ($\bar{x}$ = 3.59; std dev. = 1.133) in University of Ibadan; intranet($\bar{x}$ = 2.46; std dev. = 1.266), and electronic abstracting and indexing($\bar{x}$ = 2.77; std dev. = 1.363) in Lead City University, while electronic abstracting and indexing($\bar{x}$ = 2.77; std dev. = 1.307) and digital reference services($\bar{x}$ = 2.83; std dev. = 1.354) were the least frequently accessed electronic information resources in Ladoke Akintola University of Technology. This implies that the electronic information resources that are frequently accessed most frequently (daily) were the most useful electronic information resources to the undergraduates in the three universities.

5. **Relationship between access to electronic information resources and attitude towards plagiarism by undergraduates**.

Table 5: Relationship between access to electronic information resources and attitude towards plagiarism by undergraduates.

Variable	Mean	Std. Deviation	N	R	p-value	Remark
University of Ibadan						
Access to Electronic Information Resources	96.86	13.52220	78	.284	.012	Sig.
Attitude towards Plagiarism	51.00	7.32723				
Lead-City University						
Access to Electronic Information Resources	85.54	10.08807	13	.048	.877	Not Sig.
Attitude towards Plagiarism	55.31	7.22709				
Ladoke Akintola University of Technology						
Access to Electronic Information Resources	83.20	16.77517	219	.185	.006	Sig
Attitude towards Plagiarism	47.73	6.52627				

Significant at 0.05

The result showed that a significant relationship exists between access to electronic information resources and attitude toward plagiarism by the Faculty of Science undergraduate in University of Ibadan (N = 78, R = .284, $p < 0.05$) and Ladoke Akintola University of

Technology (N = 219, R = .185, p < 0.05). This implies that the more Faculty of Science undergraduate in University of Ibadan and Ladoke Akintola University of Technology access electronic information resources, the more they exhibit attitude towards plagiarism.

The result also showed that there is no significant relationship between access to electronic information resources and attitude toward plagiarism by the Faculty of Science undergraduate in Lead City University (N = 13, R = .048, p > 0.05). This implies that access to electronic information resources do not influence the attitudes towards plagiarism by the Faculty of Science undergraduate in Lead City University.

Conclusion

Plagiarism is an issue that is on the front burner in the world of academics due to its prevalent rate among students and researchers. This has led to the resurgence of plagiarism policies to curb the act, as the access to electronic information resources indicates the possibility of plagiarism if the undergraduates are not well trained and guided on how to effectively make use of the electronic information resources to avoid plagiarism. Undergraduates with an academic workload can be prone to plagiarism as high number of courses offered; assignment pressure and time pressure can have lasting impacts on their perception towards plagiarism if they are not well trained on handling time management.

Recommendations

The following recommendations are proffered based on the findings;

1. There are various electronic information resources accessed by science undergraduates' for their academic activities and for acquisition of knowledge. The exposure to the various information resources can influence their attitude towards plagiarism. Hence science undergraduates' should ensure the right usage of the electronic information resources by not plagiarising but reading to understand the resources which can curb the act. To achieve this, the government and university body should ensure qualified lecturers and librarians are employed in universities to train the undergraduates on the ethical use of electronic information resources.

2. The university body should play an important role on organising lectures, seminars, symposiums and others that can create awareness on electronic information resources available and that can be accessed to reduce the level of workload and enhance their academic performance. This will ensure the science undergraduates' to be conversant with the hidden benefits embedded in the ethical use of electronic information resources.

REFERENCES

Adeleke, D.S. and Nwalo, K.I. 2017. Availability, Use and Constraints to use of electronic information resources by post graduate students at the University of Ibadan. International Journal of Knowledge Content Development and Technology. 7.4:51-69. Available at http://ijkcdt.net/xml/12712/12712.pdf Retrieved 13th August, 2020

Bohner, G. and Dickel, N. 2011. Attitudes and attitude change. The *Annual Review of Psychology*. 62: 391- 417. Retrieved from http://www.annualreviews.org

Das. P., and Anushadan. D. 2013. Access, awarenessand use of electronic information resources by research scholars of Berghampur university.

Jain, V. 2013. Three model of attitude. *International Journal of Advanced Research in Management and Social Sciences.* 3.3. 2-6

Jereb, E. Perc, M., La ¨mmlein, B., Jerebic, J. Urh, M., Podbregar, I. 2018. Factors influencing plagiarism in higher education: A comparison of German and Slovene students. PLoS ONE 13(8): e0202252.https://doi.org/ 10.1371/journal.pone.0202252

Kececi, A., Bulduk, D., Oruc, D. and Celik, S. 2011. Academic dishonesty among nursing students: a descriptive study. *Nursing ethics.* 18.5: 725-733

Louw, H. 2017. Defining Plagiarism: student and staff perception of a grey concept. *South Africa Journal of Higher Education.* 31.5:116-135. Available at: http://dx.doi.org/10.28535/31-5-80

Oghenetega, U. 2014. Availability and use of electronic information resources by undergraduates of universities in Delta and Edo states, Nigeria. *International journal of advanced research.* 23-44

Quadri, G.O, Adetimirin , A.E, and Idowu, O.A. 2014. A study of availability and utilization of 0library electronic resources by undergraduate students in private universities in Ogun State, Nigeria. *International Journal of Library and Information Science.* 6.3:28-34. Available at http://academicjournals.org/journal/IJLIS/article-full-text-pdf/873B14147473. Retrieved 13th August, 2020

Roka, Y.B., 2017. Plagiarism: Types, Causes and How to Avoid this Worldwide Problem. *Nepal Journal of Neuroscience*. 14.3. 2-6 Retrieved 15th August, 2020

Schninsher, U., Northrup, P. and Alverson. 2011. A survey of Samford university students regarding plagiarism and academic misconduct. *open journal systems.* 7. 1:9-15

Singh 2015. Malaysian University Students' Attitude towards plagiarism. *Journal of Language and Communication,* 2.2:259-269

Ternenge, K. and Kashimana, J. 2019. Availability, accessibility and use of electronic information resources for research by students in Francis Suleimanu Idichaba library, university of agriculture, Markurdi. *journal of library philosophy and practice.* 2.4: 56-77

Varghese, R. and Jacob, G. 2015. Do medical students require education on issues related to plagiarism. *Indian journal medical ethics* 116: 32-45