THE IMPACT OF SPECIFIC LIBRARY SERVICES ON THE ACADEMIC SUCCESS OF STUDENTS: A CASE STUDY OF THE FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI, NIGERIA

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Abstract: **This paper is an attempt to study the impact of specific library services on the academic success of students in Federal University of Technology, Owerri with a view to unravel if there is any relationship between specific library services and academic performance of students of FUTO. A test-retest reliability method of two weeks interval was conducted, responses obtained were subjected to Pearson Products Moment Correlation (PPMC) method and a reliability coefficient of 0.83 was obtained. Multistage sampling technique was employed, 1656 respondents were selected for the study, with 89% response rate. Descriptive and inferential statistics were employed in the study, the study found that the significant mean score of Embedded librarian (3.16), Social media (3.13), and circulation services (2.97) were all above average (2.5). However only Embedded Librarianship services(R=0.994 p-value=0.001<0.05) was found to correlate significantly with the student academic performance. The most utilized services at FUTO library are the internet services, seconded by Book Loan services. It was recommended that more effort should be put on embedded librarian services as it helps students achieve higher test scores.**

Keywords: **Academic, Library, Services, Success.**

1. INTRODUCTION

The library is a bank of knowledge and an active social institution, an indispensable resource centre for reliable information meant to conserve the recorded knowledge for the benefit of man. Aina (2004) emphasized that a library is concerned with the collection, processing, storage and dissemination of recorded information for the purpose of reading, learning and consultation. The library assumes an important responsibility to facilitate students' education, providing services, programs, resources and to assist students in being more effective and efficient in their academic endeavour to enhance academic success. Academic persistence and success are critical issues for higher education, while the university community would agree that libraries are an integral part of the academic success, questions are being raised if there is any recognition of a direct and practical connection between specific library services and students academic success.

A number of studies examining this issue, using both quantitative and qualitative methodologies, have been conducted. Almost all the studies considered endorsed the view that school library services have a positive impact on student achievement. Researchers worldwide have indicated over the past thirty years that good library programmes are linked to higher academic achievement in schools. (Christopher, 2008).

One of such studies was conducted by Small Snyder and Parker (2007) in New York State. Their preliminary results suggest support for a strong relationship between library services and achievement. Another study was conducted in Scotland by Williams and Wavell (2001a). In this case, studies and focus groups were used to investigate the impact of the school library on learning. Their study however, corroborated with the later findings of Small and Parker (2007) which showed that school library can potentially positively impact upon a wide range of learning experiences.

A dominant approach by researchers seeking to establish the benefits of school library services on student academic achievement is to link the provision of more and better library services to higher test scores. A study was conducted in Colorado by Lance, Keith, & Debra (2013) on library and students' achievement, their results revealed that library collection and staff size were among the best predictors of students' academic achievement on standardized test. This showed that students are more likely to achieve higher test scores when they had access to a well resourced, well staffed library (Lance, 2005).

In the case of Federal University of Technology, Owerri library, some of the library services provided include ICT services, circulation services, embedded librarian services, Selective dissemination of information, use of library training programs etc. However no research has been done to ascertain or identify those library services put in place by FUTO library that help students to achieve high test scores. It is against this background that this study was conducted. This study will specifically look at the Embedded Librarian Services, Library circulation services and Social Media Services.

2. REVIEW OF RELATED LITERATURE

Embedded Librarian Services:

The presence of academic Librarians within departments has a long history, starting from the nineteenth century when academic buildings housed subject libraries (Kathy and Nadine, 2010). In the past three decades, the trend has been for library systems to consolidate branch libraries into fewer libraries or a main campus library. A number of factors have motivated consolidation, including the advent of electronic resources, competition for campus space, and shrinking library budgets.

Libraries have embedded both online and physical librarians to close the gap between the campus community and the academic library (Stephanies, 2012). Embedded librarians in online courses conduct a wide range of activities from providing links to library resource in the virtual classroom to collaborating with faculty on course content, design, and teaching. Physically, embedded librarians also run the gamut from answering questions at a station in an academic building for several hours a week (i.e. spending significant part of their workday in the academic department they serve) to having permanent offices in their assigned departments. The embedded librarian in an academic library is a link between the information resources, the student academic programme requirements, the institutions expectations of student academic and students' realization of a fulfilled academic and educational experience.

Circulation Services:

Library circulation or library lending as referred to by some Institutions comprise the activities around the lending of library books and other materials to users of a lending library. A circulation or lending department is one of the key departments of a library. The main public service point is the circulation desk or loans desk, usually found near the main entrance of a library. It provides lending services and facilities for return of loaned items. Renewal of materials and payment of fines are also handled at the circulation desk. (Circulation staff may provide basic search and reference services, though more in-depth questions are usually referred to the reference librarians at the library reference desk). The circulation desk is in most cases staffed by library support staff instead of professional librarians.

An exploratory study conducted by Yakup and Vivian (2015) examined book circulation patterns among undergraduate university students at an English-language University in Istanbul, Turkey, in order to investigate the relationship between students' academic achievement and discipline of study, gender and book borrowing habits. The study supports the important role of the academic library's print book collection in supporting and contributing to student success and demonstrates a significant positive correlation between undergraduate students' level of academic achievement and the number of books they borrowed from the university library. This positive correlation was found for students in all faculties and fields of study, but was strongest for students studying qualitative disciplines and was particularly strong for students enrolled in English as a foreign language programmes.

Social Media Services:

Librarians, in this digital age, are responsible for a wide variety of resources and services that expand far beyond the typical eight/nine-hour work day. Igun (2010:18) opines that librarian's role in the global information environment is unique. His roles are critical for the necessary control of information resources in physical and virtual domains. Notably, the advent of other sources of information like the internet, World Wide Web and even social media has led to a new challenge for librarians to meet the rapidly changing information needs and expectations of the 21st century users. Librarians now have a challenge of making themselves more relevant in this digital age. Iwhiwhu, Ruteyan and Eghwubare (2010), noted that the challenge of most librarians is to attract users to the library and to retain them. To deal with this challenge, librarians are reconsolidating, reshaping, re-designing and repackaging resources as a means of promoting their services and information. Social media are one modern and contemporary new media for effective promotion of library and information services in the technological era. Librarians desiring to connect constantly with their clients with an eye to increasing users' satisfaction through promotion must make a social presence using social media like Facebook, MySpace, Micro blogging sites like Twitter, blog, etc.

As universities in Nigeria are changing to meet the challenges of the new millennium, librarians in university libraries who are providing library and information resources and services to readers must do the same. There is an ever and rapidly changing academic and information environment which has led to new challenges for librarians in university libraries. Librarians are faced with a problem of meeting the increasing academic demands of users and competing with alternative sources of information and providers like the internet, World Wide Web (WWW). With these, it would seem to insinuate as though Librarians are also gradually losing their relevance because of this advent of other sources of information.

A university library that is well equipped with all the needful library and information resources and services, but its resources and services are not duly promoted cannot maintain its relevance in this 21st century. Furthermore, studies have suggested that when Nigerians go online, predominantly with their phones, they go basically to social media applications like facebook, twitter, blogs and YouTube. Terragon (2013) gave a statistics of social media users in Nigeria as 5,357,500.This invariably makes social media a must use by librarians in promoting library and information resources and services.

Other services like photocopying, bindery services, reserve collections, and reference enquiries are also rendered in FUTO Library.

Objectives of the Study:

The general objective of this paper is to assess the impact of university library services on the academic performance of students of the Federal University of Technology, Owerri.

The specific objectives of this study are:

1. To find out if there is any significant relationship between specific library services and academic performance of students.

3. METHODOLOGY

Survey approach was adopted for this Study. Primary data were collected with the aid of a Questionnaire administered to students of FUTO. The Population of the students at FUTO is 16, 558 which was obtained from the University's Information and Communications Technology records (ICT, 2017). According to Nwana (1981), if a population is in many hundreds, one needs a sample size of 20%. But if a population is in few thousands, one needs a sample size of 10%. Based on the foregoing recommendation, a sampling fraction of 10% was used to select the sample size, which one thousand six hundred and fifty six (1,656) students in the University. A multistage sampling technique was employed. FUTO is made up of 46 departments, from which 36 students were selected from each department. The research concentrated on students of 200 to 400 levels of study. 12 respondents were selected from each level giving a total of 1,656 respondents. 1,533 (92%) copies of the administered questionnaire were returned and 1479 (89%) were properly completed and thus 1479 responses were therefore used for the study.

To guarantee the reliability of the instrument, it was administered on thirty (30) participants out of the envisaged

population of the study. A test-retest reliability method of two weeks interval was conducted, response obtained were subjected to Pearson Product Moment Correlation method and a reliability co-efficient of 0.83 was obtained.

4. DISCUSION OF FINDINGS

Demographic Data:

Table 1: Age of respondents

Age range	Frequency	Percentage (%)
16-20	768	52
21-25	377	25
26 & above	334	23
TOTAL	**1479**	**100**

Table 1 shows that 768 (52%) of the respondents are within the age range of 16-20 years, 377 (25%) of the respondents are within the age range of 21-25 years of age while 334(23%) of the respondents are within the age range of 26-30 years of age and above. This Table shows that majority of the respondents are within the age range of 16-20 years of age. This can also be represented in a Chart as below:
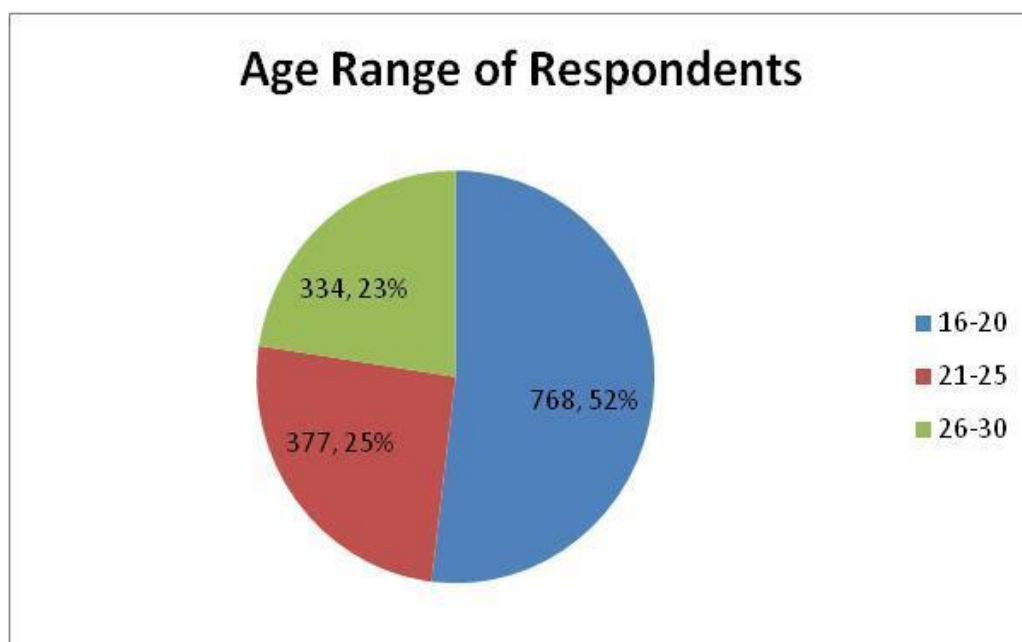

Figure 1: Age Range of Respondents

Table 2: Academic Level of Respondents

Level	Frequency	Percentage (%)
200	451	30
300	573	39
400	455	31
TOTAL	**1479**	**100**

Table 2 shows that 451 (30%) of the respondents are students in 200 Level, 573 (39%) of the respondents are students from 300 Level, while 455 (31%) of the respondents are students from 400 Level. Therefore majority of the respondents (39%) are students from 300 Level. The levels represent the students Year of Study. The distribution is represented in the Chart below:
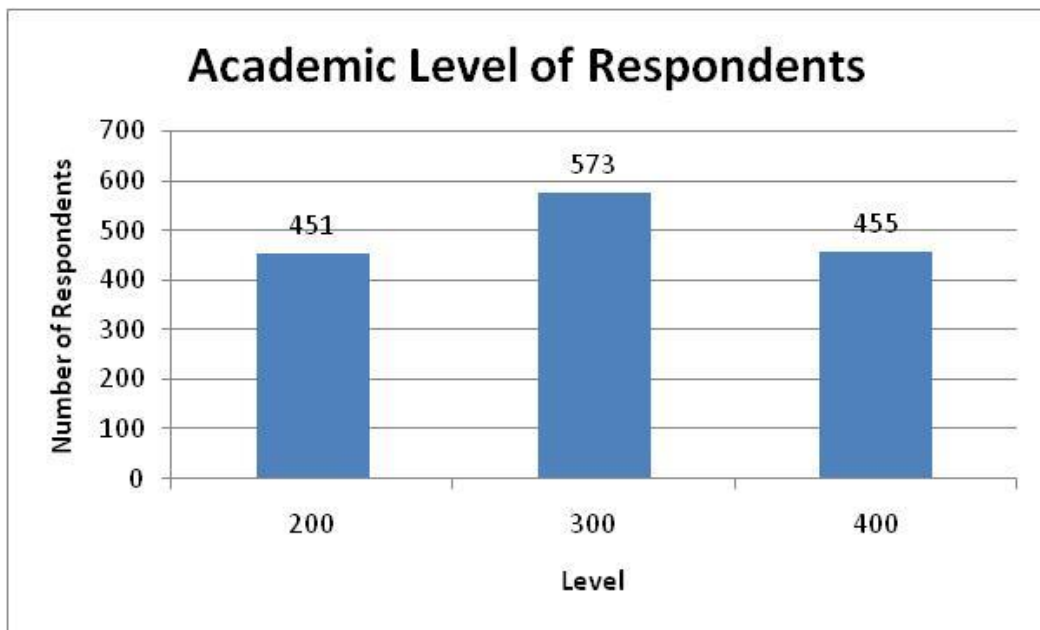
Figure 2: Academic Level of Respondents

Table 3: Gender of Respondents

Gender	Frequency	Percentage (%)
Male	921	62
Female	558	38
TOTAL	**1479**	**100**

Table 3 shows the distribution of respondents by gender. The Table reveals that 921(62%) of the respondents are males while 558(38%) of the respondents are Females. Therefore, majority of the respondents (62%) are males. This is understandable being a University of Technology. Perhaps, the result could have been different if this university had been a conventional one.
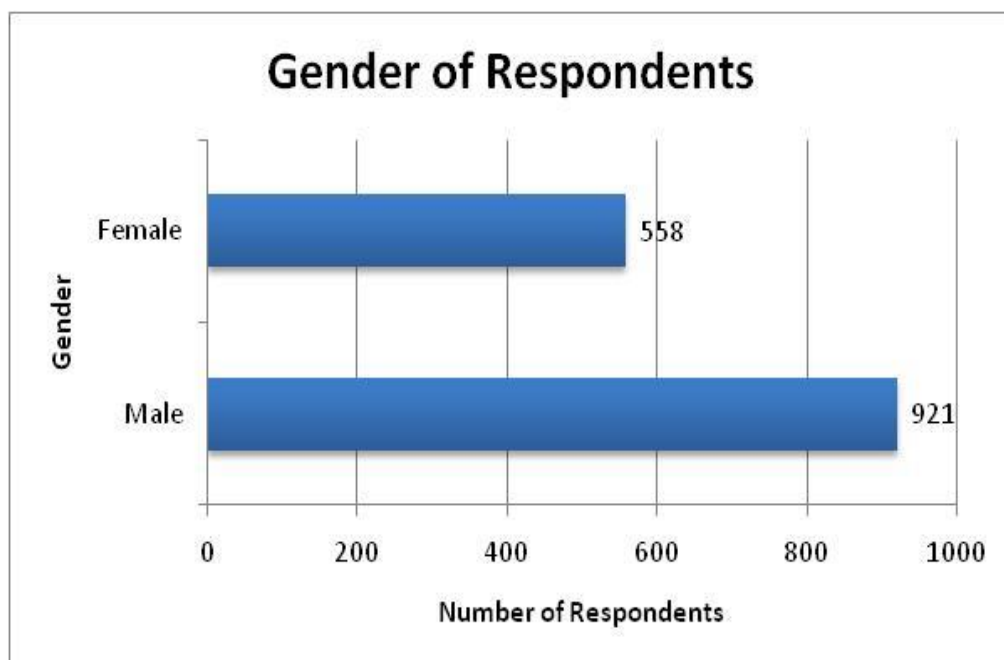

Figure 3: Gender of Respondents

Table 4: Impact of Embedded Librarian services provided by the library on Students Academic Performance

	Item	Strongly Agree	Agree	Disagree	Strongly Disagree	SD±	MEAN VALUE
1	It helps you in doing your assignments	443	661	257	118	235.43	2.97
2	It helps you in doing your term paper	636	513	218	112	245.54	3.13
3	it helps you present better Practical Reports	789	555	92	43	362.4	3.41
4	it helps you in writing better seminar papers	515	655	187	122	256.41	3.06
5	It helps you in scoring high in your assessments.	601	712	97	69	334.39	3.25
	Significant mean score						3.16

Source: Field data

The Table above reveals that 1104(75%) of the respondents agreed that embedded librarianship services provided by FUTO library helps them in doing their assignment, while 375(25%) of the respondents were of the negative opinion which gave a mean value of 2.97SD±235.43 which is above average. When asked if it helps them in writing their term papers, 1149(78%) of the respondents were of the affirmative while 330(22%) of the respondents disagreed which gave a mean value of 3.13SD±245.54 which is above average. 1344(91%) of the respondents indicated that the embedded librarianship services provided by FUTO Library helps them in writing better practical reports while 135(9%) of the respondents disagreed which gave a mean value of 3.41SD±362.40 which is above average. 1170(79%) of the respondents were of the affirmative that embedded librarianship services provided by FUTO library helps them in writing better seminar paper while 309(21%) of the respondents disagreed which gave a mean value of 3.06SD±256.41 which is above average. Also when asked if it helps them in scoring high in their assessments, 1313(91%) of the respondents agreed while 166(11%) of the respondents were of the negative opinion which gave a mean value of 3.25SD±334.34 which is above average. This however gave a significant mean score of 3.16 which shows that embedded librarianship services provided by FUTO library help students in their academic pursuit.

Table 5: Impact of Social Media provided by the library on Students Academic Performance

	Item	Strongly Agree	Agree	Disagree	Strongly Disagree	SD±	MEAN VALUE
1	It helps you in doing your assignments	582	401	358	138	182.46	2.96
2	It helps you in doing your term paper	514	536	317	112	198.04	2.98
3	it helps you presenting better Practical Reports	686	532	151	110	283.82	3.21
4	it helps you in writing better seminar papers	645	501	116	217	245.43	3.06
5	It helps you in scoring high in your assessments.	773	619	51	36	381.98	3.44
	Significant mean score						3.13

Source: Field data

Table 6: Impact of Circulation Services provided by the library on Students Academic Performance

	Item	Strongly Agree	Agree	Disagree	Strongly Disagree	SD±	MEAN VALUE
1	It helps you in doing your assignments	556	433	369	121	183.09	2.96
2	It helps you in doing your term paper	567	561	213	138	226.39	3.05
3	it helps you present better Practical Reports	412	617	232	218	187.01	2.83
4	it helps you in writing better seminar papers	567	513	287	112	210.33	3.04
5	It helps you in scoring high in your assessments.	513	636	112	218	245.54	2.98
	Significant mean score						2.97

Source: Field data

The Table 6 above reveals that 989(67%) of the respondents agreed that Circulation services provided by FUTO library helps them in doing their assignment, while 490(33%) of the respondents were of the negative opinion which gave a mean value of 2.96SD±183.09 which is above average. When asked if it helps them in writing their term paper 1128(76%) of the respondents were of the affirmative while 351(24%) of the respondents disagreed which gave a mean value of 2.83SD±187.01 which is above average. 1029(70%) of the respondents indicated that the Circulation services provided by FUTO Library helps them in writing better practical reports while 450(30%) of the respondents disagreed which gave a mean value of 3.04SD±210.33 which is above average. 1080(73%) of the respondents were of the affirmative that Circulation services provided by FUTO library helps them in writing better seminar paper while 399(27%) of the respondents disagreed which gave a mean value of 2.98SD±245.54 which is above average. Also when asked if it helps them in scoring high in their assessments 1149(78%) of the respondents agreed while 330(22%) of the respondents were of the negative opinion which gave a mean value of 2.98SD±245.54 which is above average. This however gave a significant mean score of 2.97 which shows that Circulation services provided by FUTO library helps students in their academic pursuit.

Table 7: Level of Student Academic performance

	Item	Strongly Agree	Agree	Disagree	Strongly Disagree	SD±	MEAN VALUE
1	Your score in your assignments is high.	617	512	223	127	232.26	2.89
2	Your score in your Continuous Assessments	587	585	169	138	250.03	3.00
3	Your score in your Practical report is high.	614	432	221	212	191.96	3.14
4	Your Grade Point Average is above 2.5	504	552	245	178	185.80	2.94
5	Your score in your Exams is high.	655	606	116	102	301.81	3.04
	Significant mean score						3.00

Hypothesis One:

Ho: Embedded Librarianship services provided by FUTO library does not significantly influence the Academic success of the students

Ha: Embedded Librarianship services provided by FUTO library significantly influence the Academic success of the students

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.994	.989	.985	.01180	.989	261.675	1	3	.001
a. Predictors: (Constant), Embedded Librarian									

The Table above depicts a very strong relationship between Embedded Librarianship services and Student academic success. It shows that a 0.994 or 99.4% level of coefficient exist between internet services and Student academic success, The coefficient of multiple determination denoted by R-Square is therefore strong thus indicating that the data does fit well in the statistical model (98.9%) since it is very near to 100%, therefore a reasonable level of academic success of students is been determined by the Embedded Librarianship services provided by FUTO library, this therefore appears to be useful for making predictions since the value of *R-Square* is close to 1.

Also when the R-Square was adjusted for possible error in fitness an Adjusted error of 98.5% was observed, this normally do serve as an indication that some other explanatory variable(s) by which without them the dependent variable (Students Academic Success) cannot be fully measured. Therefore other predictor variables are needed to be sourced out in order to fully measure the dependent variable (Students Academic Success).

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.036	1	.036	261.675	.001[b]
	Residual	.000	3	.000		
	Total	.037	4			
a. Dependent Variable: Academic Performance						
b. Predictors: (Constant), Embedded Librarianship						

An F-test was also performed to determine if the model is useful for prediction at 5% level of significance.

The F-ratio was calculated of the predictor variable to be 261.675 with an alpha value of 0.049 which was found to be higher than f-tabulated value at 0.05 and df= 1 and 3 is 10.13. This therefore shows that the model is useful for predicting Students Academic Success based on Embedded Librarianship.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.240	.109		11.365	.001
	Embedded Librarian	.557	.034	.994	16.176	.001
a. Dependent Variable: Academic Performance						

The equation of the regression can thus be written as follows: Academic Success=1.240+0.994(Embedded Librarianship)

On these bases we therefore reject the null hypotheses that say "Embedded Librarianship provided by FUTO library does not significantly influence the Academic success of the students." and accept the Alternate Hypothesis.

Hypothesis Two:

Ho: Social Media services provided by FUTO library does not significantly influence the Academic success of the students

Ha: Social Media services provided by FUTO library significantly influence the Academic success of the students

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.608	.369	.159	.08806	.369	1.756	1	3	.277
a. Predictors: (Constant), Social Media									

The Table above depicts a strong but no significant relationship between Social Media services and Student academic success. It shows that a 0.608 or 60.8% level of coefficient exist between Social Media services and Student academic success, The coefficient of multiple determination denoted by R-Square is poor thus indicating that the data does not fit well in the statistical model (36.9%) since it is very far from 100%, therefore a reasonable level of academic success of students cannot be determined by the Social Media services provided by FUTO library, this therefore appears not to be useful for making predictions since the value of *R-Square* is very far 1.

Also when the R-Square was adjusted for possible error in fitness an Adjusted error of 15.9% was observed, this normally do serve as an indication that some other explanatory variable(s) by which without them the dependent variable (Students Academic Success) cannot be fully measured. Therefore other predictor variables are needed to be sourced outin order to fully measure the dependent variable (Students Academic Success).

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.014	1	.014	1.756	.277[b]
	Residual	.023	3	.008		
	Total	.037	4			
a. Dependent Variable: Academic Performance						
b. Predictors: (Constant), Social Media						

An F-test was also performed to determine if the model is useful for prediction at 5% level of significance.

The F-ratio was calculated of the predictor variable to be 1.756 with an alpha value of 0.277 which was found to be lesser than f-tabulated value at 0.05 and df= 1 and 3 is 10.13. This therefore shows that the model is not useful for predicting Students Academic Success based on Social Media Services.

On these bases we therefore accept the null hypotheses that say "Social Media services provided by FUTO library does not significantly influence the Academic success of the students." and reject the Alternate Hypothesis.

Hypothesis Three:

Ho: Circulation services provided by FUTO library does not significantly influence the Academic success of the students

Ha: Circulation services provided by FUTO library significantly influence the Academic success of the students

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.659[a]	.435	.246	.08337	.435	2.306	1	3	.226
a. Predictors: (Constant), Circulation Services									

The table above depicts a strong but not significant relationship between Circulation Services and Student academic

success. It shows that a 0.659 or 65.9% level of coefficient exist between Circulation Services and Student academic success, The coefficient of multiple determination denoted by R-Square is poor thus indicating that the data does not fit well in the statistical model (43.5%) since it is very far from 100%, therefore a reasonable level of academic success of students cannot be determined by the Circulation Services provided by FUTO library, this therefore appears not to be useful for making predictions since the value of *R-Square* is very far 1.

Also when the R-Square was adjusted for possible error in fitness an Adjusted error of 24.6% was observed, this normally do serve as an indication that some other explanatory variable(s) by which without them the dependent variable (Students Academic Success) cannot be fully measured. Therefore other predictor variables are needed to be sourced out in order to fully measure the dependent variable (Students Academic Success).

An F-test was also performed to determine if the model is useful for prediction at 5% level of significance.

The F-ratio was calculated of the predictor variable to be 2.306 with an alpha value of 0.226 which was found to be lesser than f-tabulated value at 0.05 and df= 1 and 3 is 10.13. This therefore shows that the model is not useful for predicting Students Academic Success based on Circulation services.

On these bases we therefore accept the null hypotheses that say "Circulation services provided by FUTO library does not significantly influence the Academic success of the students." and reject the Alternate Hypothesis.

5. CONCLUSSION

The study found that the significant mean score of Embedded librarian (3.16), Social media (3.13), and circulation services (2.97) are above average (2.5) However only Embedded Librarianship services(R=0.994 p-value=0.001<0.05) was found to correlate significantly with the student academic performance.

6. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. Embedded Librarians should include the use of social media in their library and information services delivery in their institutions.

2. The library service hour should be reviewed to accommodate 24 hour service per day. This will give the students extended hours to use the library to enhance their academic performance.

3. The library should mount aggressive user orientation programme for fresh students with emphasis on practical sessions on the use of Online Public Access Catalogue (OPAC) as well as the manual (when there is power failure). This will equip the students with the skills for effective utilization of these catalogues to access a wide range of information which abound in the library.

4. Compulsory assignments which will make the students to interact with the catalogues should be emphasized when teaching the Use of Library Course.

5. Suggestion boxes could be mounted at strategic locations of the library as well as at the entrance to the library where students can make their requests and suggestions.

REFERENCES

[1] Aina, L.O. (2004) Library and information Science Text for Africa. Ibadan: Third World Services. Pp.15 -16

[2] Christopher Chen (2008) The Impact of School Library Services on Student Achievement and the Implications for Advocacy: A Review of Literature. Library Journal rticles: HonKong Baptist University. Pp. 15-20

[3] Igu, S.E (2010). Gender and Librarians Information and communication technology (ICT) utilization access point in Nigeria University Libraries. Delta Library Journal, 4(1&2), 18-21

[4] Iwhiwhu, B.E, Ruteyan, J.O & Eghwubare. A (2010). Mobile phones for library Services: Prospects for Delta State University Library, Abraka Library Philosophy and Practice. Retrieved 14th September, 2017 from http://digital commons.unl.edu/libphilprac/346

[5] Kathy Drewis and Nadine Hoffman. "Academic Embedded Librarianship: An Introduction" Public Services Quarterly6, 2 (2010): 75-82 accessed July 24, 2017, doi:10.1080/15228959.2010.498773.

[6] Lance, K.C. (2000c). Measuring up to standards; The impact of school library programs and Information Literacy in Pennsylvania Schools, Pennsylvania, Pennsylvania Department of Educations office of Commonwealth libraries.

[7] Small, R, Snyder, J & Parker, K. 2007, New York States School Libraries and Library Media Specialist: An Impact Study, New York Library Association, Viewed 24 April 2017.

[8] Terragin Limited (2013). State of Digital Media in Nigeria. Retrieved 22nd November 2017 from http://slideshare.net/mobile/Ennie_mo/Nigeria_state_of_digital_media.com

[9] Williams D & Wavell, C 2001a, The Impact of the School Library resource centre on Learning. The Robert Gordon University. http://www.rgu.ac.uk/files/SLRCreport.pdf Accessed, 8 October 2017

[10] Yakup Cetin and Vivian Howard (2015), An exploration of the relationship between undergraduate students library book borrowing and academic achievement. Journal of Libranship and Information Science Vol 48, issue 4.